



No. 2, Vol. 15, 2024

Editor-in-chief: Prof. DDr. med. Dr. habil Claus Muss Ph.D.

Including: Social Work, Humanitary Health Intervention, Nursing, Missionary Work

CLINICAL SOCIAL WORK AND HEALTH INTERVENTION

international
scientific
group
of applied
preventive
medicine I - GAP
vienna,
austria



Author: Michal Oláh

Social and health problems of the contemporary world, background and perspectives

Original Articles

- ✓ SOCIAL AND HEALTH PROBLEMS OF THE CONTEMPORARY WORLD, BACKGROUND AND PERSPECTIVES
- ✓ WELL-BEING AND SUBJECTIVELY EXPERIENCED STRESS AMONG DOCTORS OF THE ONCOLOGY INSTITUTE
- ✓ DIETARY AWARENESS IN PATIENTS WITH KIDNEY DISEASE
- ✓ THE USE OF TELEMEDICINE TECHNOLOGIES IN THE WORK OF NURSES FROM THE PERSPECTIVE OF DOCTORS IN THE CZECH REPUBLIC
 - ✓ WHY ARE SOME DRUGS IN SHORT SUPPLY?
- ✓ ORGANIZATIONAL CULTURE OF HEALTH CARE FACILITY AS A PREDICTOR OF THE JOB SATISFACTION OF NURSES
- ✓ THE ADOPTION OF ARTIFICIAL INTELLIGENCE WITH MULTIFACETED CHALLENGES AND PROMISING OPPORTUNITIES IN ASIAN COUNTRIES: A CASE STUDY OF INDIA
- ✓ RISK MANAGEMENT AND CONSEQUENCE MANAGEMENT OF INTERNAL MIGRATION IN THE CONTEXT OF HUMANITARIAN AND ECONOMIC CHALLENGES (EXPERIENCE OF ZAKARPATTIA OBLAST)
- ✓ APPLYING LANGUAGE COMPETENCES WHEN WORKING WITH UKRAINIAN REFUGEES IN HELPING PROFESSIONS
- ✓ POSSIBILITIES AND LIMITS OF FORENSIC SOCIAL WORK IN THE PRISON ENVIRONMENT
- ✓ POSSIBLE SOCIAL RISK AND RISKS ARISING FROM INFORMATION AND TELECOMMUNICATION TOOLS IN THE HANDS OF SECOND PRIMARY EDUCATION STAGE PUPILS IN SLOVAKIA

ISSN 2076-9741/Online

ISSN 2222-386X/Print

Editors

Editor-in-Chief:

Prof. DDr. med. Dr. habil Claus Muss Ph.D.

Deputy Chief Editors:

Dr. Daniel J. **West**, Jr. Ph.D, FACHE
(University of Scranton, Department of Health Administration and Human Resources, USA)

Editorial board and reviewers:

Dr. Andrea **Shahum**, MD (University of North Carolina at Chapel Hill School of Medicine, USA)

Dr. Vlastimil **Kozon**, Ph.D.
(Allgemeines Krankenhaus – Medizinischer Universitätscampus, Vienna, AT)

Dr. Stephen J. **Szydlowski**, MBA, MHA, DHA
(University of Scranton School of Education, USA)

Dr. zw. dr hab. Pawel S. **Czarnecki**, Ph.D.
(Rector of the Warsaw Management University, PL)

Dr. Michael **Costello**, MA, MBA, J.D.
(University of Scranton School of Education, USA)

Dr. Roberto **Cauda**, Ph.D.
(Institute of Infectious Diseases,
Catholic University of the Sacred Heart, Rome, IT)

Dr. Tadeusz **Bak**, Ph.D.
(Instytut Ekonomii i Zarządzania PWSTE
Jarostaw, PL)

Dr. Daria **Kimuli**, Ph.D.
(Catholic University of Eastern Africa, Nairobi, KE)

Dr. Gabriela **Lezcano**, Ph.D.
(University of California, San Francisco, USA)

Dr. Jirina **Kafkova**, Ph.D. (MSF, Freetown, SL)

Prof. Dr. Arab **Naz**, Ph.D.
(University of Malakand Chakdara Khyber
Pakhtunkhwa PK)

Dr. Vitalis Okoth **Odero**, Ph.D.
(St. Philippe Neri Schools Joshka, KE)

Dr. Johnson **Nzau Mavole**, Ph.D.
(Catholic University of Eastern Africa, Nairobi, KE)

Prof. Dr. Selvaraj **Subramanian**, Ph.D.
(SAAaRMM, Kuala Lumpur, MY)

Dr. hab. Zofia **Szarota**, Ph.D.
(Pedagogical University of Cracow, PL)

Commissioning and language editor:

Prof. Dr. John **Turner** (Amsterdam, NL)
Whole-Self@quicknet.nl

Submit manuscript:

cswjournal@gmail.com

Photo:

Refugees in Greece who crossed the Aegean Sea into the EU.

Contact

**International Gesellschaft für angewandte
Präventionsmedizin i-gap e.V.
(International Society of Applied Preventive
Medicine i-gap)**

Währinger Str. 63 A-1090

Vienna, Austria

Tel. : +49 - 176 - 24215020

Fax : +43 / 1 4083 13 129

Mail : office@i-gap.org

Web : www.i-gap.org

Visiting Editors

Volodymyr Khymynets, Anatoliy Holovka

Impact factor

1. november 2019

1,21

(ISIIndexing)

Subscription rates 2024, Vol. 15, No.2

Open Access Journal

Additional Information on Internet:

www.clinicalsocialwork.eu

This journal works on the non-profit basis. For each published article 300 EUR/USD was charged, and there is a standard range which cannot be exceeded.

Table of Contents

Original Articles

Volodymyr Khymynets, Anatoliy Holovka Social and health Problems of the contemporary World, Background and Perspectives	4
Anna Arpova, Laura Arpova Well-being and subjectively experienced Stress among Doctors of the oncology Institute	6
Zuzana Bartkova, Martina Valachovicova, Katarina Gazdikova Dietary Awareness in Patients with kidney Disease	10
Sylva Bartlova, Ales Chrdle, Ivana Chloubova The use of telemedicine Technologies in the Work of Nurses from the Perspective of Doctors in the Czech Republic	19
Michael M. Costello, Daniel West, Eva Grey Why Are Some Drugs in Short Supply?	27
Viera Hulkova, Maria Kilikova, Stanislav Sabo Organizational Culture of Health Care Facility as a Predictor of the job Satisfaction of Nurses	32
Deepshikha Chhaperia, Kamini Khanna The Adoption of artificial Intelligence with multifaceted Challenges and promising Opportunities in Asian Countries: A case Study of India	37
Volodymyr Khymynets, Anatolii Holovka, Jan Holonic Risk Management and Consequence Management of Internal Migration in the Context of Humanitarian and Economic Challenges (Experience of Zakarpattia Oblast)	47
Michal Olah, Monika Mackinova, Tomas Planka, Michaela Mackinova, Sona Wimmerova Applying language Competences when working with Ukrainian Refugees in helping Professions	57
Tomas Planka, Monika Mackinova, Michaela Mackinova, Michal Olah Possibilities and Limits of forensic Social Work in the prison Environment	66
Katarina Vankova Possible social Risk and Risks arising from Information and Telecommunication Tools in the Hands of second primary Education Stage Pupils in Slovakia	74

Editorial

Social and health Problems of the contemporary World, Background and Perspectives

Source: *Clinical Social Work and Health Intervention*

Volume: 15

Issue: 2

Page: 4 – 5

CSWHI 2024; 15(2): 4 – 5; DOI: 10.22359/cswhi_15_2_01 © Clinical Social Work and Health Intervention

The current volume of the *Clinical Social Work and Health Intervention Journal* is devoted to diverse social and health problems, defining the causes of these problems and finding solutions.

The authors of the contributions are scientists, experts, and scientific and pedagogical staff from universities and research institutes.

In the modern era, we are confronted with an array of social and health challenges that demand urgent attention and innovative solutions.

The COVID-19 pandemic, among other **pandemics and infectious challenges**, was a great challenge for the world. It provoked the social and economic phenomenon of the “coronacrisis”, which included widespread illness, death, economic decline, and low business and commercial activity brought about by various measures such as lockdowns, travel restrictions, social distancing, etc. It highlighted the vulnerability of the modern world to infectious diseases in the period of globalization and increased migration (tourism, labor migration, refugees, etc.), and it revealed the inadequate preparedness of healthcare systems for these kinds of challenges.

Inequalities in the availability of healthcare services – People in many countries (above all it’s about developing countries and poor countries) face unequal access to healthcare services and resources based on their social status, economic opportunities and geographic location. But one of the most important issues is providing healthcare in military conflict conditions. A relevant example is the Russian military ag-

gression against Ukraine, which provoked a humanitarian crisis, and, in particular, problems for providing healthcare such as: security concerns for medical personnel, limited access to healthcare facilities, shortages of medical supplies, and the vulnerability of internally displaced persons who are particularly susceptible to infectious diseases, malnutrition and trauma-related injuries.

Threats to mental health – Rising levels of stress, depression and other mental disorders pose a significant challenge. Background factors include the current global situation (“turbulence” in international politics, economic problems, etc.), as well as the numerous stressors of modern life.

All of these problems are overlaid on global challenges that have faced the international community: armed conflicts (especially Russian aggression against Ukraine, conflicts in the Middle East, potential conflicts in Latin America and South Asia), consequences of climate change and ecological crises, and humanitarian and migration crises.

Key factors in the success of the modern scientific community in this field are cooperation and the adoption of a multidisciplinary approach that integrates insights from diverse fields including medicine, humanities, sociology, economics, environmental science, etc. Promising areas of research include:

- Implementing fairer healthcare insurance systems, increasing access to medical services, the implementation of international and

cross-border projects (with the involvement of funding from international institutional donors) regarding telemedicine, raising people's awareness of medical and especially psychological support, mental health programs

- Ensuring quality medical services for the displaced population and the population of territories close to the warfare zone (including psychological assistance)
- Global cooperation in combating infections (prevention strategies, vaccination efforts) etc.

The current volume will be interesting to policymakers, civil servants, experts from hospital facilities, university teachers and scientists.

Prof. Volodymyr Khymynets,
Doctor of Economics
Department for Research
of the Western Region NISS, UA

Anatoliy Holovka, PhD
Department for Research
of the Western Region NISS, UA

Well-being and subjectively experienced Stress among Doctors of the oncology Institute

A. Arpova (Anna Arpova)¹, L. Arpova (Laura Arpova)²

¹ St. Elizabeth University of Health and Social Work in Bratislava, Slovakia

² Pan-European University, Faculty of Psychology, Bratislava, Slovakia

Original Article

E-mail address:

araneta5@gmail.com

Reprint address:

Anna Arpova
St. Elizabeth University of Health and Social Work in Bratislava
Palackeho 1
810 00 Bratislava
Slovakia

Source: *Clinical Social Work and Health Intervention*
Pages: 6 – 9

Volume: 15
Cited references: 9

Issue: 2

Reviewers:

Vlastimil Kozon
General Hospital - Medical University Campus, Vienna, AT
Steve Szydowski
University of Scranton school of education, USA

Keywords:

Quality of Life. Well-being. Stress. Burnout Syndrome. Prevention.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 6 – 9; DOI: 10.22359/cswhi_15_2_02 © Clinical Social Work and Health Intervention

Abstract:

Health, life satisfaction and subjective well-being are key concepts that directly define the complex of a person's quality of life, and at the same time they support it and are the most significant determinants. These determinants directly express "how people perceive their place in life, in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and interests" (WHO, 1996, p. 5). In addition to health, satisfaction and economic well-being, work also appears in the ranking of human priorities. The author Uhál (2006, p. 29) refers to it as the constant, rational and free activity of a person that is based on a sense of creative necessity and the necessity of maintaining life. He adds that it is connected with joy and effort, "which aims to create individual and social good and values of both material and spiritual nature".

According to the author Árpová (2018), the general effort to preserve and improve human health is such a serious task that issues related to it are not only the subject of interest of important national and international institutions and the topic of several international documents, it is also of interest for individual countries and is a priority of their governments. We are talking about the state health policy, which, according to WHO (1999), directly determines the goals, strategies and priorities of the state in the field of healthcare, its support and development, as well as protection and restoration. Several contemporary experts such as Musil (2004) and Gérinová (2011) define helping professions as professions based on providing professional assistance to people in difficult life situations. Thus, these professions are significantly different from other professions.

Research objectives

The primary goal was to determine the overall level of well-being and subjectively experienced stress and their dimensions among doctors. The secondary goal was to examine the differences between doctors depending on certain monitored socio-demographic variables (age category, gender, number of years of practice, job position) in the examined variables (well-being, stress). The tertiary goal was to determine the correlation between well-being and subjectively experienced stress among doctors.

Research questions

Q1: What is the level of well-being of doctors as a whole, and what is it like in its individual dimensions (positive relationships with others, self-acceptance, personal growth, environmental mastery, purpose in life and autonomy)?

Q2: What is the level of subjectively experienced stress among doctors as a whole and what is it in its individual levels (cognitive, emotional, physical, social)?

Q3: Is there a difference in the overall level of subjectively experienced stress and its levels among doctors depending on age category, gender, number of years of experience, and job position?

Q4: What is the correlation between well-being and subjectively experienced stress among doctors?

Q5: What is the correlation between well-being and stress levels among doctors?

Q6: What is the correlation between stress and dimensions of well-being among doctors?

Methods

Research group

The research group consisted of a research sample of 80 doctors (in various positions) of the oncology institute. Specifically, 56 women and 24 men took part in the research. It was a deliberate and probabilistic selection of participants. The research was carried out in November and December 2019 at a specialized oncology institute in Bratislava.

Research methods

We used a Psychological Well-Being Scale to measure well-being (Ryff, Singer, 1998). A questionnaire to identify the stress level and burnout syndrome (Henning, Keller, 1996) was used to measure stress.

Research plan

The design of the research is quantitative. It is also exploratory due to only research questions being asked, and it is correlational with comparative sub-questions.

Methods of data analysis

A complete data analysis was carried out using the statistical program SPSS (version 21). Descriptive statistics were used to provide a more detailed description of the individual monitored dimensions and levels. A normality test was used, and the next procedure was chosen based on its result. Parametric tests, Student's t-tests, ANOVA and non-parametric tests, Mann-Whitney tests and Kruskal-Wallis tests

were also used. When a statistically significant difference was found, the material significance and the corresponding graphs were indicated. The correlation method used was Spearman's correlation coefficient.

Results

The results of the research showed that doctors have a high overall level of well-being, and the same is true in the dimensions of positive relations with others, self-acceptance and personal growth. The dimensions of environmental mastery, purpose in life and autonomy were at the average level (see Table 1).

Research findings have alerted us to the low overall level of stress in healthcare workers. All

levels of stress (cognitive, emotional, physical and social) also fell into the optimum range (see Table 2).

The results of the research showed us statistically significant differences in the examined variable stress. Therefore stress, as well as its individual levels (cognitive, emotional, physical and social) depend on the socio-demographic data (age category, gender, number of years of practice, job position) of workers. The statistical analysis of the research results confirmed medium strong negative correlation between the monitored variables (well-being, stress) and their dimensions and levels.

Table 1 Descriptive table of psychological well-being and its dimensions

	Positive relations with others	Self-acceptance	Autonomy	Personal growth	Environmental mastery	Purpose in life	Scale of psychological well-being - total score
Average	17,10	17,15	14,2875	18,1875	15,3625	14,50	96,5875
Standard deviation	3,41849	3,19850	3,54427	2,73789	3,28881	3,30707	10,06396
Minimum	8,00	3,00	5,00	6,00	6,00	5,00	72,00
Maximum	21,00	21,00	21,00	21,00	21,00	21,00	117,00
Median	18,00	18,00	15,00	19,00	15,00	15,00	98,00
Skewness	-0,784	-1,568	-0,425	-1,344	-0,514	-0,614	-0,398
Steepness	-0,115	3,732	0,443	3,465	0,351	0,445	0,024

Table 2 Descriptive table of subjectively experienced stress and its four levels

	Cognitive level of stress	Emotional level of stress	Physical level of stress	Social level of stress	Overall level of susceptibility to stress
Average	6,25	6,50	5,5625	4,8375	23,15
Standard deviation	3,55962	4,62793	4,37149	4,03605	14,64612
Minimum	0,00	0,00	0,00	0,00	0,00
Maximum	16,00	17,00	18,00	20,00	62,00
Median	6,00	7,00	5,50	4,00	23,00
Skewness	0,176	0,261	0,718	1,142	0,456
Steepness	-0,002	-0,716	0,113	1,707	-0,144

Discussion

The starting point of the publication are the basic concepts related to the analyzed research issue as well as the connections resulting from them. With the help of selected classifications of important international organizations and current domestic and foreign experts, we have defined a set of the most frequent factors affecting the field of mental health in the context of the quality of life of doctors. We have come to the conclusion that the field of mental health is an inseparable and necessary part of the complex of a person's quality of life, as it has an impact on psychological health and forms the basis for abilities such as thinking, feeling, establishing relationships and enjoying life and work.

Limits of the research

The first limit is the use of non-standardized questionnaires. However, they have their own methodology. We consider the unequal gender representation in favor of women to be another limit, but it is a mirror of the current state of representation of both sexes in the health sector. The last limitation is the translation of the Psychological Well-Being Scale into the Slovak language, which may not quite be adequate and accurate for our culture. To ensure a higher level of reliability and the validity of the scale, we recommend updating its translation.

Recommendations for future practice

We consider the standardization of the questionnaire for the identification of stress level and burnout syndrome method by the authors Henning and Keller (1996) to be justified. Even though it is frequently used in Slovakia, it is not standardized. In the area of prevention, we suggest including, for example, a study subject focused on acquiring the ability to manage stress and one's workload in medical faculties. The result would be the elimination of the burnout syndrome, which undoubtedly is not only reflected by the doctor himself or herself, but is also ultimately passed onto their patients. In the context of science, we propose carrying out research once a year, as research focused this way based on feedback could not only bring a great benefit for managers, but also for the entire medical facility. We also see a challenge in the implementation of comparative research that

would compare individual healthcare facilities or other helping professions. The work based on these recommendations may have benefits for the entire healthcare community.

References

1. ARPOVA L (2018) *Wellbeing and socio-emotional health of teaching and professional staff in an inclusive primary school* (Bachelor thesis). Bratislava: Pan-European College.
2. ARPOVA L (2020). *Health workers in the context of wellbeing and subjectively experienced stress* (Master's thesis). Bratislava: Pan-European College.
3. GERINGOVA J (2011) *Helping professions: creative treatment of the downside*. Prague: Triton.
4. HENNING C, KELLER G (1996) *Anti-stress program for teachers: Manifestations, causes and ways to overcome occupational stress*. Prague: Portal.
5. MUSIL L (2004) "I'd like to help you, but": dilemmas of working with clients in organizations. Brno: Marek Zeman.
6. RYFF C D, SINGER B (1998) The contours of positive human health. *Psychological Inquiry*, 9, 1-28.
7. UHAL M (2006) *The social doctrine of the church in basic principles* (p.29). Ružomberok: Catholic University.
8. WHO (1996) *WHOQOL-BREF Introduction, Administration, Scoring and Generic Version of the 37 Assessment* (p. 5). Geneva: World Health Organization. Available at: <https://www.who.int/mental_health/media/en/76.pdf>.
9. WHO (1999) *Health 21 - health for all in the 21st century*. Copenhagen. Available at Internet: <http://www.szu.sk/userfiles/file/FVZ/Katedra%20riadenia/Zdravotna%20politika/zdra_vie_21.pdf>

Dietary Awareness in Patients with kidney Disease

Z. Bartkova (Zuzana Bartkova)¹, M. Valachovicova (Martina Valachovicova)²,
K. Gazdikova (Katarina Gazdikova)³

Original Article

¹ Eastern Slovak Institute of Heart and Vascular Diseases,
Inc., Košice, Slovakia

² Faculty of Nursing and Health Professional Studies of the Slovak University of Health Care
in Bratislava, Slovakia

³ Faculty of Medicine of the Slovak University of Health Care in Bratislava, Slovakia

E-mail address:

zbartkova@vusoch.sk

Reprint address:

Zuzana Bartkova
Osloboditelov 68
044 11 Trstene pri Hornade
Slovakia

Source: *Clinical Social Work and Health Intervention*
Pages: 10 – 18

Volume: 15
Cited references: 21

Issue: 2

Reviewers:

Michael Costello
University of Scranton school of education, USA
Gabriela Lezcano
University of California, San Francisco, USA

Keywords:

Chronic kidney Disease. Awareness. Kidneys. Nutrition. Diet. Haemodialysis.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 10 – 18; DOI: 10.22359/cswhi_15_2_03 © Clinical Social Work and Health Intervention

Abstract:

Nutrition is an important part of the treatment of many diseases, including chronic kidney disease.

The objective of our study was to investigate haemodialysis patients' awareness of nutritional principles before and after the initiation of their dialysis treatment. Other objectives were to find out whether they were aware of the position of nutritional therapists and about their compliance with dietary measures and technological modifications.

Results: 64 questionnaires were evaluated. 41 (64.06%) respondents were informed about the principles of a low protein diet, and there was the greatest lack of information about the need to restrict sodium, potassium and vegetable protein, inappropriate meat products, milk and dairy products. 56 (87.5%) probands were informed about diets after being involved in

haemodialysis treatment. However, based on their implementation in practice, we found that this instruction was insufficient, especially in terms of limiting phosphorus and potassium intake. A positive finding was the strong awareness of egg consumption, as 41 (60%) respondents eat eggs only 1-2 times a week due to the high phosphorus content in the yolk; they do not have any restrictions when it comes to the consumption of egg whites. A negative finding was that 39 (60%) participants consume dark bread, pastries, rye or buckwheat flour, but 15% of them were diabetics. Strikingly, it was found that the patients did not know a nutritional therapist, which significantly influenced the lack of awareness of the respondents about the correct principles of nutrition in different stages of the disease and forms of treatment.

Conclusion: Proper nutrition is an important part of the comprehensive management of chronic kidney disease. Dietary measures must take into consideration the stage of the disease, comorbidities and the current dietary pattern. This clearly demonstrates the important role of a nutritional therapist in the treatment management of patients with kidney disease. By informing patients early on about the principles of nutrition, disease progression, overall morbidity and mortality can be significantly influenced.

„The food you eat can be either the safest and most powerful form of medicine or the slowest form of poison.“

(Ann Wigmore)

Introduction

Chronic kidney disease (CKD) is a heterogeneous disorder of renal structure and function (estimated glomerular filtration rate (eGF) < 60ml/min/1.73m²) with variable clinical manifestations and the potential for progressive loss of function and/or complications resulting from reduced function lasting more than 3 months. It significantly increases both cardiovascular (CV) and general morbidity and mortality.

The prevalence of CKD is on an increasing trend and is reported to be 9-10% (15%) of the population, and globally about 850 million people have some category of CKD. In Slovakia in 2021, 159,882 patients were seen in nephrology clinics, which means that every 10th- 15th Slovak citizen suffers from some degree of CKD. 4,458 patients were enrolled in regular dialysis treatment, 105 patients underwent kidney transplantation and 343 patients were on the waiting list (1).

The basis of CKD treatment is to influence the underlying causative factor as well as all the

factors of nephropathy progression, which may accelerate the progression of renal disease independently of the underlying nephrological diagnosis.

Treatment modalities include regime and dietary measures, pharmacological measures, active elimination and transplantation therapy. The therapeutic nutrition of patients in the pre-dialysis period as well as those undergoing haemodialysis therapy forms an integral part of the therapy to minimise the risks associated with kidney disease and the development of a secondary disease. It should be individually designed based on the stage of CKD and consider individual patient specificities (2, 3, 4, 5).

Objectives The primary objective of our study was to determine whether haemodialysis patients have sufficient information about diet in the pre-dialysis phase and after the initiation of dialysis treatment.

Other objectives were:

- to find out the awareness about nutritional therapists and the possibility of consulting a nutrition plan with a nutritional therapist,
- to find out whether patients follow the dietary measures as prescribed by their physician and whether they had been instructed about these

measures before being placed on dialysis treatment,

- to find out whether they have information on low-protein flours, breads and pastries in terms of limiting vegetable sources of protein in the pre-dialysis phase,
- to find out whether haemodialysis patients adhere to the dietary measures during dialysis treatment and whether they were instructed to change their dietary measures after starting dialysis treatment,
- to find out whether they have sufficient information about increased animal protein intake during dialysis treatment,
- to find out whether they have information on the need for potassium restriction and the possibility of technological modification to reduce the potassium content of foods, also on the need for phosphorus restriction in milk, dairy products, eggs and pastries,
- to find out whether they accept their diet as part of their treatment and obey the dietary instructions of the dialysis physician when their results deteriorate,
- to find out how patients perceive the dietary instructions they receive and what they would suggest to improve the awareness of dietary interventions for chronic kidney disease.

Probands and methods

Characteristics of the set of respondents

70 haemodialysis patients of the East Slovak Institute of Heart and Vascular Diseases, Inc. in Košice, Slovak Republic, who were treated in the institute for secondary diseases were approached for participation. The survey was conducted from 01.09.2022 to 31.12.2022.

We used the method of quantitative research through an anonymous questionnaire consisting of 16 questions of our own design, of which 15 questions were closed and 1 was open-ended. The first part of the questionnaire was focused on patients' diet and dietary instructions in the pre-dialysis period, and the second part was focused on information about patients' instructions regarding a haemodialysis diet and the patients' current diets.

Microsoft Excel was used for statistical analysis and the processing of the collected data.

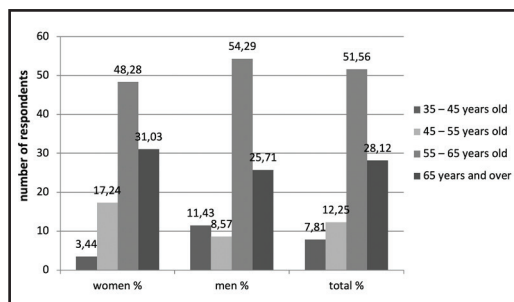
Results

The return rate was 91.43% (64 questionnaires out of 70 distributed).

Demographic data

The evaluated set consisted of 29 (45%) women and 35 (55%) men. The age distribution of the probands is shown in Graph 1.

Graph 1 Age of the respondents

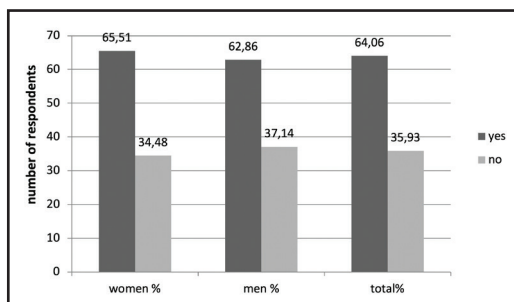


Source: own compilation

Most of the respondents 42 (65.63%) had high school education and the least 10 (15.63%) had university education. 18 (28.13%) of the respondents have been enrolled in a dialysis program for less than 5 years but more than 2 years, 16 (25%) for less than 1 year, 12 (18.75%) for 2 years, 16 (7.19%) for 1 year and only 7 (10.90%) for more than 5 years.

41 (64.06%) of the respondents were aware of the low-protein diet (Graph 2).

Graph 2 Instructions for a low-protein diet



Source: own compilation

Instruction by a healthcare professional other than a nutritional therapist took on average 10- 15 minutes, and only 11 (17.07%) respon-

Table 1 Evaluation of the diet of patients in the pre-dialysis stage and their adherence to a low-protein diet

meat/fish	women	%	men	%	total	%
a) daily	27	93,10	32	91,43	59	92,19
b) 2x per week	0	0,00	0	0,00	0	0,00
c) 1x per week	1	3,49	2	5,71	3	4,69
d) occasionally	1	3,49	1	2,86	2	3,13
e) never	0	0,00	0	0,00	0	0,00
amount of meat / day	women	%	men	%	total	%
a) 1 slice	26	89,66	20	57,14	46	71,88
b) 2 slices	3	10,34	12	34,29	15	23,44
c) 3 or more slices	0	0,00	3	8,57	3	4,69
meat products	women	%	men	%	total	%
a) daily	4	13,80	19	54,29	23	35,94
b) 2x per week	13	44,83	8	22,90	21	32,81
c) 1x per week	5	17,24	4	11,43	9	14,06
d) occasionally	5	17,24	4	11,43	9	14,06
e) never	2	6,90	0	0,00	2	3,13
milk intake	women	%	men	%	total	%
a) daily	6	20,69	7	20,00	13	20,31
b) 2x per week	2	6,90	4	11,43	6	9,38
c) 1x per week	9	31,03	2	5,71	11	17,19
d) occasionally	6	20,70	16	45,71	22	34,38
e) never	6	20,70	6	17,14	12	18,75
dairy products and cheese	women	%	men	%	total	%
a) daily	15	51,72	16	45,71	31	48,44
b) 2x per week	7	24,14	8	22,90	15	23,44
c) 1x per week	2	6,90	3	8,57	5	7,81
d) occasionally	2	6,90	3	8,57	5	7,81
e) never	3	10,34	5	14,29	8	12,50
salt	women	%	men	%	total	%
a) I have salted when cooking	6	20,70	15	42,90	21	32,81
b) I have salted after cooking	1	3,49	1	2,86	2	3,13
c) I have not salted when cooking	18	62,09	17	48,57	35	54,69
d) I have not salted after cooking	4	13,80	2	5,71	6	9,38
canned vegetables	women	%	men	%	total	%
a) daily	0	0,00	1	2,86	1	1,56
b) 2x per week	1	3,49	4	11,43	5	7,81
c) 1x per week	1	3,49	4	11,43	5	7,81
d) occasionally	17	58,62	23	65,71	40	62,50
e) never	10	34,49	3	8,57	13	20,31
foods high in sodium	women	%	men	%	total	%
a) I have restricted	16	55,17	11	31,43	27	42,19
b) I have excluded	1	3,49	3	8,57	4	6,25
c) I have not restricted	12	41,38	16	45,71	28	43,75
d) I have not excluded	0	0,00	5	14,29	5	7,81
foods high in potassium	women	%	men	%	total	%
a) I have restricted	17	58,62	12	34,29	29	45,31
b) I have excluded	1	3,49	3	8,57	4	6,25
c) I have not restricted	9	31,03	11	31,43	20	31,25
d) I have not excluded	2	6,90	9	25,71	11	17,19
fluid intake	women	%	men	%	total	%
a) I have restricted	3	10,34	3	8,57	6	9,38
b) I have not restricted	26	89,66	32	91,43	58	90,63

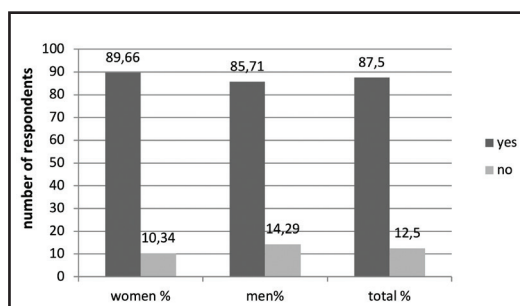
dents reported being instructed for more than 15 minutes but less than 45 minutes. Instruction by a nutritional therapist took on average 90 minutes, and repeated re-educations took one hour.

Despite the dietary instruction conducted, other survey results regarding dietary adherence show the opposite (Table 1).

When asked specifically about the recommendation to consume low protein flour and bakery products (bread and pastries) and whether they followed this recommendation, 50 (72.12%) respondents stated that they had not been informed about low protein flour, bread and pastries. 7 (10.94%) respondents stated that they included such bakery products in their diet and that it was costly to buy this kind of flour, bread and pastries.

The next question concerns the instruction given by a healthcare professional about dietary change after starting dialysis treatment. 56 (87.50%) of the respondents reported that they had been instructed about a haemodialysis diet (Graph 3).

Graph 3 Instructions on a haemodialysis diet



Source: own compilation)

51 (91.07%) people were instructed by a dialysis physician, 12 (21.43%) by a dialysis nurse, 2 (7.14%) looked up the information on the Internet or in books, 1 (1.76%) was thoroughly instructed by a physician from the family, and only 1 (1.76%) was thoroughly instructed by a friend - a nutritional therapist. On average, the instruction lasted 10-15 minutes for 42 (66.07%) respondents, and 17 (26.79%) respondents reported that they were instructed for a few minutes during the visit. Respondents who were attended to by a nutritional therapist or had a physician in the family reported an av-

erage time of 180 minutes or more of education or repeated re-education at an average time of 180 minutes. 8 (12.50%) respondents stated that they had not been educated about a haemodialysis diet.

Other survey questions focused on the consumption of animal protein, especially meat, during dialysis treatment. 54 (84.38%) respondents reported having knowledge about the need for an increased consumption of animal protein, and 10 (15.63%) did not have this information. 60 (93.75%) respondents consumed chicken and turkey the most frequently, 55 (85.94%) pork and 48 (75%) beef, while calf meat had the lowest frequency of 6 (9.34%). Consumption of rabbit meat and pigeon meat was also reported. Of the meat products, ham made up a higher proportion of the meat and was reported the most frequently by 51 (79.68%) respondents, and ham for children was at 25 (39.06%). The probands, of whom there were 6 more (20%) males than females, consumed dry salamis, bratwurst, wiener sausages, frankfurters, pates, cracklings, bacon, sausages and entrails. 23 (35.94%) respondents reported consuming home-made spreads or pates.

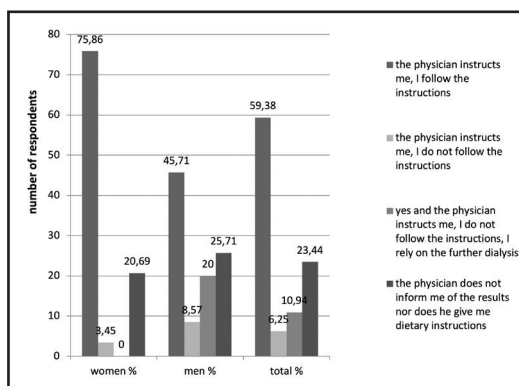
Since it is necessary to restrict/eliminate foods with high potassium content during dialysis treatment, we investigated whether patients practice these restrictions and follow the recommended technological treatment of vegetables and potatoes aimed at reducing potassium. 23 (34.94%) respondents reported that they restricted themselves from consuming these foods only after being alerted by their physician about elevated potassium levels in their blood. 28 (43.7%) said they restrict the consumption of these foods and 13 (20.31%) do not restrict. Unfortunately, 33 (51.56%) of the respondents had not been informed about the technological treatment of potatoes and vegetables in order to leach potassium into the water, a process that reduces the amount of potassium in the food. Only 20 (31.25%) prepare potatoes and vegetables in this way, and 11 (17.19%) do not know this method at all.

We also investigated the respondents' awareness of limiting the intake of foods high in phosphorus (canned foods, milk, dairy products, meat, entrails, whole-grain breads, legumes, nuts, chocolate, cocoa, beer, cola drinks) and egg consumption. 31 (48.44%) patients limit their

intake of high phosphorus foods, 21 (32.81%) do not limit it as they take phosphate binders, and 12 (18.75%) do not limit it. Among dairy products, 53 (82.81%) consume white and fruit yogurt the most frequently, and 48 (76.56%) of the respondents consume cheese with a preference for melted cheeses and fresh cream cheeses. Fresh cheese was predominant among females, and melted cheeses were shown to be more popular with men. Mouldy and smoked cheeses are more likely to be consumed by men. Both sexes also consume cottage cheese, cream, acidophilic milk, kefir and hard cheeses. 41 (64.06%) respondents consume an egg 1-2 times a week, 21 (32.81%) 3-4 times a week and only 2 (3.13%) consume more than 5 eggs a week.

Haemodialysis patients are regularly laboratory checked and dietary changes may be recommended according to the results. Therefore, we wanted to find out if the physician informed the patients about the results and recommends diet modification after the tests (Graph 4).

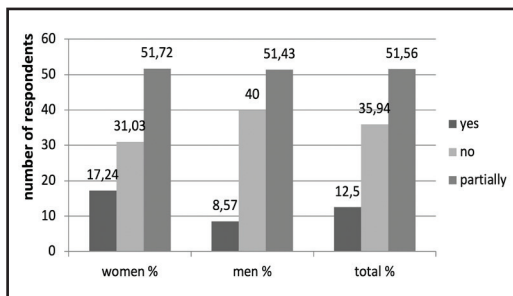
Graph 4 Compliance with dietary instructions provided by the dialysis physician



Source: own compilation)

We asked the probands whether they considered the dietary instruction during kidney disease to be sufficient (Graph 5).

Graph 5 Sufficiency of instructions provided before and after the start of dialysis treatment



Source: own compilation

Since nutrition is a very crucial component in the treatment of CKD, adequate time should be devoted to instructing patients as well as implementing these instructions given by nutritional therapists, who are highly professional health-care professionals. Therefore, we asked patients if they had ever met a nutritional therapist during their hospital stay. Unfortunately, 31 (48.44%) of the respondents said that they did not know what a nutritional therapist was, and 23 (35.94%) said they had not met or sought one out during their hospitalization. Only 10 (15.63%), 7 (24.14%) women and 3 (8.57%) men, had sought one out during their hospitalization.

Discussion

Diet has an essential place in the treatment of patients with CKD. A properly adjusted diet, according to the stage of the disease, comorbidities and form of treatment, can significantly influence the progression of renal disease as well as the overall morbidity and mortality of the patient (6, 7, 8, 3, 4, 5, 9).

In the pre-dialysis period, a low-protein diet with potassium and phosphorus restriction is a key dietary measure (10, 5).

Once patients are enrolled in dialysis treatment, there are significant changes in diet, especially in terms of protein intake, that need to be communicated to the patient so they can reflect this by changing the food they eat. Patients with CKD are at risk of developing sec-

ondary sarcopenia, which is characterised by the progressive loss of muscle mass, strength and function, and it is associated with reduced physical performance, immobility, falls, repeated hospital admissions, a reduced quality of life and even death. It is generally associated with organ failure (11). During the first year of dialysis treatment there is a risk of developing Protein Energy Malnutrition (PEM). Due to insufficient phosphorus and potassium excretion, it leads to hyperphosphatemia and hyperkalaemia, which can be influenced by diet. Malnutrition is a risk factor for higher morbidity, prolonged hospitalizations, increased need for rehospitalizations, prolonged recovery and higher mortality (9). In addition, it reduces immunity (12, 13) and adversely affects some renal functions (14). In the early stages of CKD, its prevalence is similar to the general population, whereas in the later stages up to 40% of patients are at risk of developing malnutrition. It is important to note that PEM can also occur in obese patients (15).

In order to prevent the development and to identify malnutrition early in patients with CKD, it is recommended to assess the nutritional status of the patient prior to their enrolment in the dialysis programme and repeat this at 6-monthly intervals for patients over 50 years of age. With younger patients undergoing haemodialysis therapy for more than 5 years, we monitor their nutritional status every 3 months (16).

In the pre-dialysis period, a low-protein diet with potassium and phosphorus restriction is crucial (3, 4, 5, 17, 18). In our set, patients' awareness of the principles of a low-protein diet was lower at 41 (64.06%) compared with 56 (87.5%) after their enrolment in haemodialysis treatment. There was an absence of information about the need to limit sodium, potassium and vegetable protein, inappropriate meat products, milk and dairy products. Only 7 (10.94%) of the respondents reported having introduced a low protein diet and low protein bakery products into their diets. The reasons people gave for not doing so was that they had not been informed about them or because these things were beyond their financial means.

In practice, it often happens that haemodialysis patients do not have enough information about the dietary measures that are part of the treatment process. In our set, 56 (87.5%) said

they had been informed, but based on their implementation in practice, we found that this instruction was insufficient, especially in terms of limiting phosphorus and potassium intake. Even though the patients increased their protein intake after starting treatment, the composition of protein did not match the dialysis treatment recommendations. The majority consumed meat products, smoked meats, salamis and canned foods and did not eat meat itself. Meat products are not suitable, as they contain small amounts of protein but a lot of fat, salt, phosphates and preservatives (19). More than half of the respondents do not know the correct way to prepare vegetables and potatoes. We attribute the observed deficiencies to the education about these topics, as it is insufficiently long, typically only lasting several minutes, and this information is often not repeated again. This is supported by Šváč's (15) observation that proper patient education cannot be implemented in minutes, but rather in hours, and repetitions are necessary.

A positive finding is the strong awareness of patients about egg consumption. 41 (60%) of the respondents reported consuming eggs only 1-2 times a week due to the high phosphorus content in the yolk, and they do not limit themselves when it comes to egg whites. We were negatively surprised to learn that 39 (60%) of the respondents consumed dark bread, pastries, rye or buckwheat flour, but 15% of them were diabetics. The reasons given were not only about a lack of information, but also about the higher prices of whole-grain breads and pastries. Only 25 (40%) of the respondents consumed white bread, pastries and flour, which are more suitable alternatives for haemodialysis patients in terms of phosphorus content.

A striking, though unfortunately expected finding was that patients do not know or see a nutritional therapist in the hospital, despite the fact that the role of a nutritional therapist is indispensable in most chronic diseases, including kidney disease (20).

When evaluating the education they received, patients reported such shortcomings as the absence of more space for instruction, a lack of information regarding diet, and an insufficient amount of information given to them, requiring them to supplement it through acquaintances of physicians and health professionals or

by studying books and the Internet. Otherwise they would not be given any instruction at all. In addition, they lack direct consultation on their meal plans and consequent adjustments to them. During the dialysis treatment they would like to see more communication from the medical staff with the patient to inform them about the results and dietary adjustments that should be implemented after analysing the laboratory results. They recommend the inclusion of a nutritional therapist and a psychologist while on dialysis. The implementation of these recommendations would result in increased patient awareness as well as the practical application of this information in the dietary management of patients with CKD (21).

Conclusion

Proper nutrition is an important part of the comprehensive management of chronic kidney disease. Dietary measures must take into account the stage of the disease, comorbidities and the current treatment modality. By informing patients early on about the principles of nutrition, it is possible to significantly influence disease progression as well as overall morbidity and mortality.

Conflict of interests

None declared

References

1. NCZI (2022) Available at: https://data.nczisk.sk/statisticke_vystupy/Nefrologia/Nefrologia_v_SR_2021_Sprava_k_publicovanym_vystupom.pdf. [cit. 20.3.2023].
2. GAZDIKOVA K (2021) Kidney disease in a general practitioner's outpatient clinic. In: *General Medicine*. Bratislava: Solen. ISSN 1069-1131. (In Slovak).
3. MACLAUGHLIN H, FRIEDMAN A, IKIZLER T (2022) Nutrition in Kidney Disease: Core Curriculum 2022. In: *American Journal of Kidney Diseases*. vol 79. Iss 3.
4. ZLATOHLAVEK L et al. (2019) *Clinical dietetics and nutrition*. Praha: Current Media, s.r.o. ISBN 978-80-88129-44-8. (In Czech).
5. VIKLICKY O et al. (2013) *Predialysis*. Praha: Maxdorf. ISBN 978-80-7345-356-5. (In Czech).
6. XI W-Z, WU C, LIANG Y-I, WANG L-L, CAO Y-H (2023) Analysis of malnutrition factors for inpatients with chronic kidney disease. *Front. Nutr.* 9:1002498. doi: 10.3389/fnut.2022.1002498.
7. Iorember FM (2018) Malnutrition in Chronic Kidney Disease. *Front. Pediatr.* 6:161. doi: 10.3389/fped.2018.00161.
8. APETRII M, TIMOFTE D, VORONEANU L (2021) Nutrition in Chronic Kidney Disease—The Role of Proteins and Specific Diets. In: *Nutrients*. [online]. Available at: <https://www.mdpi.com/journal/nutrients>.
9. BALOGOVA E, BORONOVA L (2014) Malnutrition as a risk factor for hospitalized patients. In: *Prohuman*. ISSN 1338 - 1415. Available at: <https://www.prohuman.sk/zdravotnictvo/podvyziva-ako-rizikovy-faktor-hospitalizovanych-pacientov>. (In Slovak).
10. STEFIKOVA K, SPUSTOVA V, GAZDIKOVA K et al. (1997) Dietary protein restriction in combination with angiotensin converting enzyme inhibitor improves insulin resistance in patients with chronic renal disease. In: *Int Urol Nephrol*. vol. 29, no. 4:497-507. doi: 10.1007/BF02551119. PMID: 9406010. [online].
11. VRBOVA P, KOLLER T, PAYER J (2019) Sarcopenia in internal medicine. In: *Via practica*. vol. 16, no. 4, p. 58. [online]. [cit. 11. september 2022]. Available at: <https://www.solen.sk/casopisy/via-practica/sarkopenia-v-internej-medicine>. (In Slovak).
12. HRUBY M, MENGEROVA O (2009) *Nutrition in regular dialysis treatment*. 1. Edition. Praha: Forsapi. ISBN 978-80-87250-06-8. (In Czech).
13. ZADAK Z (2002) *Nutrition in intensive care*. Praha: Grada publishing a. s.. ISBN 80-247-0320-3. (In Czech).
14. DEMES M (2017) World Kidney Day draws attention to obesity-induced nephropathy. In: *Medical letters*. 2017, č. 6, s. 11. (In Slovak).
15. SVAC J (2017) World Kidney Day. In: *Review of medicine in practice*. vol. 15, no. 1, ISSN 1336-202X. (In Slovak).
16. FOUQUE D, VENNEGOOR M, WEE P et al. (2007) EBPG Guideline on Nutrition. In: *Nephrol Dial Transplant*. vol. 22. no. 2, p. 45. [online]. [cit. 17. october 2022]. Avail-

- able at: <https://www.nhs.uk/conditions/kidney-disease/treatment/>.
17. BENO I (2008) *Doctrine of nutrition*. Martin: Osveta, spol. s. r. o.. ISBN 80-8063-126-3. (In Slovak).
 18. SVACINA S et al. (2008) *Clinical dietetics. 1. Edition*. Praha: Grada Publishing, a.s.. ISBN 978-80-247-2256-6. (In Czech).
 19. POKOROVA P (2013) *Nutrition of dialysis patients*. 1. Edition. Praha: Forsapi. ISBN 978-80-87250-23-5. (In Czech).
 20. PALKO M (2011) Chronic kidney disease and therapeutic nutrition. *In: Medical letters*. no. 28, p. 9. ISSN -. (In Slovak).
 21. MAGUROVA, MUDRAKOVA E (2009) Patient education in the pre-dialysis period. *In Urology for practice* vol. 10,no. 4, p. 201- 202. [online]. Available at: https://www.solen.cz/artkey/uro2009030010_Edukacia_pacienta_v_preddialyzacnom_obdobi.php. (In Czech).

The use of telemedicine Technologies in the Work of Nurses from the Perspective of Doctors in the Czech Republic

S. Bartlova (Sylva Bartlova)¹, A. Chrdle (Ales Chrdle)^{1,2,3}, I. Chloubova (Ivana Chloubova)¹

Original Article

¹ University of South Bohemia in Ceske Budejovice, Faculty of Health and Social Sciences, Institute of Nursing, Midwifery and Emergency Care, Czech Republic

² Infectious Disease Department, Ceske Budejovice Hospital, Czech Republic

³ Tropical and Infectious Diseases Unit, Royal Liverpool University Hospital, Liverpool, UK

E-mail address:

bartlova@zsf.jcu.cz

Reprint address:

Sylva Bartlova
University of South Bohemia in Ceske Budejovice
Faculty of Health and Social Sciences
Institute of Nursing, Midwifery and Emergency Care,
J. Boreckeho 1167/27
370 11 Ceske Budejovice
Czech Republic.

Source: *Clinical Social Work and Health Intervention*
Pages: 19 – 26

Volume: 15
Cited references: 15

Issue: 2

Reviewers:

Selvaraj Subramanian
SAAaRMM, Kuala Lumpur, MY
Tadeusz Bak
Institute of Economics and Management PWSTE Jaroslaw, PL

Keywords:

COVID-19 Pandemic. Telemedicine Technologies. Doctors. Nurses. Telemedicine. Telenursing.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 19 – 26; DOI: 10.22359/cswhi_15_2_04 © Clinical Social Work and Health Intervention

Abstract:

Aim: To assess the expectations of Czech doctors during the COVID-19 pandemic relative to the ability of nurses to use telemedicine technologies.

Design: descriptive and cross-sectional

Participants: 1,203 physicians were included in the study. The sample is representative in terms of gender, age, and region.

Methods: A representative sociological survey was conducted. A non-standardized questionnaire was used to collect data. The field survey was conducted using standardized face-to-face interviews.

Results: Most physicians agree that nurses can learn how to use telemedicine technologies and can use these technologies to collaborate with physicians in the care of patients. Most respondents (80.7%) believe that doctors support the active involvement of nurses in educating patients with chronic diseases.

Conclusion: Respondents agree that nurses can use e-technologies to acquire further information, participate in online courses, and collaborate with physicians to provide patients with recommendations.

Introduction

In recent years, we have witnessed a revolution in digital health, or e-health, i.e., bringing the benefits of telemedicine technologies to health care and health maintenance. The health sector is undergoing profound changes and moving towards decentralizing services and increased support for outpatient services. The provision of medical care with the help of innovative technologies has an increasingly significant impact on the management and organization of health care. This new scenario highlights the need for highly skilled nurses capable of adapting to modern technologies and methods and the challenges associated with the rapid progress of the digital health revolution [1]. The transition toward e-health was accelerated by the COVID-19 pandemic, which highlighted many problems linked to limited resources in terms of medical staff, medical equipment, and technological tools. The pandemic also pushed healthcare facilities to transform service delivery, patient travel management, and telemedicine [2]. The COVID-19 pandemic led to an exponential increase in the use of telemedicine, which led to radical changes in the organization of healthcare systems and the role of healthcare professionals. Nurses are (and increasingly will be) the cornerstone of communication and coordination between different professional stakeholders (e.g., general practitioners, specialists), patients, and other caregivers [3]. The role of nurses has changed significantly in recent decades, especially during the COVID era. Even the post-COVID era has placed new demands on healthcare workers. One of these requirements is the need to use information and communication skills in a targeted manner to address psychosocial problems (e.g., vaccination hesitancy and fears) and people with chronic physical illness [4]. Digital health pro-

vides inexpensive, quality, and fast health care and plays a crucial role in maintaining patients' physical and mental health. This was especially true during the COVID pandemic when patients were advised to stay home and avoid unnecessary visits to general practitioners [5]. The goal of telenursing, under the umbrella of telemedicine/e-health, is to improve the quality of patient care and safety and speed up access to nursing care by overcoming geographical barriers [6]. In countries where telenursing (especially with mobile phones) is widely available, there is solid and convincing evidence for its effectiveness and benefits [7]. However, as Rutledge and Gustin [8] noted, the increasing need for telenursing will require increased efforts to incorporate this skill set into the curriculum of nursing programs so that nurses are well-prepared to provide this type of care.

This research aimed to assess the expectations of doctors in the Czech Republic (during the COVID pandemic (2019–2022)) relative to the ability of nurses to use telemedicine technologies in their work, how they perceived the work of nurses with medical information, and whether they expected nurses to show a keen interest in adopting digital health/e-health technologies and methods.

Methods

The design of this research was descriptive and cross-sectional. A non-standardized questionnaire was used to collect data, the main aim of which was to find out the opinions of physicians on the role of the nurse and nursing care during a pandemic in the Czech Republic, based on their knowledge of the course of the COVID-19 pandemic in 2019–2022. The questionnaire contained a total of 15 questions. Content and construct validity were confirmed

through a preliminary survey conducted on a sample of 127 respondents (physicians). Not only were the wording and clarity of the questions assessed, but also the coverage of areas of nurses' work and life that could be affected by the COVID-19 pandemic and their relevance. Construct validity was also tested using a test of concurrent comparison of data obtained from the pre-questionnaire to determine expected correlations between selected variables.

Content and construct validity were also confirmed through a preliminary survey conducted on a sample of 127 respondents (doctors), in which not only the formulation and comprehensibility of the questions were assessed but also the coverage and relevance of how the COVID-19 pandemic impacted the work and life of nurses, as well as how it affected them. Construct validity was also evaluated using a parallel comparison test of data from the preliminary questionnaire to determine the expected correlations between selected variables.

As part of the field survey, 1,410 randomly selected interviewers approached doctors with a request for an interview on the issue of nurses' work during the pandemic. Most doctors (1,203 (85.3%)) agreed to the discussion, while 207 (14.7%) doctors refused. The final analysis was based on data from 1,203 physicians.

Doctors were selected from all regions of the Czech Republic. Their composition in terms of individual socio-demographic characteristics was chosen to be representative of doctors in the Czech Republic. The sample parameters were constructed based on data from the National Register of Healthcare Workers, valid as of 19 August 2021.

The questionnaire consists of socio-demographic questions and questions on the impact of the pandemic on nurses' work and life from the doctors' perspectives—this part of the questionnaire used separately closed, semi-open, and open questions to examine critical areas. Most were completed projective questions in the form of statements on individual topics, where the respondent expressed their agreement with the information. A specific area of the questionnaire was devoted to the following: *the readiness of nurses to work during the pandemic, *the course of the pandemic – how nurses experienced the pandemic, *the impact of the pandemic on nurs-

es, *the prestige of the nursing profession, *the future of nursing, and several questions assessing nurses using telemedicine technologies in communication with patients.

Each battery of questions was analyzed by calculating the average values for each sub-question in the storm and then comparing them, calculating the overall score for each battery, and then analyzing their relationships with the selected characters in the questionnaire.

Reliability measurements for each battery of questions were made using the Cronbach alpha test. Results of the Cronbach alpha showed that the internal consistency values for each battery of questions ranged from 0.731 to 0.873, which indicates a high level of internal consistency.

Our field survey used standardized face-to-face interviews with respondents; it took place throughout the Czech Republic from 12/11/2022 to 24/11/2022. Interviews were conducted by 210 professional interviewers from INRES-SONES, v.o.s.

The physicians (1,203) were selected by quota selection from all over the Czech Republic. Their composition in terms of individual socio-demographic characteristics was chosen to be representative of doctors in the Czech Republic based on parameters from the National Register of Healthcare Workers (valid as of 19 August 2021).

Statistical data processing was performed using SASD 1.5.8 (Statistical Analysis of Social Data) and SPSS 28.0.

Outcomes

In terms of gender, 513 (42.6%) men and 690 (57.4%) women were included in the sample. Compared to the population, the deviation from the sample was 0.2%. The results of the research are representative of doctors in the Czech Republic in terms of gender.

The age structure of our sample corresponds well to the parameters of the Czech population; the deviation did not exceed 0.3%. This means that the research results represent doctors in the Czech Republic in terms of age.

Another monitored feature was the region of the Czech Republic where the doctors worked; the reference material was the administrative divisions that have been valid since 1 January 2001. As part of the research, doctors from all

regions of the Czech Republic were approached, and their representation was intended to correspond to the distribution of doctors in the Czech Republic. The deviation in our sample did not exceed 0.1%. Overall, our sample is representative of doctors in the Czech Republic in terms of gender, age, and work region.

Dentists were not included in our research due to the specificity of their specialization. However, the sample did include three groups of physicians, i.e., (1) general practitioners for adults, (2) general practitioners for children and adolescents, and (3) doctors of other disciplines (specialist doctors).

The research also monitored the doctors' length of practice. Doctors with 11 years or more of experience were the best represented.

Unlike age, gender, and region of employment, medical field and length of practice were not factors assessed for representativeness.

In terms of medical care facilities linked to employment, almost one-half (49.3%) of physicians worked in primary outpatient care facilities, 13.9% of respondents worked in specialized outpatient care facilities, and the remaining 36.8% worked in inpatient care facilities. This feature was not assessed for representativeness.

Physicians' views on nurses' ability to use telemedicine technologies in their work were surveyed through a battery of projective questions. Doctors were presented with six basic theses, to which they commented using a standardized scale of four answers to express their degree of agreement with the presented thesis.

The distribution of relative frequencies of individual responses can be seen in Table 1.

The answers "I completely agree" and "tend to agree" were grouped to indicate general agreement with the ability of nurses to use telemedicine technologies in the given areas. In all areas studied, most (80.95%) physicians expressed full or partial agreement with the ability of nurses to use telemedicine technologies. It can be noted that most physicians expressed full or partial agreement with the ability of nurses to obtain new information through the online environment, including online courses (85.2%) and, in cooperation with physicians, to create recommendations for patients with chronic diseases (84.6%). Most (82.5%) physicians agreed in whole or in part that nurses can collaborate with physicians to use telemedicine technologies to make recommendations for infectious disease patients, and 81.3% of physicians agreed that nurses can use telemedicine technologies to communicate with patients (e.g., online counseling). While still a majority of doctors, general agreement on the ability of nurses to educate chronically ill patients using telemedicine in accordance with the competencies of a general nurse (76.4%) and their ability to monitor chronically ill patients online in accordance with the competencies of a general nurse (75.7%) was slightly less than the other abilities.

More precisely, the opinion of doctors on the ability of nurses to use telemedicine technologies in their work can be expressed through a measure of mean values. Their comparison is made

Table 1 Doctors' views on the ability of nurses to use telemedicine technologies in their work

Doctors' opinions on nurses' ability to use telemedicine technologies	I completely agree	I tend to agree	I tend to disagree	I completely disagree
In communication with patients	24,8	56,5	16,1	2,6
In the acquisition of new information	27,6	57,6	12,9	1,9
In the formation of recommendations for patients with chronic diseases	26,9	57,7	13,5	1,9
In the formation of recommendations for patients with infectious diseases	25,9	56,6	14,3	3,2
In online education of chronically ill patients	20,7	55,7	19,1	4,5
Online monitoring of chronically ill patients	21,8	53,9	19,0	5,3

possible by the fact that a standard four-level scale of responses with the grades “I completely agree,” “tend to agree,” “tend to disagree,” and “completely disagree” was used to assess the level of perceived changes. We have chosen the arithmetic mean as the key mean, where the smaller its size, the greater the degree of agreement with the thesis. The size of the measured mean values can be seen in the following table (Table 2).

A comparison of median values shows that most physicians agree with nurses’ ability to use telemedicine technologies, including online courses, to learn new information and, in collaboration with physicians, to make recommendations for patients with chronic diseases using telemedicine technologies. On the other hand, doctors were a bit less sure about the ability of nurses to use telemedicine technologies to educate chronic patients in accordance with general nursing competencies and the ability of nurses to use telehealth technologies to monitor chronically ill patients in accordance with general nursing competencies. The variance and standard deviation indicate that the opinion of physicians regarding the use of telemedicine for online monitoring of chronically ill patients was the most diverse.

Most physicians agreed that nurses can learn new information online to create recommendations (in cooperation with doctors) for patients with chronic and infectious diseases.

The questionnaire also investigated the interest of physicians in having nurses involved with the education of patients with chronic and acute diseases using electronic systems (Table 3).

Based on the summation of the answers “I completely agree” and “tend to agree”, expressing the degree of interest of doctors in the involvement of nurses in the education of patients using electronic tools, the vast majority of doctors expressed interest in the involvement of nurses in both areas of education (i.e., acutely and chronically ill patients), with a slight tendency to prefer the involvement of nurses in the education of chronically ill patients (80.7% vs. 77.1%). In both cases, however, the interest of physicians in the active involvement of nurses in the education of patients using telemedicine technologies far outweighs the lack of interest (78.9% vs. 21.1%).

Most physicians expect to see more and more interest from physicians in the active involvement of nurses in the education of patients with chronic and acute diseases using telemedicine technologies.

Table 2 Doctors’ views on nurses’ ability to use telemedicine technologies in their work – comparison of mean values

Doctors’ opinions on nurses’ ability to use telemedicine technologies	N	Mo	Me	Average	s ²	s
In communication with patients	1203	2	2	1.965	0.511	0.715
In the acquisition of new information	1203	2	2	1.898	0.469	0.685
In the formation of recommendations for patients with chronic diseases	1203	2	2	1.904	0.471	0.686
In the formation of recommendations for patients with infectious diseases	1203	2	2	1.947	0.526	0.725
In online education of chronically ill patients	1203	2	2	2.074	0.572	0.756
In online monitoring of chronically ill patients	1203	2	2	2.079	0.615	0.784

Mo = mode; Me = median; s² = variance; s = standard deviation

Discussion

A comparison of median values shows that most physicians agree with nurses' ability to use telemedicine technologies, including online courses, for learning new information and, in collaboration with physicians, to make recommendations for patients with chronic diseases; this is also true regarding infectious diseases. Most physicians (80.7%) are of the opinion that physicians will be increasingly interested in the active involvement of nurses in the education of patients with chronic diseases (using various telemedicine technologies). Telemedicine technologies in the twenty-first century offer a patient-centered approach and protect patients and healthcare professionals in the event of another pandemic [9].

The development of these technologies is in line with the Regional digital health action plan for the WHO European Region 2023–2030 [10]. The World Health Organization (WHO) defines telemedicine as “the provision of telehealth services by all health professionals using information and communication technologies to exchange information on diagnosis, treatment, and prevention of diseases and injuries, research and evaluation, and in the further training of health professionals, all in order to improve the health status of populations, individuals and communities” [11]. Certain shortcomings in the preparedness of the health system in the context of the demands of care during the pandemic are also highlighted in the WHO report [12], which mentions the need for clearly defined emergency mechanisms. However, it also repeatedly emphasizes the management of non-infectious dis-

eases and preventing risky behaviors (such as alcohol abuse and tobacco use). Furthermore, this report highlights the impact of COVID-19 on people's mental health and health inequalities.

In light of the WHO action plan, we were interested in the opinions of doctors on the use of telemedicine by nurses since doctors in the Czech Republic already had considerable experience with telemedicine during the COVID period. Physicians in our study indicated that nurses can use telemedicine technologies, including online courses, to learn new information and, in collaboration with physicians, make recommendations for patients with chronic and infectious diseases using telemedicine.

However, further increasing the readiness of nurses to adopt telemedicine requires an integrated approach, including a combination of technical knowledge, management skills, and communication skills [3]. Specific subjects need to be added to nursing curriculums to promote adopting new communication and technological skills that enable health professionals to use telemedicine technologies effectively.

Telehealth technology brings numerous benefits, especially in non-acute/routine care and in cases where services do not require direct patient-provider interaction, e.g., the provision of psychological services [13]. Remote care reduces resource consumption in health centers and improves access to care while minimizing the risk of direct human-to-human transmission of infectious agents [14].

Most physicians agree that nurses can learn new information online to make recommendations (in cooperation with physicians) for pa-

Table 3 The interest of physicians in involving nurses in educating chronic and acute patients using telemedicine technologies.

Physicians' interest in the use of telemedicine technologies by nurses	I completely agree	I tend to agree	I tend to disagree	I completely disagree
Greater interest of physicians in the involvement of nurses in the education of chronically ill patients	22.9	57.8	15.3	4.0
Greater interest of doctors in involving nurses in the education of sick acute patients	21.6	55.5	19.0	3.83

tients with chronic and infectious diseases. Our physician survey indicates that we can expect increasing interest from physicians regarding the active involvement of nurses in the education of patients with chronic and acute diseases using telemedicine and e-health systems.

Telemedicine has significant benefits, e.g., reducing patient costs, improving the efficiency of health systems by reducing overcrowding in secondary and tertiary facilities, and reducing the risk of transmission of COVID-19. However, more research is needed to assess the long-term outcomes of telemedicine, e.g., provider and patient satisfaction and financial sustainability [15].

Our research sought the opinions of physicians regarding the ability of nurses to contribute to the creation of virtual educational materials for patients of general practitioners in outpatient clinics for adults and to verify the potential use of virtual environments for counseling. These services would be delivered by nurses as an acute health care tool for providing education when discharging patients to the home environment and as motivation for better cooperation between patients and nurses regarding primary care. Since telenursing is still a new method in the Czech Republic, intensive research in this field is still needed to prove its effectiveness and how it can be best used. To this end, the opinions of doctors on the issue are essential.

Conclusion

Telenursing is still a relatively new method for nurses in the Czech Republic, so knowing physicians' opinions on this issue is necessary. Physicians agree with the ability of nurses to acquire further information, use the electronic environment, including online courses, and make recommendations for patients with chronic and infectious diseases in collaboration with physicians in the electronic environment. Nurses would play essential roles in these virtual environments. These telemedicine concepts aim to improve health delivery during epidemics/pandemics, improve health care for the chronically ill, and offer counseling and education for lifestyle diseases.

Conflicts of Interests

The authors declare that no conflicts of interest exist.

Funding

The study was supported by the Ministry of Health of the Czech Republic, Grant No. NU 21-09-00300.

Ethical approval

The research was conducted per ethical principles and was approved by the relevant ethics committee on 15. 6. 2020.

References

1. PHILLIPS TA, MUNN AC, GEORGE TP (2020) Assessing the impact of telehealth objective structured clinical examinations in graduate nursing education. *Nurse Educ.* 2020; 45 (3):169–172. <https://doi.org/10.1097/nne.0000000000000729>.
2. MAHONEY MF (2020) Telehealth, telemedicine, and related technologic platforms: current practice and response to the covid-19 pandemic. *Journal of Wound, Ostomy, and Continence Nursing.* 2020; 47 (5):439–444. <https://doi.org/10.1097/WON.0000000000000694>.
3. ISIDORI V, DIAMANTI F, GIOS L, MALFATTI G, PERINI F, NICOLINI A, LONGHINI J, FORTI S, FRASCHINI F, BIZZARRI G, BRANCORSINI S, GAUDINO A (2022) Digital Technologies and the Role of Health Care Professionals: Scoping Review Exploring Nurses' Skills in the Digital Era and in the Light of the COVID-19 Pandemic. *JMIR Nursing* 2022; 5(1):e37631, <https://doi.org/10.2196/37631>.
4. VASILIOU VS, PHILIA I, DROSATOUC, MITSI E, TSAKONAS I (2023) LeadinCare: A Qualitative Informed Digital Training Platform Development to Increase Physicians' Soft Communication Skills After COVID-19. *Psychol, Health & Med.* 2023; 2, 1-16.
5. BUYL R, BEOGO I, FOBELETS M, DELETROZ C, VAN LANDUYT P, DEQUANTER S, et al. (2020) E-health interventions for healthy aging: a systematic review. *Syst Rev.* 2020, 9. <https://doi.org/10.1186/s13643-020-01385-86>.
6. PURABDOLLAH M, GHASEMPOUR M

- (2020) Tele-Nursing New Opportunity for Nursing Care in COVID-19 Pandemic Crisis. *Iran J Public Health*, 2020; 49, (Suppl.1): 130-131. <https://doi.org/10.18502/ijph.v49iS1.3685>.
7. SOUZA-JUNIOR VD, MENDES IA, MAZZO A, GODOY S (2016) Application of telenursing in nursing practice: an integrative literature review. *Applied nursing research: ANR*, 2016, 29, 254–260. <https://doi.org/10.1016/j.apnr.2015.05.005>.
 8. RUTLEDGE CM, GUSTIN T (2021) Preparing Nurses for Roles in Telehealth: Now is the Time! *OJIN: The Online Journal of Issues in Nursing* 2021; 26, 1, Manuscript 3. <https://doi.org/10.3912/OJIN.Vol26No01Man03>.
 9. KRUSE CS, KROWSKI N, RODRIGUEZ B, TRAN L, VELA J, BROOKS M (2017) Telehealth and patient satisfaction: a systematic review and narrative analysis. *BMJ Open* 2017; 7 (8):e016242. <http://dx.doi.org/https://doi.org/10.1136/bmjopen-2017-016242>.
 10. WHO (2022) Seventy-second Regional Committee for Europe: Tel Aviv, 12–14 September 2022: *Regional digital health action plan for the WHO European Region 2023–2030*. Geneva, 2022. Available z: <https://www.who.int/europe/publications/i/item/EUR-RC72-5>.
 11. WHO (2019) Recommendations on digital interventions for health system strengthening. Geneva, 2019. Available na: www.who.int/publications/i/item/9789241550505.
 12. WHO (2021) The European Health Report 2021. Taking stock of the health-related Sustainable Development Goals in the COVID-19 era with a focus on leaving no one behind. Copenhagen: *WHO Regional Office for Europe*; 2022b. Licence: CC BY-NC-SA 3.0 IGO.
 13. FORTNEY JC, PYNE JM, EDLUND MJ, WILLIAMS DK, ROBINSON DE, MITTAL D, HENDERSON KL (2007) A randomized trial of telemedicine-based collaborative care for depression. *J Gen Intern Med*. 2007; 22 (8):1086-93. <https://doi/10.1007/s11606-007-0201-9>
 14. CHARLES BL. *Telemedicine can lower costs and improve access*. (2000) *Health Financ Manage*. 2000; 54 (4):66-9. PMID: 10915354.
 15. VERMA N, BUCH B, TARALEKAR R, ACHARYA S (2023) Diagnostic concordance of telemedicine as compared to face-to-face care in primary health care clinics in rural India: a randomized crossover trial. *Form Res*. 2023; 11. <https://doi.org/10.2196/42775>. Online ahead of print. PMID: 37130015.

Why Are Some Drugs in Short Supply?

M. M. Costello (Michael M. Costello)¹, D. West (Daniel West)¹, E. Grey (Eva Grey)²

¹ University of Scranton PA, USA

² St. Elizabeth University, Bratislava, Slovakia

Original Article

E-mail address:

michael.costello@scranton.edu

Reprint address:

Michael M. Costello
University of Scranton
PA
USA

Source: *Clinical Social Work and Health Intervention*
Pages: 27 – 31

Volume: 15
Cited references: 13

Issue: 2

Reviewers:

Johnson Nzau Mavole
Catholic university of Eastern Africa, Nairobi, KE
Jirina Kafkova
MSF, Freetown, SL

Keywords:

Cancer Drugs. Drug Shortages. Re-exportation.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 27 – 31; DOI: 10.22359/cswhi_15_2_05 © Clinical Social Work and Health Intervention

Abstract:

Traditional market theory says that efficient markets will supply the quantity of a good or service demanded at a satisfactory price that clears the market by assuring that the quality demanded is equal to the quantity supplied. Markets are sometimes inefficient when supply does not meet demand, as is the current case with certain cancer medications and other frequently ordered pharmaceuticals.

Introduction

Private markets produce a significant portion of the world's pharmaceuticals. Drug manufacturers make use of their expertise to provide the pharmaceuticals patients require for their medical treatment.

Economic theory would say that markets are behaving efficiently when the quantity supplied to the market is equal to the quantity demand-

ed and the market is said to have cleared. But markets do experience inefficiency on some occasions when the available supply of medication does not meet the demand for that drug.

Discussion

Although such inefficiencies in the supply of medications are known to occur, when cancer medications fall victim to such supply shortages,

the results can be problematic for treating practitioners and can have deadly consequences for cancer patients.

As of May 23, 2023, the US Food and Drug Administration listed 15 cancer drugs on its drug shortage list (Llamas, 2023). Among the cancer drugs in short supply are Carboplatin and Cisplatin. A late May survey by the National Comprehensive Cancer Network (NCCN) indicated that 93% of surveyed US cancer centers reported a shortage of Carboplatin and 70% reported a shortage of Cisplatin (Horvath, August 8, 2023).

In an interesting demonstration of international drug diplomacy, two Chinese pharmaceutical firms are coordinating with the US Food and Drug Administration (FDA) to increase the availability of the injectable drug due to the shortage (Qilu Pharmaceutical, May 24, 2023).

Medical oncologists claim that these shortages are affecting patient treatment and could shorten the lives of some cancer patients (Yong, 2023). Substituting other medications is not always a workable solution, especially if the medications in short supply have proven their effectiveness over time. Other complicating factors include the stage of the patient's cancer, the side effects of substituted medicines and the clinical effectiveness of the originally prescribed medications.

The inadequate supply of certain cancer medications is only part of a larger issue. How is it that established medications are found to be in short supply in this day and age? If private markets are heralded as the most efficient means of meeting patient needs, why are needed medicines so difficult to obtain?

According to Marta Wosinska, a health economist at the Brookings Institution:

“...shortages are caused by internally generated problems, created within the market because of its structure. In other words, ‘they’re self-inflicted wounds’.” (Yong, *ibid.*)

Reasons for shortages in medicine supplies

Shortages in drug supplies for patients are both a health and social problem. They can be caused by increased consumption, production problems, distribution issues and problematic laws and regulations. The Slovak minister of

health, Michal Palkovič, stated that approximately 27% of Slovak patients over the age of 65 have unnecessary and excessive prescriptions for medications (Rezort zdravotníctva, 2023).

The world recently experienced the increased consumption of certain drugs during the COVID-19 pandemics such as inhalation corticoids, which were used in support therapy, as well as other drugs that were considered effective against the disease. Production problems may include shortages in supplies of precursors or chemicals necessary in the production process, detected contamination and temporary retraction from the market. Distribution of drugs and other goods was hampered during the COVID-19 measures, bringing about negative impacts on transportation, and this is commonly seen in areas where there are natural catastrophes and military conflicts.

Regulations to decrease the cost of medicines as a reason for shortages in drug supplies in the Slovak Republic

Sometimes drug shortages are caused or aggravated by laws and regulations. In the Slovak Republic, the cost of medicines is responsible for almost 30% of all costs for healthcare (Rážova, 2017). Therefore, there have been several attempts to decrease their cost. One of them was a law stating the price of drugs in Slovakia has to be among the lowest prices in the European Union.

Until December 2011, the price of medicines was set at a maximum of the average of the six lowest prices in the European Union. From December 2011, the maximum manufacturer's price was set at the second lowest price in the EU. This measure caused a significant increase in the re-export of medicines from Slovakia, causing a shortage of medicines for Slovak patients.

The subsequent modification of the law after January 2013 brought about two changes. The manufacturer's maximum price was set as the average of the 3 lowest prices in the EU Member States, and additionally, distributors were obliged to report planned re-exports of medicines to the State Institute for the Control of Medicinal Products (ŠÚKL) (Novák, 2016). Under Act No 363/2011 Coll., all categorized medicinal products are subject to referencing,

and their price is approved at the level of the European reference price, meaning the average of the three lowest prices of a given medicinal product in other European countries (Zákon č. 363/2011 Z. z.).

This law, which aimed to decrease the cost of medicines in Slovakia, had a negative effect on their availability for Slovak patients. It led some speculators to re-export cheaper drugs from Slovakia and sell them for higher prices in other countries. Re-export means that medications that are usually produced in a different country and are exported from there to Slovakia are subsequently re-exported to yet another country. The missing medications were mostly from the generally more expensive groups: cytostatics, immunosuppressants, immunoglobulins and antidepressants. At the same time, they were medications that were often irreplaceable by other medicines. For instance, oncological therapies are often taken long term, and they are based on verified protocols with specific combinations of certain medicines. Such shortages harmed groups of very vulnerable patients.

Attempts to solve the problem hampered by EU legislation

To solve the problem, Slovakia introduced the monitoring of medicine exports in 2013. If there was a shortage of a medicine, ŠÚKL (State Institute for Control of Medicinal Products) had the power to ban the export.

However, the European Commission considered this legislation to be in conflict with the free movement of persons and goods within the European Union. The Commission initiated infringement proceedings against Slovakia regarding the ban on the re-export of medicines in 2015.

The new legislation

This led to new legislation that permitted the re-export of medicines, but an attempt was made to regulate it through the stakeholders included in the process of production and different levels of distribution. The main stakeholders are **the holder of a categorized medicinal product registration**, wholesale distributors of categorized medicinal products and public pharmacies. The amended law that came into effect in 2017 stated that the **patient** has the right to get their

prescribed medicine within 24 hours from any pharmacy.

Pursuant to Section 9(1) of Act No 363/2011 Coll., the **holder of a categorized medicinal product registration** is obliged to ensure that the medicinal product is available on the market in sufficient quantities for the entire duration of the inclusion of the medicinal product in the list of categorized medicinal products. A sufficient quantity is an amount sufficient to cover the estimated monthly consumption of the medicinal product in the Slovak Republic (Slaný, 2017). Furthermore, the new law forbade the resale of medicines by pharmacies to any **wholesale distributor**, except the one that the pharmacy bought the medicine from. Previously when the pharmacies had resold medicines to wholesale distributors, some distributors re-exported them out of the country for profit. The legislation also obliged all stakeholders to keep records about the sale of medicines so it could be tracked. Exports of categorized medicinal products were only allowed to be made to the holder of a categorized medicinal product registration and the authorized manufacturer of the exported medicinal product (Slaný, 2017).

The legislators believed that these new regulations would make sure that there were no shortages of medicines in Slovakia.

The problem continues in 2023

Unfortunately, shortages of medicines caused by their re-export are a problem even today. In July 2023 there were 29 pharmacies involved in the illegal re-export of medicines. The director of ŠÚKL, Peter Potůček, said that most of them were biologics, the production of which is more expensive and thus the price abroad is higher than in Slovakia (ŠÚKL, 2023). The price of the medicines was above 7 million euro. There were several mechanisms used for illegal re-exports: falsified prescriptions, repeated use of the same prescriptions and the misuse of a form by which a distributor requests the removal of a medicinal product from the list of categorized medicinal products (Rezort zdravotníctva, 2023).

The problem with re-exporting also has impacts on shortages of certain medications in the Czech Republic, mainly medicines to treat high blood pressure, heart failure, breast cancer, diabetes, epilepsy, respiratory problems and blood

thinner. Some of it was happening directly from the Czech Republic to another country where the medication is more expensive, and some of the illegal trade was going through distributors from Slovakia. Pharmacies resold the medications despite the fact that they are not allowed to do so in the Czech Republic. Sometimes they bought the medications, did not register them in their electronic system and subsequently resold them (Janoušek et al., 2023).

Both the Czech Republic and the Slovak Republic are increasing the penalties for breaches of the laws and are considering further changes in regulations to prevent medicine shortages.

The appeal of churches to moral responsibility

The Bioethics Subcommittee of the Conference of Bishops of Slovakia, together with the Evangelical Church of the Augsburg Confession and the Ecumenical Council of Churches, created a common opinion that appeals to all those who deal with medicines at any level - manufacturers, registration holders, wholesale distributors, pharmacists and pharmacy care providers - to refuse to participate in any step that is part of the chain leading to the export of medicines and that deepens the unavailability of medicines for Slovak patients. Since such activities directly endanger the health and lives of very vulnerable patients, they are morally unacceptable (Stanovisko k problému reexportu liekov zo Slovenska, 2023).

Conclusion

If we assume that Wosinska is correct in her observation that drug shortages are a function of market structure, how might governmental and market forces influence the desired availability of medications in short supply? A few suggestions:

- Use government influence to improve the availability of ingredients required in pharmaceutical manufacturing and limit re-exportation to other nations. Manufacturers often cite the short supply of needed ingredients as a reason for being unable to meet market demand. When drugs are re-exported to other nations, domestic supply is limited, which may lead to increased prices for the drugs that remain available.

- Offer tax incentives to certain drug manufacturers and distributors who may be restraining supplies due to smaller margins on needed drugs.
- Seek to minimize the influence of pharmacy benefit managers in western nations. Such practices may be expected to impact the pricing of certain pharmaceuticals in international markets, thereby leading to shortages (Walker, 2023).

References:

1. HORVATH J (2023) Providers Struggle with Lack of Cancer Drugs. *The Sunday Times*, Scranton, PA. August 6, 2023, p. 1.
2. JANOUSEK A, STORKAN M, MIKEL J (2023) Drugs worth hundreds of millions for Czech patients are disappearing illegally across the border. The route leads through Slovakia https://www.irozhlaz.cz/zpravy-domov/leky-nelegalni-vyvoz-nedostatek-sukl-irena-storova_2305110500_vik.
3. LLAMAS M (2023) Record Drug Shortages put Cancer Patients at Risk. www.drugwatch.com/news, Retrieved August 10, 2023.
4. NOVAK I (2016) (Legal aspects of the categorisation process of medicines in the Slovak Republic.) *Verejné zdravotníctvo* [online]. 2016, vol. 12, no. 1, pp. 1 - 60. Available online: <http://verejnezdravotnictvo.szu.sk>. ISSN 1337-1789.
5. Qilu Pharmaceuticals Co. Ltd. (2023). Temporary Importation of Cisplatin Injection with non-US Labeling to Address Drug Shortage. qilu-pharma.com. Retrieved August 11, 2023.
6. RAZOVA H (2017) Reexport is a lucrative business. It can be prevented. Association for the Protection of Consumers of Medicines. <https://www.aosl.sk/reexport-jelukrativna-zivnost-da-sa-mu-zabranit/>.
7. Health ministry seeks effective tools to combat drug shortages. (2023) <https://www.health.gov.sk/Clanok?mzsr-lieky-reexport>.
8. SLANY J (2017) Availability of categorised medicines after the restriction of their re-export by the amendment to the Medicines Act. *Prakt. lekarn.*, 2017; 7(1): 38–40.
9. Opinion on the problem of re-export of medicines from Slovakia. (2023) <https://www.>

- kbs.sk/obsah/sekcia/h/dokumenty-a-vyhlasenia/p/dokumenty-komisii-a-rad-kbs/c/stanovisko-k-problemu-reexportu-liekov-zo-slovenska.
10. SUKL (2023) The state institute for drug control (ŠÚKL) confirmed illegal re-export of medicines in other pharmacies. https://www.sukl.sk/hlavna-stranka/slovenska-verzia/media/tlacove-spravy/statny-ustav-pre-kontroly-lieciv-sukl-potvrdil-nelegalny-re-export-liekov-v-dalsich-lekarnach?page_id=6179.
 11. TASR (2016) The possibility of banning the export of medicines from Slovakia will end. <https://euractiv.sk/section/podnikanie-a-praca/news/moznost-zakazu-vyvozu-liekov-zo-slovenska-skonci/>.
 12. WALKER J (2003) Insurers Mark Up Prices of Generic Drugs. *The Wall Street Journal*. September 12, 2003, p. 1.
 13. YONG E (2023) The Cancer-Drug Shortage Is Different. *The Atlantic*. June 26, 2023. Act No 363/2011 Coll. on the scope and conditions of reimbursement of medicinal products, medical devices and dietetic foodstuffs under public health insurance and on the amendment and amendments to certain acts.

Organizational Culture of Health Care Facility as a Predictor of the job Satisfaction of Nurses

V. Hulkova (Miera Hulkova)¹, M. Kilikova (Maria Kilikova)², S. Sabo (Stanislav Sabo)²

¹ Department of Nursing, Faculty of Health, Alexander Dubcek University of Trencin, Trencin, Slovakia

Original Article

² St. Elizabeth University of Health and Social Sciences Bratislava, Slovakia

E-mail address:

m.kilikova@gmail.com

Reprint address:

Maria Kilikova
St. Elizabeth University of Health and Social Sciences Bratislava
Detached Office Bl. Sary Salkahazi
Kosu Schoppera 22
04 801 Roznava
Slovakia

Source: *Clinical Social Work and Health Intervention*
Pages: 32 – 36

Volume: 15
Cited references: 14

Issue: 2

Reviewers:

Roberto Cauda
Institute of Infectious Diseases, Catholic University of the Sacred Heart, Rome, IT
Daria Kimuli
Catholic university of Eastern Africa, Nairobi, KE

Keywords:

Organizational Culture. Job Satisfaction. Nurses.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 32 – 36; DOI: 10.22359/cswhi_15_2_06 © Clinical Social Work and Health Intervention

Abstract:

Objective: To find out whether the organizational culture of a healthcare facility has an impact on nurses' job satisfaction.

Methods and participants: Data were collected using a self-constructed questionnaire from September to November 2022, categorized and statistically processed. 136 nurses participated in the study. The largest number of nurses was under the age of 29 (67%) and with a bachelor's degree (77%).

Results: The organizational culture of a healthcare facility had a significant impact on nurses' job satisfaction. Only 36.7% of nurses were satisfied with the organizational culture of the health facility in which they were employed at the time of the study. 63.2% of nurses consider working conditions, relationships at the workplace and communication in the team

or with a superior as factors that significantly influence their satisfaction or dissatisfaction with work, and they perceive the organizational culture of the organization accordingly.

Conclusion: The level of organizational culture of a healthcare facility significantly predicts nurses' job satisfaction.

Introduction

Organizational culture includes the norms, visions, beliefs, philosophy and values that influence the interaction between people. It also includes the behavior of the employees in an organization and how they approach their work. All of this influences their productivity and engagement. The job satisfaction of employees includes and depends on the employees' attitudes and feelings about the job, working conditions, relationships within the team, remuneration and the career development perspective. Factors affecting job satisfaction can be divided into four categories: organizational factors, environmental factors, the nature of the work and individual factors (1). Plevová (2) also states that the level of job satisfaction depends on several factors: the nature of work, the salary, feedback, the possibility of self-realization and the leadership style. Employee satisfaction is largely influenced by the supervisor, who co-creates the social climate at the workplace, relationships in the team – both formal and informal – friendships, conflicts, disagreements and the work environment.

The compliance of employees' values with the organization's values is considered to be a significant factor in determining the level of employees' work attitudes, such as with work engagement and job satisfaction. The more employees accept the organization's values and beliefs, the stronger the organizational culture and the more positive influences the work and attitudes of the employees' bring. Therefore, organizational culture is considered to be a basic tool for forming the behavior and working attitudes of employees. An organizational culture that provides innovative procedures and career opportunities and has set remuneration rules, a good reputation and effective communication among the staff significantly contributes to the work engagement of employees. The presence of feedback and work autonomy are fundamental factors that form the level of work engagement in an organization.

Nursing is the profession that is the most involved in direct patient care. Nurses are an important group of employees that can influence the overall culture in a healthcare organization, both positively and negatively. However, existing practice indicates a low level of nurse engagement due to a lack of autonomy, low salaries and insufficient feedback (3).

Aim of the research

To find out whether the organizational culture of a healthcare facility has an impact on nurses' job satisfaction.

Sample and Methods

The study was carried out with nurses from September to November 2022 using a self-constructed questionnaire. All data were coded, entered and analyzed using InStat® software, version 3.02, GraphPad Software, Inc., USA, and Statistica®12 software, StatSoft, USA. Descriptive results expressed as standard deviation, median, minimum and maximum were conducted for all parameters obtained. The Chi-square test (χ^2) was used to measure the possible association between nominal variables. The comparison of two independent variables was performed using the Mann-Whitney test, and the differences between the three subsets were verified using the Kruskal-Wallis analysis. The relationship between the variables was calculated with the non-parametric Spearman correlation coefficient, indicating the 95 percent confidence interval and the p-value of the test criterion of its difference from the zero value. We used $\alpha \leq 0.05$ as a criterion for statistical significance.

Results and Discussion

136 nurses filled in the questionnaire. The largest number of nurses was younger than 29 years (67%). Most of them (77%) had the first degree of university education. Organizational culture significantly affects nurses' job satisfaction or dissatisfaction. In the group of nurses involved, only 36.7% of the respondents were satisfied

with the organizational culture of the healthcare facility. However, 43.4 % of the nurses could not assess the level of organizational culture of the health facility in which they were employed. Only 26.5% of the nurses indicated a high level. We were interested in whether the age of the nurses correlates with the assessment of satisfaction with the level of organizational culture (Table 1), but we noted that the age of the respondents is not related to their assessment of the organizational culture ($p>0.05$). Differences in the age structure are not statistically significant enough to be considered causally related to the degree of satisfaction with the organizational culture.

The results of our study are in agreement with the findings of numerous authors. Giovanni and Ahsan (4) investigated the influence of organizational culture on job satisfaction using a sample of 131 nurses. Organizational culture affected the nurses' work motivation and job satisfaction. In a study involving the 200 nurses, the author's team (5) analyzed the impact of organizational culture, career development and job satisfaction on nurses' performance. The positive direct influence of organizational culture on nurses' performance and job satisfaction was confirmed. The findings of this study confirmed that organizational culture has a significant relationship with overall employee job satisfaction. The sample for the study of the next author's team (6) consisted of 527 nurses. The study confirmed the direct connection between organizational culture and nurses' job satisfaction. Bolton's (7) research focused on the correlation between organizational culture, managers' behavior and employee job satisfaction. The results showed that organizational culture had an impact on job satisfaction and employee engagement. In a descriptive, analytical study, the group of authors (8) analyzed the relationship between

the perception of organizational culture and the results with 280 nurses. The results showed that nurses did not perceive the organizational culture of healthcare facilities positively. The average score of the organizational culture perception scale was 2.63 ± 0.55 .

We were interested to see what the nurses in our study appreciate the most in the organizational culture of healthcare facilities. The most valued were interpersonal relationships, followed by working conditions and workplace communication. The management's leadership is the least significant for nurses. The nurses' decision to terminate the employment relationship would be influenced by the work team (43.4%), the psychological burden (28%) and relationships with superiors (21%). 63.2% of nurses consider relationships at the workplace, working conditions and communication in the team or with a superior as the factors that significantly influence their satisfaction or dissatisfaction with work, and they perceive the organizational culture based on these points. Table 2 shows the statistical significance of the results, but at the cost of close (non)fulfillment of the number requirements for non-parametric tests ($n>5$). With a moderate interpretation, however, we can state that of the mentioned factors, we find the highest average values and medians in the organizational factors, i.e., satisfaction/dissatisfaction with working conditions and relations with superiors and in the collective.

The results of a study (9) performed on a sample of 452 nurses confirmed a significant relationship between the system of values and beliefs and the level of job satisfaction. Job satisfaction is influenced by three aspects: the meaningfulness of the work, the degree of responsibility for the results of the work and the feedback related to the results. The findings indicate a significant positive association between the innovativeness

Table 1 Satisfaction of the nurses with the organizational culture depending on age

Category	<i>n</i>	\bar{x}	<i>sd</i>	x_m	<i>min.</i>	<i>max.</i>	<i>p</i>
No	24	1,42	1,02	1	1	4	0,25
Partly	62	1,66	0,97	1	1	4	
Yes	50	1,74	1,10	1	1	4	

Legend: *n* – No. of participants, \bar{x} – arithmetical mean, *sd* – standard deviation x_m – median, *min.* – minimal value, *max.* – maximal value, *p* – value of testing criteria of the Kruskal-Wallis test

of the organizational culture and the level of nurse job satisfaction. Nurses are satisfied with their work in organizations with innovative elements. Communication and relations between employees are also important factors. Understanding the vision and mission of the organization has the least significant effect on the level of nurse job satisfaction. According to Gurková (10), job satisfaction is the most important predictor of nurses not only staying at their current workplace, but in the nursing profession in general. The research group consisted of 556 nurses, and the processed answers showed that Slovak nurses reported the highest satisfaction with relations with colleagues and the lowest with salary. 110 nurses participated in the study by the author's team (1). 71.8% of nurses were not satisfied with the salary evaluation. 32.7% of nurses were satisfied with interpersonal relationships. Only 16.4% of respondents reported high job satisfaction. The results of the study confirmed a statistically significant correlation between organizational culture and job satisfaction. In the authors' study (11), 80% of nurses from a sample of 130 respondents were dissatisfied with their salary, and 60% of nurses were dissatisfied with the possibility of career growth. Culture has a significant impact on nurses' job satisfaction. The results of another study (3) showed that organizational culture significantly affects the level of employee burnout. The level of job satisfaction among nurses in Greece was 3.55 out of 5. The dominant type of organizational culture in the monitored hospitals in Greece was hierarchical. A high level of job satisfaction depends on the balance between the organizational culture and employee values. Organizational culture directly

and indirectly affects employee satisfaction, productivity, efficiency, job performance, job satisfaction, innovation, leadership and decision-making. A cross-sectional study by Tsai (12) on a sample of 200 nurses aimed to determine the relationship between organizational culture, leadership behavior and nurses' job satisfaction. The results showed that organizational culture was significantly (positively) correlated with leadership behavior and job satisfaction, and leadership behavior was significantly (positively) correlated with job satisfaction. If the interaction between management and employees is good, employees will contribute to team communication and cooperation to a higher degree. They will also be encouraged to fulfill the mission and goals set by the organization, thereby increasing job satisfaction. Dimunová (13) also analyzed the nurses' job satisfaction. In her study dedicated to workloads and coping, she states that nurses expressed the lowest satisfaction with interpersonal relationships at the workplace (61.7%). According to Hwang (14), from the factors that influence job satisfaction, nurses' autonomy has the greatest effect. From the analysis performed with 226 nurses, the findings emerged that nurses were not satisfied with financial remuneration and interpersonal relationships in the workplace, especially between nurses and doctors. In terms of types of organizational culture, the respondents mostly worked in organizations with a hierarchy-oriented culture.

Conclusion

The levels of organizational culture in medical facilities are different regarding the approach to creating optimal working

Table 2 The influence of the factors investigated on the satisfaction of nurses with their jobs

Factors of the organizational culture	<i>n</i>	\bar{x}	<i>sd</i>	x_m	<i>min.</i>	<i>max.</i>	p_{MW}
Satisfaction with the working conditions, relationship with management or superiors, relations at the working place	86	2,11	0,72	2	1	3	0,05
Financial factors – inadequate salary evaluation	45	1,98	0,50	2	1	3	
Other	5	1,40	0,55	1	1	2	

Legend: *n* – No. of participants, \bar{x} – arithmetical mean, *sd* – standard deviation x_m – median, *min.* – minimal value, *max.* – maximal value, *p* – value of testing criteria of the Kruskal-Wallis test

conditions for nurses to do their jobs. According to many studies, common indicators of the quality of organizational culture are workplace communication, job satisfaction, leadership style, working conditions, motivation and salary. The organizational culture can directly affect the ability of an organization to effectively manage human resources, and it has a significant impact on employees' positive attitudes toward their work tasks and the organization (3).

Limitations

The conducted research was limited by the size of the sample, which affects the possibilities of interpretation, the representativeness of the findings and their applicability in a global context. Due to the low number of respondents, the results serve to create a summary picture of the investigated issue in practice. The findings complemented literature sources by providing empirical support. The study had a subjective nature as it was based on the subjective perception of the nurses. A validated measurement tool was not used.

Conflict of interest

The authors declare no conflict of interest.

References

1. MAHMOUD ZM, SAMIA MA, HANAA MAR, NADIA MA (2022) Relation between Organizational Culture and Job Satisfaction among Staff Nurses. *Egyptian Journal of Health Care, EJHC*. 13(1):1080-1090.
2. PLEVOVA I et al. (2012) *Management in nursing*. Praha: Grada Publishing a.s., p. 162- 165. ISBN 978-80-247-8242-3.
3. BAKERTZIS E, PAPADIONYSIOU E, BARBARA M (2022) The Relationship between Organizational Culture and Employees' Work Attitudes in Hospitals in Greece. *Journal of Quality in Health care & Economics*. 5(1): 000260. DOI: 10.23880/jqhe-16000260.
4. GIOVANNI IF, AHSAN RI (2023) Impact of organizational culture and job satisfaction on nurse performance in the general hospital: A path analysis. *Jurnal Aisyah: Jurnal Ilmu Kesehatan*. 8(1): 525-530. DOI: 10.30604/jika.v8i1.1638.
5. NELLI R, YETTY S, KADIR K (2022) Organizational Culture, Career Development, Job Satisfaction and Nurse Performance at Batam City Hospital. *Advances in Economics, Business and Management Research*. 659: (362-367).
6. SAN PJ, HYUN KT (2009) Do types of organizational culture matter in nurse job satisfaction and turnover intention? *Leadership in Health Services*. 22(1): 20-38. doi.org/10.1108/17511870910928001.
7. BOLTON CH (2018) *The Effect of Organizational Culture on the Retention of Millennial Employees*. Florida: Nova Southeastern University. 89p.
8. MOVAHEDI A et al. (2020) The Relationship Between Positive Perceptions Toward Organizational Politics and the Work-Related Outcomes of Nurses. *J Nurs Res*. 28(4):e104. doi: 10.1097/jnr.0000000000000381.
9. NAWAZ I, MAAN AA, KHAN IA, SHAHBAZ B (2021) Effect of Different dimensions of organizational culture on job satisfaction of nurses. *Humanities & Social Sciences Reviews*. 9(2): 540-548 https://doi.org/10.18510/hssr.2021.9413 540.
10. GURKOVA E (2012) Factors of job satisfaction of Slovak nurses. *Humanum-Międzynarodowe Studia Społeczno-Humanistyczne*. 9(2):119-128.
11. ARROZI A, WAWAH R (2022) Work Culture, Workload, and Job Satisfaction Intervening a Public Hospital Nurses' Performance. *Interdisciplinary Social Studies*. 1(11):1341-1354.
12. TSAI Y (2011) Relationship between Organizational Culture, Leadership Behavior and Job Satisfaction. *BMC Health Serv Res*. 11, 98 https://doi.org/10.1186/1472-6963-11-98.
13. DIMUNOVA L (2014) Coping strategies in the clinical practice of nurses. *Zdravotnicke listy*. 2(1):18-24.
14. HWANG E (2019) Effects of the organizational culture type, job satisfaction, and job stress on nurses' happiness: A cross-sectional study of the long-term care hospitals of South Korea. *Japan Journal of Nursing Science*. 16:(263-273). doi:10.1111/jjns.12235.

The Adoption of artificial Intelligence with multifaceted Challenges and promising Opportunities in Asian Countries: A case Study of India

D. Chhaperia (Deepshikha Chhaperia)¹, K. Khanna (Kamini Khanna)²

Original Article

¹ Artificial Intelligence Student at NMIMS Deemed-to-be University, School of Mathematics Applied Statistics and Analytics, Navi Mumbai, Maharashtra, India

² Professor at NMIMS Deemed-to-be University, Navi Mumbai, Maharashtra, India

E-mail address:

deepshikhachhaperia@gmail.com

Reprint address:

Deepshikha Chhaperia
Artificial Intelligence Student at NMIMS Deemed-to-be University
School of Mathematics Applied Statistics and Analytics
Navi Mumbai
Maharashtra
India

Source: *Clinical Social Work and Health Intervention*
Pages: 37 – 46

Volume: 15
Cited references: 17

Issue: 2

Reviewers:

Claus Muss
International Society of Applied Preventive Medicine i-gap, Vienna, Austria
Vlastimil Kozon
General Hospital - Medical University Campus, Vienna, AT

Keywords:

Artificial Intelligence (AI). Healthcare. Developing Countries. Accessibility. India.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 37 – 46; DOI: 10.22359/cswhi_15_2_07 © Clinical Social Work and Health Intervention

Abstract:

In a world where innovation meets compassion, cancer continues to cast a long and daunting shadow across Asian nations, which are home to nearly 4.6 billion people. This research primarily examines India while encompassing broader Asian healthcare perspectives. We explore the potential of artificial intelligence (AI) to revolutionize cancer care, particularly in India, where diverse healthcare challenges persist. Data from Kharghar, Maharashtra, India, underscore the local community's eagerness to embrace AI technologies. However, the staggering costs of cancer care pose formida-

ble barriers, particularly in developing and underdeveloped regions across Asia. This study advocates for strategic government intervention to make AI-driven cancer care accessible, potentially reducing mortality rates and offering hope to millions of cancer patients in the region.

Introduction

Imagine a world where cutting-edge healthcare innovations could be the beacon of hope for millions in India, especially those residing in semi-urban regions like Kharghar, Maharashtra. In this world, artificial intelligence (AI) holds the promise of revolutionizing healthcare, but there's a critical roadblock - affordability and accessibility, a challenge that resonates with many developing and underdeveloped countries.

Healthcare in India, much like in other developing nations, grapples with the enormous burden of diseases and limited resources. Diseases, particularly those like cancer, continue to claim countless lives. In this scenario, AI stands as a potential game-changer, but only if it can be made accessible to the masses. The urgency lies in acknowledging the immense potential of AI in Indian healthcare and addressing the stark reality that the cost of these technologies is beyond the reach of a significant portion of the population.

This research delves into the aspirations and challenges faced by India and nations like it as they seek to harness the power of AI in healthcare. We aim to shed light on the pressing need for government intervention to make AI healthcare technologies affordable and accessible, ultimately reducing mortality rates and offering hope to millions.

While governments have indeed adopted numerous healthcare policies to effect change and assist their people, persistent barriers remain. These include:

A Glimpse of India's Healthcare Dilemma

In India, where vast disparities in healthcare access persist, the need for innovative solutions is paramount. The burden of diseases such as cancer, diabetes and cardiovascular ailments looms large, and early detection is often the key to saving lives. However, the healthcare infrastructure, particularly in semi-urban and rural areas, is stretched thin. Doctors and healthcare professionals are in short supply, and even when

available, they face an uphill battle in diagnosing and treating patients effectively.

AI's Potential for India

Artificial intelligence, with its ability to analyze vast amounts of healthcare data, has the potential to transform the Indian healthcare landscape. From early disease detection to precision medicine and telemedicine, AI offers a lifeline to those in need. For instance, AI-powered systems can analyze medical images such as X-rays and CT scans, making accurate diagnoses more accessible, particularly in areas with a shortage of specialists.

Furthermore, AI can aid in predictive analytics, helping healthcare providers identify individuals at risk of certain diseases and offer preventive care. This proactive approach can be a game-changer in a country where healthcare resources are scarce.

The Harsh Reality: The Cost Barrier

However, there's a harsh reality that cannot be ignored - the cost barrier. AI technologies in healthcare come with a hefty price tag, often making them unaffordable for a significant portion of the population in developing nations. In India, where a large percentage of the population still lives below the poverty line, the affordability of healthcare technologies, especially advanced AI-driven solutions, is a major concern.

Low Digital Literacy Hinders AI Adoption

A significant challenge in the widespread adoption of AI-driven healthcare solutions in Asian countries, including India, is low digital literacy. Many individuals, particularly in rural areas, lack the necessary digital skills to effectively use AI applications. Limited exposure to technology and the Internet further exacerbates this issue. Additionally, health information literacy is a concern, as understanding the potential of AI in healthcare can be challenging for those with limited health literacy. Language and cultural diversity also add complexity to the accessibility of AI technologies.

Government Intervention: A Necessity, Not a Luxury

To bridge this gap, governments in developing countries like India must recognize that AI in healthcare is not a luxury but a necessity. Innovation is important; but it's also about saving lives. The responsibility falls on governments to invest in research and development, foster partnerships with AI technology providers and create policies that ensure the affordability and accessibility of AI-driven healthcare solutions.

The Role of Public-Private Partnerships

One promising avenue is the development of public-private partnerships (PPP). By collaborating with private sector technology companies, governments can tap into the resources and expertise needed to deploy AI healthcare solutions effectively. These partnerships can facilitate the creation of affordable and scalable AI-driven healthcare models tailored to the specific needs of the population.

These challenges are not unique to India but resonate across many Asian countries. A significant issue is the hesitation, especially among females, to seek breast cancer treatment due to a lack of awareness. Governments should prioritize awareness campaigns to benefit both rural and urban areas. Patients often hesitate to address their health concerns due to a lack of knowledge, highlighting the need for government initiatives to raise awareness about technologies that can aid patients. Indirectly, AI plays a pivotal role in the health sector, offering hope for improved healthcare outcomes across Asia.

Literature Review

In the landscape of healthcare across India, where cancer incidence is on the rise, there's a growing need for innovative solutions to address the healthcare challenges. One such solution is the integration of artificial intelligence (AI) into the field of medicine, offering a glimmer of hope for improved diagnosis and patient care.

One remarkable study by Esteva et al. (2017) titled "Dermatologist-level classification of skin cancer with deep neural networks" brings to light the potential of AI. This deep learning algorithm's capability to classify skin lesions as benign or malignant rivals the accuracy of

board-certified dermatologists. The impact of such advancements extends beyond India, offering the promise of improving early cancer detection and potentially reducing the need for invasive biopsies across the Asian healthcare landscape.

Across many Asian countries, including India, limited healthcare resources often lead to challenges in providing timely and accurate diagnoses. "A survey on deep learning in medical image analysis" conducted by Litjens et al. (2017) underscores the transformative power of AI. By augmenting diagnostic accuracy and aiding healthcare professionals in decision-making, AI emerges as a potential game-changer in cancer diagnosis, transcending geographical boundaries.

China has made significant strides in AI applications for breast cancer diagnosis. The study "Automated breast cancer diagnosis using deep learning and data fusion" by Wang et al. introduces an innovative approach that combines Convolutional Neural Networks (CNNs) for image analysis and Multilayer Perceptrons (MLPs) for demographic data analysis. This approach enhances diagnostic accuracy and reduces the time and potential human errors associated with traditional methods.

Furthermore, AI is poised to revolutionize liver cancer diagnosis, as evidenced by the paper "Automated diagnosis and classification of liver cancer using deep learning and radiomics" by Hwang. The integration of radiomics data with deep learning models promises to enhance the accuracy and comprehensiveness of cancer detection, a critical need in resource-constrained regions like India.

While AI holds immense potential to optimize cancer treatment and reduce costs, affordability remains a significant hurdle to widespread adoption across Asian countries. The promise of AI-driven cancer care is hampered by the formidable price tags associated with these technologies. Consequently, ensuring universal access to AI-driven healthcare remains an ongoing challenge in many parts of the region.

Objective

This research paper seeks to address a critical issue at the intersection of healthcare and technology: the urgent necessity of democra-

tizing access to Artificial Intelligence (AI) in healthcare, particularly in developing nations like India. Our primary objective is to delve into the multifaceted challenges and promising opportunities associated with AI adoption in healthcare. We aim to underscore how AI can be a transformative force in narrowing healthcare disparities, reducing mortality rates and vastly enhancing healthcare accessibility in resource-constrained regions. By examining the Indian context as a case study, this research endeavors to advocate for visionary government policies, foster collaborative public-private partnerships and catalyze innovative strategies to render AI-powered healthcare solutions affordable, available and life-saving for the masses.

Research methodology

The study is exploratory and centered on a survey-based approach. It seeks to comprehensively investigate the perception and potential for adopting artificial intelligence (AI) in healthcare, with a specific focus on developing and underdeveloped regions, notably within Navi Mumbai's Kharghar area, India. To ensure diverse perspectives, a random sampling approach was employed. In this endeavor, the researcher engaged with 25 cancer patients who had experienced AI-based healthcare technologies. Notably, the decision to explore such a modest sample size reflects the hesitancy and lack of awareness surrounding AI technologies among potential users in the study area. Data was collected through a structured questionnaire employing a five-point Likert scale for responses, where 1 indicates strong agreement and 5 indicates strong disagreement. Demographic variables, including age, gender, education, profession and geographic location, were incorporated into the data collection process. Data analysis was facilitated using the Statistical Package for the Social Sciences (SPSS), and the reliability of the survey instrument was evaluated through Cronbach's Alpha. Additionally, multiple regression analysis was employed to delve into the implications of AI adoption within the healthcare sector, specifically assessing the receptiveness of patients and healthcare stakeholders to the utilization of AI-based technologies, including robotic surgery, in the

context of cancer treatment. The methodology employed in this study is more than a mere academic exercise. It serves as a pivotal cornerstone for shaping informed policy decisions and strategic initiatives. Ultimately, it aims to pave the way for more accessible and affordable AI adoption within the healthcare domain. By doing so, it seeks to address the overarching goal of improving healthcare outcomes and substantially reducing mortality rates, especially in resource-constrained regions where the need for transformative healthcare solutions is most pressing and acute.

Hypothesis

H_0 : Artificial intelligence in healthcare has no effect on patients' feelings of fear.

H_1 : Artificial intelligence in healthcare has an effect on patients' feelings of fear.

Questionnaire structure

The questionnaire is divided into two sections: the first focuses on the demographics of cancer patients, and the second asks about their opinions of the use of artificial intelligence in the healthcare sector.

Table 1

Section	Category	
Section One	General	General information like name of the person, age, education
Section Two	Opinions about the use of artificial intelligence in the healthcare sector	Questions about the implementation of artificial intelligence in the healthcare industry and if people are concerned or afraid of it were posed in various ways.

Interface

In Table 1: Section one consisted of the demography data of the respondents. Section two consisted of how willing the respondents are to see AI used in the healthcare industry, if they can bear the costs associated with robotic surgery and how anxious or afraid they feel about this.

Results and Discussion

Reliability Measure

Reliability analysis was employed to test the consistency level and relationship between groups of statements designed in the questionnaire. The reliability of the service quality scale was analyzed by Cronbach’s coefficient alpha. The alpha is a figure that ranges between 0 and 1. According to Cohen (2007), the Cronbach’s alpha value at 0.6 is marginally reliable while 0.91 or above is highly reliable. He also suggested that a Cronbach’s alpha value that is over 0.89 shows good estimates of internal consistency reliability. Cronbach’s alpha value was calculated as follows:

$$\frac{N^2 \times M(COV)}{\text{SUM (VAR/COV)}}$$

Where N^2 = is the square of the number of items in the scale
 $m(COV)$ = is the mean interterm covariance
 Sum (VAR/COV) = equals the sum of all the elements in the variance/ covariance matrix

Reliability for the questionnaire was calculated through SPSS. The statistics (Table 2) came out as:

Table 2 Reliability Statistics

Cronbach’s Alpha	Cronbach’s Alpha Based on Standardized Items	N of Items
.896	.982	6

It is considered that the reliability value should be more than 0.7, and it can be seen that in the statistics, the reliability value was (.896) higher than the standard value. Therefore, all the items in the questionnaire are reliable for study. Hence, no changes were made to the questionnaire, and all the items were retained for further analysis.

Taken from: Khanna, Dr. K. K. (2017, June).

Data Analysis

Due to the limited sample size and data source constraints, the study acknowledges its limitations in generalizing results. The demographic variables considered included gender and age.

Table 3

Gender	Percent
Male	46%
Female	54%
Total	100%

Table 4 displays that out of the total respondents, 50% belonged to the 20-35 years category, followed by 46% belonging to the 35-45 years category. Only 4% belonged to the 45 years and above category.

Table 4

Age	Percent	Cumulative percentage
25-35	50%	50%
35-45	46%	96%
45 and above	4%	100%
Total	100%	

Descriptive Statistics

	Mean	Std. Deviation	N
AI based device	4.04	1.654	25
Implementation in healthcare	2.08	.929	25
AI in medical treatment scares you	2.38	1.096	25
Willingness for robotic surgery	2.13	1.035	25
Bearing the expenditure	2.04	.908	25
AI in cancer treatment makes you nervous	.46	.509	25

From this table it’s apparent that the standard deviation is extremely low, almost approaching zero. This indicates that the data points are clustered closely around the mean.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.982 ^a	.865	.802	.612

a. Predictors: (Constant), AI in cancer treatment makes you nervous, willingness for robotic surgery, bearing the expenditure, AI in medical treatment scares you, implementation in healthcare

ANOVA^a

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.012	6	2.668	2.779	.002 ^b
	Residual	18.388	19	0.967		
	Total	34.400	25			

a. Dependent Variable: AI based device

b. Predictors: (Constant), AI in cancer treatment makes you nervous, willingness for robotic surgery, bearing the expenditure, AI in medical treatment scares you, implementation in healthcare

Coefficients^a

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.649	2.239		1.630	.020
	Implementation in healthcare	.506	.520	.684	.974	.043
	AI in medical treatment scares you	-.129	.433	-.385	-.298	.053
	Willingness for robotic surgery	.110	.418	.069	.263	.796
	Bearing the expenditure	.116	.478	.064	.243	.811
	AI in cancer treatment makes you nervous	-.787	.811	-.442	-.970	.034

a. Dependent Variable: AI based device

According to the study, there exists a negative correlation between nervousness (-.787) and fear

(-.129) when receiving medical treatment. This suggests that as the use of artificial intelligence (AI) and robotic surgery continues to grow, fear and anxiety are likely to decrease.

The value of R^2 equals 0.865, indicating that 86.5 percent of the variations in AI based device usage can be explained by factors like the implementation of AI, willingness to accept robotic surgery, fear or nervousness regarding AI in medical treatment, and the ability to bear the

associated expenditure. The value of R^2 is statistically significant as indicated from the p value (0.002) in the ANOVA Table. The estimated regression equation as obtained in the table may be written as:

$Y = 3.649 + 0.506X_1 + 0.110X_2 - 0.129X_3 - 0.787X_4 + 0.116X_5$					
P value =	(.020)	(.043)	(.796)	(.053)	(.034) (.811)
Beta coefficient =		(.684)	(.069)	(-.385)	(-.442) (.069)
<p>X_1 = Implementation of AI X_2 = Willingness to accept robotic surgery X_3 = AI in medical treatment scares you X_4 = AI in medical treatment makes you nervous X_5 = Bearing the expenditure</p>					

In this regression equation, the variables related to fear and nervousness about AI in medical treatment (-.129 and -.787) exhibit negative associations with AI-based device usage, while variables related to AI implementation, willingness to accept robotic surgery and expenditure (.506, .110, and .116), exhibit positive associations. The beta coefficient of 0.684 for the implementation of AI highlights its relative importance. While the data indicates a strong willingness to adopt AI-based healthcare solutions, it's crucial to acknowledge the substantial financial implications. In a country like India with diverse economic backgrounds, the cost of AI implementation and robotic surgeries can be prohibitive, potentially limiting access for those with limited financial means. Beyond financial considerations, the research recognizes several other bottlenecks that resonate not only in India but also in many underdeveloped Asian countries. These challenges include disparities in literacy, with a particular emphasis on female literacy, as well as deeply entrenched religious beliefs and superstitions prevalent in rural areas. These sociocultural factors contribute to the complexity of AI adoption in healthcare, necessitating nuanced strategies and awareness campaigns to overcome them effectively.

Discussion

Our research uncovers a significant enthusiasm among people for incorporating AI-based technology into healthcare. Nevertheless, we must grapple with the financial hurdles linked to AI adoption, notably in regions like India. The data highlights the urgency of government intervention to ensure that AI-driven healthcare solutions reach all sections of society. Such steps could involve

subsidies, financial backing for research and development, and the creation of cost-effective healthcare facilities equipped with AI.

In the realm of AI in healthcare, it's worth noting that the global landscape is showing encouraging signs. The numbers we've presented in this section indicate a remarkable surge in the AI healthcare market, with substantial investments and growing confidence among healthcare professionals in AI technologies. Moreover, AI holds the potential to generate substantial cost savings for the healthcare sector, and estimates suggest AI applications could dramatically reduce annual healthcare expenditures.

Furthermore, we're witnessing a rising trend in implementing AI for medical diagnosis, offering the prospect of reduced treatment costs and enhanced health outcomes. For example, research from Harvard's School of Public Health indicates that AI-driven diagnoses could lead to cost reductions of up to 50% while concurrently improving health outcomes by 40%. Additionally, AI technologies are being explored to enhance breast cancer risk prediction, offering promising avenues for improved healthcare services.

On the global stage, we're observing rapid AI adoption in healthcare, with significant investments and advancements in various countries. For instance, China's government has set ambitious goals to become a frontrunner in AI innovation by 2030, with a particular focus on medical imaging. In South Korea, AI in the healthcare market is anticipated to experience substantial growth, driven by the utilization of big data and AI in medical device software.

Moreover, global AI in the healthcare market is on a trajectory towards substantial valuations

in the forthcoming years. The data indicates substantial growth, with projections indicating a reach of USD 45.2 billion by 2026, reflecting a compound annual growth rate of 44.9%. These trends signify AI's potential to reshape global healthcare delivery and outcomes.

In conclusion, while the adoption of AI in healthcare offers immense potential, especially in addressing critical challenges such as low doctor-patient ratios, uneven expertise distribution and affordability, it's imperative to acknowledge the central role of government intervention in guaranteeing accessibility and fairness. The financial challenges linked to AI adoption necessitate a collective effort to bridge the divide and fully leverage AI's potential to enhance healthcare outcomes.

Conclusion

The potential of AI in healthcare is not just a distant dream, but a tangible solution for countries like India that are struggling with healthcare access. However, to realize this potential, governments must play a pivotal role in making AI technologies affordable and accessible to all. The cost barrier cannot be allowed to stand in the way of saving lives.

In India, the case of Kharghar serves as a microcosm of the broader challenges faced by developing and underdeveloped nations. The urgency lies in recognizing that AI in healthcare is not a luxury but a lifeline. It is the responsibility of governments to pave the way for innovation, foster partnerships and create policies that ensure AI's reach to the masses.

The time has come for developing nations to unlock the transformative power of AI in healthcare and, in doing so, offer hope, accessibility and a chance at a healthier life to millions who deserve nothing less. The investment is not just in technology; it's an investment in humanity's well-being.

Recommendation

1. **Establish National AI Healthcare Initiatives:** Asian governments should initiate dedicated national programs aimed at integrating AI into healthcare systems. These initiatives should prioritize the development and implementation of AI technologies tailored to address the specific healthcare challenges faced in Asian countries, with special attention given to rural healthcare accessibility and improving life expectancy.
2. **Invest in AI Infrastructure:** Adequate funding should be allocated to build essential AI infrastructure in healthcare. This includes investments in robust data storage and processing capabilities, as well as secure data sharing platforms. Ensuring that AI infrastructure reaches rural areas is critical to improving healthcare accessibility and life expectancy in these regions.
3. **Incentivize AI Research and Development:** Governments can encourage AI research and development by offering grants, tax incentives, and research funding to local companies and startups. These incentives will not only drive innovation but also nurture a thriving ecosystem of AI healthcare providers, benefiting both urban and rural populations.
4. **Promote Public-Private Collaboration:** Collaboration between public healthcare institutions and private AI companies should be encouraged to develop cost-effective AI solutions. This partnership can leverage the strengths of both sectors to ensure the widespread availability of AI-driven healthcare services, addressing disparities in healthcare access and life expectancy.
5. **Ensure Affordable Licensing and Regulation:** Governments should establish clear and reasonable regulations for AI healthcare technologies, prioritizing patient safety without creating financial barriers that hinder innovation. Licensing fees and compliance costs should be kept affordable to encourage broad participation, especially in rural areas.
6. **Invest in Education and Training:** Robust training programs should be developed for healthcare professionals to equip them with the skills needed to effectively use AI technologies. This includes ensuring that rural healthcare workers have access to training opportunities, ultimately improving healthcare quality and life expectancy in remote areas.
7. **Integrate Telehealth Services:** Promote the integration of AI-powered telehealth services, particularly in rural and underserved

areas. Telehealth can bridge the gap in access to specialized care, ultimately improving healthcare accessibility and life expectancy in remote regions.

8. **Prioritize Data Privacy and Security:** Enforce stringent data privacy and security regulations to safeguard patient information. Building trust in AI healthcare technologies is essential for their widespread adoption, especially in regions where data security concerns may be more pronounced.
9. **Engage Communities:** Involve local communities in decision-making processes related to AI in healthcare. Understanding the unique healthcare needs and concerns of different communities, especially in rural areas, is crucial for successful AI implementation and improving life expectancy.
10. **Encourage Global Collaboration:** Promote collaboration with international organizations and other countries to facilitate the exchange of knowledge, resources and best practices in AI healthcare implementation. Learning from global experiences can expedite progress in adopting AI in healthcare and improving life expectancy across Asian countries.

In conclusion, the adoption of AI in Asian countries holds the potential to address critical healthcare challenges, improve healthcare accessibility and enhance life expectancy, especially in rural areas. By proactively implementing these recommendations and considering the specific healthcare needs of diverse communities, Asian nations can work towards achieving healthcare equity and healthier lives for all citizens.

References

1. SELVATHI D, POORNILA A (2017) Breast cancer detection in mammogram images using deep learning technique. *J Sci Res.* 2017;25(2):417–426. doi: 10.5829/idosi.mejsr.2017.417.426.
2. ESTEVA A, KUPREL B, NOVOA R. *et al.* (2017) Dermatologist-level classification of skin cancer with deep neural networks. *Nature* **542**, 115–118 (2017). <https://doi.org/10.1038/nature21056>.
3. LITJENS G, KOOI T, NEJNORDI BE, SETIO AAA, CIOMPI F, HJAFOORIAN M, VAN DER LAAK JAWM, VAN GINNEKEN B, SANCHEZ CI (2017) A survey on deep learning in medical image analysis. *Med Image Anal.* 2017 Dec;42:60-88. doi: 10.1016/j.media.2017.07.005. Epub 2017 Jul 26. PMID: 28778026.
4. WANG S, CHEN X, HU J, JIANG T, WANG Y (2018) Automated breast cancer diagnosis using deep learning and data fusion. *Neurocomputing*, 321, 321-327.
5. ZHEN SH, CHENG M, TAO YB, WANG YF, JUENGPANICH S, JIANG ZY, JIANG YK, YAN YY, LU W, LUE JM, QIAN JH, WU ZY, SUN JH, LIN H, CAI XJ (2020) Deep Learning for Accurate Diagnosis of Liver Tumor Based on Magnetic Resonance Imaging and Clinical Data. *Front Oncol.* 2020 May 28;10:680. doi: 10.3389/fonc.2020.00680. PMID: 32547939; PMCID: PMC7271965.
6. ARDILA D, KIRALY A P, BHARADWAJ S. *et al.* (2019) End-to-end lung cancer screening with three-dimensional deep learning on low-dose chest computed tomography. *Nat Med* **25**, 954–961 (2019). <https://doi.org/10.1038/s41591-019-0447-x>.
7. HUANG S, YANG J, FONG S, ZHAO Q (2019) Artificial intelligence in cancer diagnosis and prognosis: Opportunities and challenges. *Cancer Lett.* 2020 Feb 28;471:61-71. doi: 10.1016/j.canlet.2019.12.007. Epub 2019 Dec 10. PMID: 31830558.
8. NCI (n.d.) (2022) Cancer Currents Blog. Retrieved from <https://www.cancer.gov/news-events/cancer-currents-blog/2022/artificial-intelligence-cancer-imaging>.
9. National Cancer Institute (2022, February 16) Artificial Intelligence for Cancer Diagnosis. Retrieved from <https://www.cancer.gov/research/areas/diagnosis/artificial-intelligence>.
10. SEBASTIAN AM, PETER D (1991) Artificial Intelligence in Cancer Research: Trends, Challenges and Future Directions. *Life.* 2022; 12(12):1991. <https://doi.org/10.3390/life12121991>.
11. TRAN BX, LATKIN CA, SHARAFELDIN N, NGUYEN K, VU GT, TAM WWS, CHEUNG NM, NGUYEN HLT, HO CSH, HO RCM (2019) Characterizing Artificial Intelligence Applications in Cancer

- Research: A Latent Dirichlet Allocation Analysis. *JMIR Med Inform.* 2019 Sep 15;7(4):e14401. doi: 10.2196/14401. PMID: 31573929; PMCID: PMC6774235.
12. KUMAR Y, GUPTA S, SINGLA R, HU YC (2022) A Systematic Review of Artificial Intelligence Techniques in Cancer Prediction and Diagnosis. *Arch Comput Methods Eng.* 2022;29(4):2043-2070. doi: 10.1007/s11831-021-09648-w. Epub 2021 Sep 27. PMID: 34602811; PMCID: PMC8475374.
 13. KHANNA DR K K (2017) *Impact of Brand Equity on Purchase Intension of Home Appliances.* *Asian Journal of Research in Marketing.* Retrieved March 5, 2023, from <https://www.indianjournals.com/ijor.aspx?target=ijor:ajrm&volume=6&issue=3&article=001>.
 14. KHANNA DR K K (2020) Disparities In Social Development & Status of Women In Bimaru / Eag States of India. *Clinical Social Work and Health Intervention* Vol. 11 No. 4.
 15. *The benefits of AI in Healthcare, IBM Blog.* Available at: <https://www.ibm.com/blog/the-benefits-of-ai-in-healthcare/>
 16. BANIK A (2021) *Top 10 countries actively applying AI in Healthcare, health.* Available at: <https://www.healthcareoutlook.net/top-10-countries-actively-applying-ai-in-health-care/>.
 17. *PWC India - Consulting | ESG | Financial Advisory Services (2023) Enabling health-care with technology.* Available at: <https://www.pwc.in/assets/pdfs/healthcare/enabling-healthcare-with-technology.pdf>.

Risk Management and Consequence Management of Internal Migration in the Context of Humanitarian and Economic Challenges (Experience of Zakarpattia Oblast)

V. Khymynets (Volodymyr Khymynets)¹, A. Holovka (Anatolii Holovka)¹, J. Holonic (Jan Holonic)²

Original Article

¹National Institute for Strategic Studies, Kyiv, Ukraine

²Merci, n.o., Slovakia

E-mail address:

holovka.niss@gmail.com

Reprint address:

Volodymyr Khymynets
National Institute for Strategic Studies
7-A Pyrohova str.
01054 Kyiv
Ukraine

Source: *Clinical Social Work and Health Intervention*
Pages: 47 – 56

Volume: 15
Cited references: 11

Issue: 2

Reviewers:

Johnson Nzau Mavole
Catholic university of Eastern Africa, Nairobi, KE
Andrea Shahum
University of North Carolina at Chapel Hill School of Medicine, USA

Keywords:

Internal Migration. Internally Displaced Persons. Recipient Territories. Regional Economy.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 47 – 56; DOI: 10.22359/cswhi_15_2_08 © Clinical Social Work and Health Intervention

Abstract:

This article focuses on the study of Ukraine's experience, particularly in Zakarpattia oblast, to identify and characterize key consequences of forced internal migration on regional economies and the social sphere of regions and communities. The empirical basis of the research includes (a) the results of a sociological survey conducted in Zakarpattia oblast in November 2022, (b) data from regional statistics on the socio-economic situation in Zakarpattia oblast and (c) data from international organizations such as the International Organization for Migration (IOM) regarding population migration. It is worth noting that the article was written in June 2023, and therefore all the information presented, including statistical data, is rel-

evant as of the time of writing. The article proposes a series of suggestions for harnessing the potential of internally displaced persons to stimulate regional economic development, which is one of the factors contributing to national resilience. The article provides guidance on managing the consequences of internal migration in the face of challenges, outlining major trends and recommendations that can be utilized as a roadmap during times of martial law or other potential emergencies, such as natural disasters, technological catastrophes, etc. The article is intended not only for the scientific and expert community but also for government officials (both in Ukraine and partner countries), local council members, civil activists and volunteers.

Introduction

The war initiated by Russia against Ukraine (from 2014 to the present) and its active phase, which involved a full-scale invasion (from February 24 until now), have significantly impacted all aspects of development in the Ukrainian state and society. The active hostilities in numerous regions of Ukraine and the systematic shelling of populated areas by Russian forces have resulted in extensive forced internal migrations. At the same time, several relatively safe regions and communities have taken on the main responsibility of accommodating and supporting internally displaced persons (IDPs) who have been forced to flee their homes. These regions and communities have acted as recipients, aiding the displaced individuals.

Therefore, within the context of the article, we will use the term “*recipient territories*” to refer to hosting regions and communities that have borne the greatest burden because of the forced internal migrations caused by the conflict and where the majority of enterprises relocated to under the relocation program. It is for such territories that the use of the potential of IDPs (combined with the potential of relocated enterprises) in the regional economy is relevant.

There are many issues the central government as well as regional and local authorities should take into consideration under the conditions of a massive internal migration of the population, such as IDP law, policy issues (Dustmann, Vasiljeva, Damm, 2016; Nahorniak, 2016 ; Adeola, 2021), the whole assessment of the internal migration’s influence on regional development (Smal, Poznyak, 2016 ; Arakelova, 2017), etc. We agree with Ukrainian experts that the mas-

sive internal migration of the population within the country is connected to a number of burdens that arise both for the IDPs themselves and in society as a whole. This is important for strategic programs of regional development under the reform conditions, further IDP integration to study the problems and needs (primary and secondary) of internally displaced persons and the services provided to them, the level of satisfaction with these services, the definition of a trust credit to state and non-state institutions, services, IDP organizations and their effectiveness in providing services to these persons (Arakelova, 2017; Nahorniak, 2016). On the other hand, the priority of the IDP policy should be socioeconomic integration. It’s necessary to seek long-term solutions intended to provide housing, employment and the social integration of IDPs; this is in addition to the positive potential contained in the internally displaced population and taking into account the specific features of certain regions and the lessons learned from international experience (Smal, Poznyak, 2016).

But, nevertheless, important issues are also the practice instruments of IDPs and the potential realization of the regional economy, including during emergency situations that have led to large-scale internal migrations (in the case of the Ukraine – Russian military aggression).

Therefore, the goals of the article are to (1) identify and characterize consequences of internal migration on regional economies and the social sphere of regions and communities, as well as to (2) provide guidance on managing the consequences of internal migration in the face of challenges and outline major trends and recommendations that can be utilized as a roadmap

during times of martial law or other potential emergencies, such as natural disasters, technological catastrophes, etc.

Methodology

To write a scientific article, a methodology was used that consisted of general scientific and special methods, namely:

- The method of statistical analysis, which consisted of the processing of statistical data on the socio-economic situation of Zakarpattia oblast (using data that are available for the period of martial law) – the income of local budgets, dynamics of real estate prices, etc.
- Systems analysis was used to analyze the state policy on managing the consequences of internal migration as a system of measures aimed at minimizing risks in the humanitarian sphere and using the potential of IDPs for the stability of the regional economy.
- In addition, empirical data were used - the results of a sociological survey conducted in the Zakarpattia region (November 2022) among IDPs and the local population were processed.

Intuitively, one can assume that the largest flows of internal migration are directed towards remote areas from the conflict zone and geographically close to the borders of the EU, specifically the border regions (in the case of Ukraine, the western regions bordering European countries). Indeed, in the early weeks, the territories closest to Ukraine's western borders became temporary havens for internally displaced persons (IDPs) or transit zones for refugees before their departure abroad. However, later on, secondary displacement and the gradual return of some IDPs to their permanent places of residence began. This was made possible after successful defense by the Armed Forces of Ukraine (AFU) and other Ukrainian military formations, as well as their implementation of a series of successful counteroffensive operations and the liberation of territories in Kyiv, Chernihiv and Sumy oblasts (April 2022), followed by the Kharkiv and Kherson oblasts (autumn 2022).

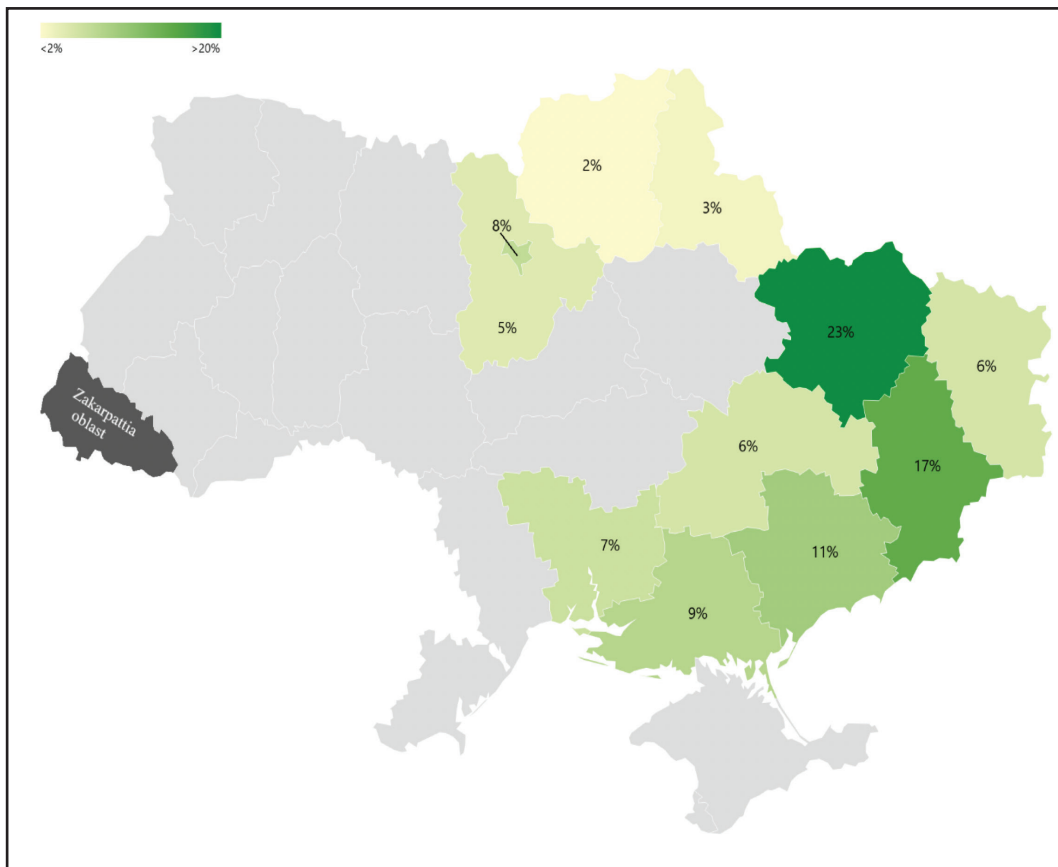
It is also important to note that even the westernmost regions of Ukraine can only be considered *conditionally safe*, as the risk of missile strikes and/or attacks by unmanned aerial vehicles (especially so-called “kamikaze drones”) from Russian forces remains. These attacks can

target civilian objects and critical infrastructure elements and result in consequences such as fires, the destruction of residential/commercial buildings, emergency power outages, fuel shortages and more.

Currently, we can observe a relatively even distribution of internally displaced persons (IDPs) across the territory of Ukraine. According to the data from the Ministry for Reintegration of Temporarily Occupied Territories of Ukraine, as of May 2022, the regions with the highest number of registered and accommodated IDPs are as follows: Dnipropetrovsk oblast - 11% of the total number of IDPs in Ukraine, Kyiv oblast - 10%, Lviv oblast - 9%, Vinnytsia oblast - 7% and Poltava oblast - 7%.

Meanwhile, the data from the Ministry for Reintegration of Temporarily Occupied Territories specifically refer to registered IDPs. However, for the sake of article objectivity, it is necessary to consider the total number of IDPs, including those who, for various reasons, have not undergone registration. In this context, we can rely on the data from the International Organization for Migration (IOM) and can state that as of January 2023, the highest number of registered IDPs is recorded in the following regions: Kharkiv oblast (456,946 individuals), Dnipropetrovsk oblast (367,089 individuals), Kyiv oblast (336,803 individuals) and the city of Kyiv (225,074 individuals), Lviv oblast (247,067 individuals), Vinnytsia oblast (178,572 individuals), Zaporizhia oblast (156,134 individuals), Zakarpattia oblast (149,786 individuals) and Ivano-Frankivsk oblast (141,484 individuals).

Considering the factors described above, the border regions of western Ukraine, although included in the list of major recipient territories, have become temporary shelters for a relatively smaller number of internally displaced persons (IDPs) compared to regions like Kyiv and Dnipropetrovsk. However, we can assume that this is due to objective reasons. For example, in Zakarpattia oblast most of the IDPs arrived from highly urbanized regions such as Kharkiv, Donetsk, Luhansk, Zaporizhia and others. Therefore, they were more inclined towards urban life.

Fig. 2 Regions of origin of IDP interviewees in Zakarpattia Oblast

(Compiled on the basis of Mapping the Situation and Needs of Displaced People in Zakarpatska Oblast, November 2022)

On the other hand, the border regions of western Ukraine are characterized by relatively lower levels of urbanization. For example, Zakarpattia oblast has a rural population of 62.9%, and Chernivtsi oblast has a rural population of 58.1%. These regions have smaller populations and lower population density, which affects the housing stock, civil infrastructure and the capacity to accommodate IDPs.

Disclaimer: *Undoubtedly, the dynamics of forced internal migration are greatly influenced by the overall situation in the country. In the case of Ukraine during the period of 2022-2023, it was the situation on the front-lines of the war. However, based on the analysis of the processes that took place in Ukraine at the beginning of*

the full-scale invasion by Russian forces in 2022, we can identify the most general trends and significant factors that impact both the migration processes themselves and the development of regions and communities.

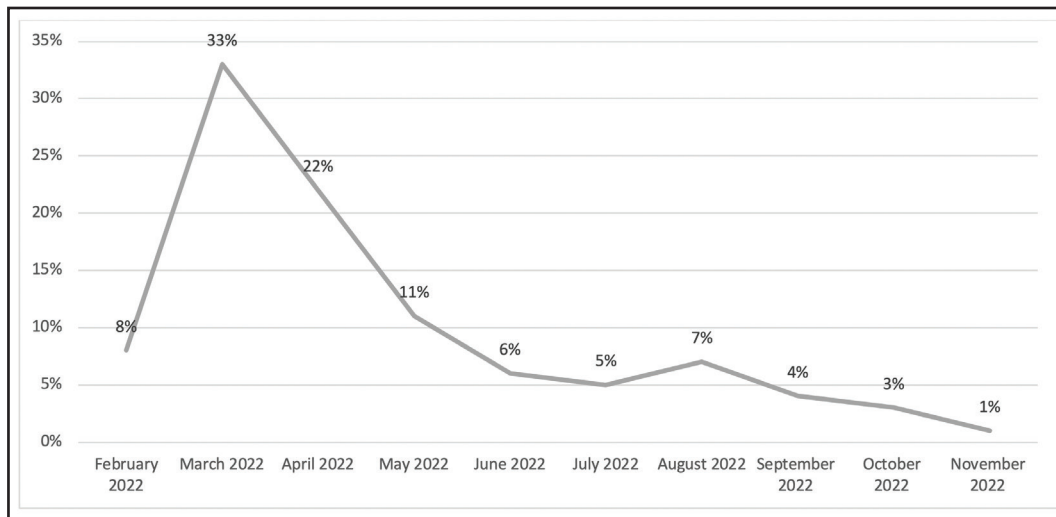
In order to achieve the goal of the article, we will provide an example of a recipient territory in western Ukraine - Zakarpattia oblast. According to information from the Zakarpattia Regional Military Administration (Zakarpattia RMA), as of February 2023, there were a total of 156,000 individuals officially registered and included in the database of internally displaced persons (IDPs) in Zakarpattia oblast. However, according to data from mobile operators, the total number of registered and unregistered IDPs in the region is approximately 400,000 individu-

als (the information was reported by the deputy head of the Zakarpattia RMA).

For a more objective study of migration processes in Zakarpattia within the framework of the article, we will rely on data from a sociological survey conducted in November 2022.

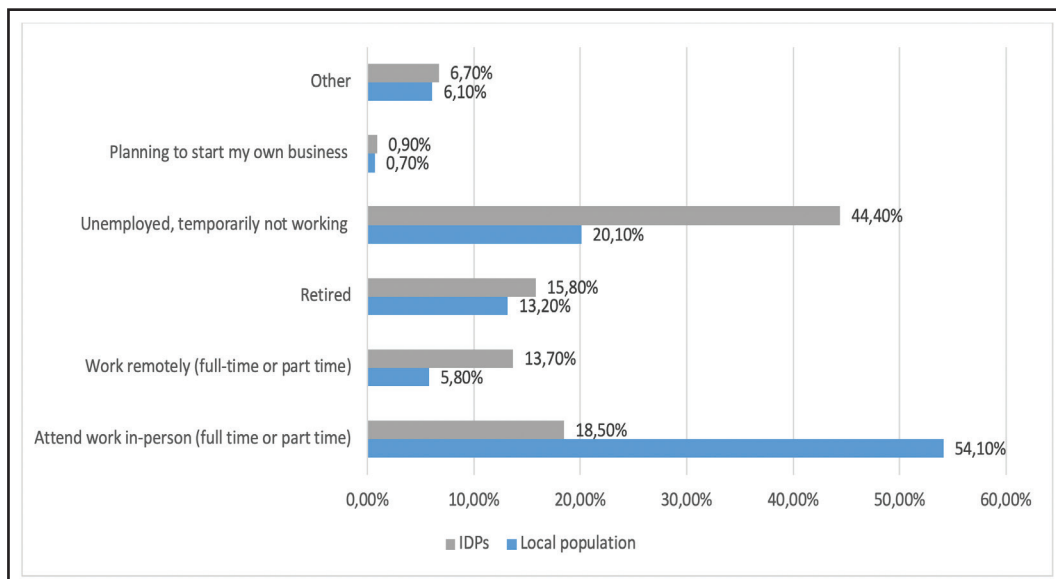
Moreover, the authors of the article were involved in coordinating the mentioned survey and were also responsible for analyzing the collected data. This allows for a better understanding of its specificity and the correct utilization of the obtained results within the context of this

Fig.1 Distribution of IDPs by time of arrival in Zakarpattia Oblast. – in % of the total number of arrivals.



(Compiled on the basis of Mapping the Situation and Needs of Displaced People in Zakarpatska Oblast, November 2022)

Fig.2 Employment among IDPs and the local population



(Compiled on the basis of Mapping the Situation and Needs of Displaced People in Zakarpatska Oblast, November 2022).

article. The survey aimed to assess the social attitudes of internally displaced persons (IDPs) and the local population, including aspects such as urgent needs and the most pressing issues of IDPs, their migration intentions, employment levels among IDPs and the local population, and evaluations of the current human potential of the region considering the consequences of internal migration.

According to the survey results, the peak arrival of internally displaced persons (IDPs) to Zakarpattia occurred between the end of February 2022 and the end of March 2022. However, during April and May 2022 (the period when the defense forces of Ukraine liberated Kyiv, Chernihiv, and Sumy oblasts), this influx started to decline.

Among the surveyed internally displaced persons (IDPs), 18.5% reported working in non-remote jobs. 13.7% had remote employment, which was easier to maintain during their forced displacement. A high level of unemployment was recorded among all surveyed IDPs (44.4%), which is more than twice as high as the unemployment rate among the surveyed local population (20.1%).

The highest number of IDPs who lost their jobs due to the war were recorded in the trade

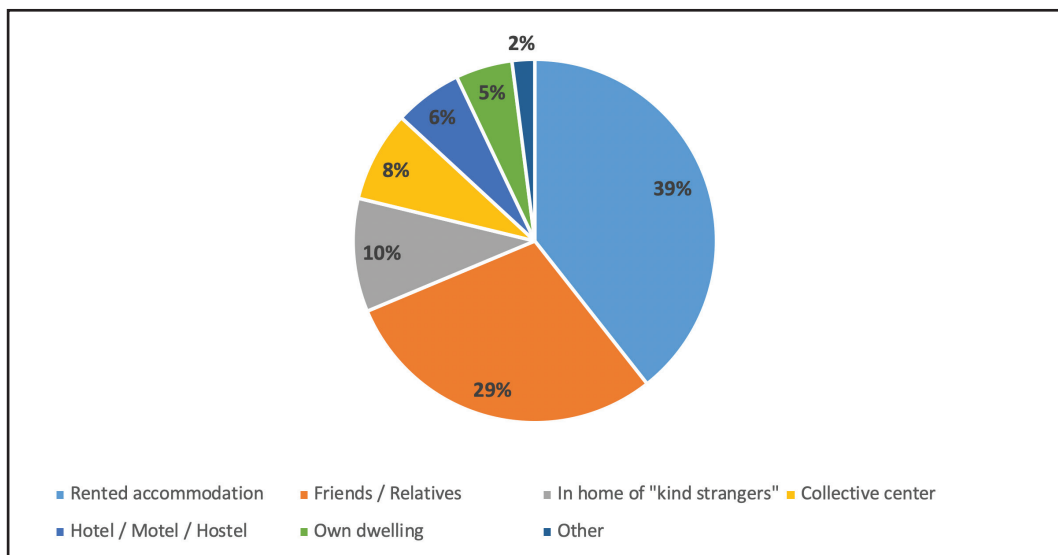
sector (13.4% of those surveyed) and the service sector (12.4% of those surveyed). Therefore, objectively speaking, these sectors are among the most desirable for IDPs in terms of employment prospects: 18.2% of the surveyed IDPs expressed a desire to work in the trade sector, 9.2% in the construction sector and 8.6% in the service sector.

It is also important to understand the situation regarding the accommodation of IDPs. The majority of those surveyed (39.7%) reported renting housing, while a similar percentage (38.7%) stated that they were living with relatives/friends or with people who provided them temporary shelter in their own homes (meaning that IDPs in this category are likely not paying for accommodation).

Continuing the analysis of migration intentions, it is worth noting that 33% of those surveyed expressed a desire to stay in the region, while another quarter of the respondents were undecided. Specifically, 11.4% stated that their choice depends on specific circumstances, and 12.1% were unable to provide a clear answer.

Meanwhile, 42.5% of the surveyed IDPs expressed the intention to leave the Zakarpattia oblast. Among those who intend to leave Zakarpattia, 75.4% plan to return to their previous or

Fig. 3 Distribution of IDPs by place of residence



(Compiled on the basis of Mapping the Situation and Needs of Displaced People in Zakarpatska Oblast, November 2022).

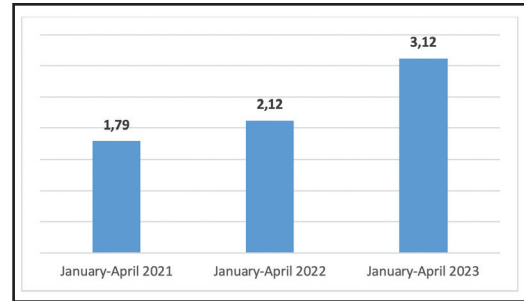
permanent place of residence (i.e., the regions where they lived before the conflict started), 10.3% plan to relocate to another place within Ukraine and 7.5% plan to move to another country.

It is worth mentioning that the arrival of a significant number of IDPs, alongside other processes such as mobilization measures, industrial relocation, among other issues, has had a significant impact on the development of the regional economy and social sphere.

One of the most intuitively obvious consequences is the stimulation of the consumer market due to the sudden increase in population. Particularly notable are retail trade establishments, food services, temporary accommodation and the hotel and restaurant business, among others. Since statistical information on the socio-economic situation of Zakarpattia oblast and other regions during a state of war is not publicly available, it is appropriate to turn to the analysis of trends in local budget revenues for Zakarpattia oblast (currently this information is publicly accessible). In this context, it should be noted that from January-April 2022, citizens and business entities paid approximately 2.125 billion UAH in tax obligations to the local budgets of Zakarpattia oblast, which is 413 million UAH more than in the same period of 2021 (when 1.7948 billion UAH was paid). Furthermore, from January-April 2023, this amount increased by an additional 41.5% to 3.125 billion UAH. It is important to consider factors such as the devaluation of the national currency during the specified period, increased prices for industrial and food products, and so on. However, significant growth in tax revenues indicates a stimulation of economic processes in the region despite the realities of the full-scale war (the statistics regarding the local and regional budget income in Zakarpattia oblast).

We specifically note the increase in demand for buying and renting residential and commercial properties, which has led to a rise in real estate prices, particularly as favorable government policies (including preferential lending programs for certain social groups) have gradually been reinstated. Let's take the example of rental housing: although official statistical information at the regional level indicates a relatively small increase in rental prices (4.2% in March, 7% in

Dynamics of revenues of local budgets in Zakarpattia oblast (January–April 2021–2023), billion UAH



(Compiled on the basis of regional statistics).

April, 13.7% in May), it should be noted that the actual price growth has been much higher, as the majority of the real estate rental market in Zakarpattia oblast, like in other regions, operates in the informal sector. According to research conducted by the Ukrainian real estate portal «LUN», if May 2022 is compared to October 2021, Zakarpattia oblast experienced the highest increase in rental housing costs in Ukraine, with prices rising by 225%. This is significantly higher than in other Western Ukrainian regions such as Chernivtsi (156%), Ivano-Frankivsk (128%) and Lviv (96%).

The simplest explanation for this situation is that prices rose due to stable supply levels and a sharp increase in demand, as the construction of new residential and commercial properties is a lengthy process. Moreover, in such conditions, it is advantageous for construction companies to raise prices for completed projects or those that will be completed in the near future.

Overall, it should be noted that there are expanding prospects for the construction business in recipient territories, as the demand for housing is expected to increase, especially if certain orders are supported and/or provided by the government. However, for a significant portion of IDPs who have lost their jobs or businesses (and therefore their source of income), the sharp increase in rental prices can become an unbearable burden. Additionally, in the context of the mass influx of IDPs, the opportunities for settling people in collective accommodation centers quickly diminish.

One of the solutions implemented by regional authorities in Ukraine, including in the Zakar-

pattia oblast, was the use of modular construction, which was driven by its key advantages such as rapid building assembly and relatively low cost. However, the use of this approach was limited. For example, in the western regions of Ukraine, the number of modular buildings constructed ranged from several dozen to several hundred, which did not meet the substantial housing needs of IDPs in the context of mass migration.

Alongside the possibilities for increasing revenue, we also note the additional burden on local budgets associated with the need to support IDPs in terms of resettlement and providing essential items such as food, clothing, medication, etc. Undoubtedly, international humanitarian aid and the work of volunteers have partially met these needs. However, local government authorities (local administrations) and local self-governance bodies face the task of ensuring humanitarian security. This includes ensuring the unimpeded supply and necessary reserves of food, hygiene products and other household goods (considering the increased population). It also involves ensuring the resilience of the infrastructure and housing and communal facilities in communities under conditions of increased demand. These include water supply and sanitation, waste collection and disposal, public transportation, and so on.

It should also be noted that due to its geographical distance from the conflict zone, Zakarpattia oblast has become a so-called “rear region” and has transformed into a conditional humanitarian hub that dispatches a portion of humanitarian cargo and aid to the eastern regions of Ukraine. Moreover, the strengthening of the region’s human potential has become evident through the arrival of a large number of people, including young individuals, skilled professionals and entrepreneurs. Alongside the movement of capital to recipient territories (primarily through the relocation of businesses, industrial evacuation and investments in relatively safe regions), there is an increase in their human resources.

The change in approaches to shaping the socio-economic sphere of recipient territories has become relevant, primarily in terms of focusing on the effective utilization of the human capital of internally displaced persons (IDPs), the po-

tential of relocated businesses and the formation of new centers of economic activity.

It should be emphasized that strategic development planning in such “extreme” conditions should be conducted using forecasting tools (short-term, medium-term and long-term perspectives), and the development of hypothetical scenarios (most common: optimistic, neutral, pessimistic) should be considered with the determination of their probability of realization.

In the case of Ukrainian territories (as of June 2023), we assume that the hostilities have taken on a prolonged nature (a scenario of “war of attrition”), and after their conclusion, there will be a lengthy period of time before demining, infrastructure restoration, housing reconstruction and other measures can take place. In such conditions, the development of strategic directions for the recipient territories should consider the consequences of internal population migrations and business relocations, while also considering the persistence of current risks to economic and humanitarian security.

Conclusions and general recommendations

In summarizing the discussed theses in the article, we emphasize that the formation of a “roadmap” to address the consequences of forced internal population migrations in the context of intensified socio-economic and humanitarian situations in regions and the country should focus on supporting and integrating internally displaced persons (IDPs) and utilizing their human capital within the regional economy. From our perspective, achieving this goal is possible through active cooperation between local government authorities (administrations at all levels, their relevant departments responsible for social affairs and economic development), local self-governance and under the overall coordination of central executive bodies. It is important to direct joint efforts towards the following strategic directions:

- 1) First and foremost, in the context of humanitarian and economic challenges, the question of **renewing regional and local development strategies, as well as targeted state programs** (in the field of regional development, social policy, economy, trade, etc.), becomes relevant. In this process, it is

important to utilize “new variables” within the framework of strategic regional and community development planning: updated statistical information on the region’s socio-economic and demographic situation; the assessment of public sentiments and the needs and expectations of the local population and internally displaced persons (IDPs) (which can be achieved through sociological surveys or other forms of polling); analysis of supply and demand in the labor market in terms of professions and specialties (suggestions regarding this will be presented below); the number of relocated enterprises (if any), and so on. An important condition for the success of updating strategic and programmatic documents is the involvement of experts and scholars, especially professionals in the field of strategic planning and project management, among others.

- 2) **The establishment of systematic registries of internally displaced persons (IDPs) categorized by qualifications** with the aim of facilitating their employment (within host communities, neighboring communities or through resettlement) within communities or engaging them in productive activities. This involves creating “information banks” about IDPs that, in addition to personal data (full name, place of permanent residence, age, gender), will contain information about their education, profession, the position they held before their forced displacement and their contact details. Such information should be regularly updated and forwarded to regional military administrations for consolidation and processing.
- 3) **The implementation of training programs, skill enhancement and requalification initiatives for internally displaced persons (IDPs)** who can be engaged as new employees in evacuated enterprises within communities. To achieve this, it is necessary to involve higher education institutions, specialized training centers, associations of local self-government bodies, civil society organizations and business associations in the regions. It is worth noting that to ensure efficiency and reach a wider audience, utilizing distance learning opportunities is desirable. This can involve creating open online courses, utilizing communication software for internet telephony and other relevant methods.
- 4) In terms of **providing necessary conditions for accommodating IDPs**, we would like to highlight several important priorities:
 - Ensuring the unimpeded supply and creation of necessary reserves of food, hygiene products and other household goods in accordance with the population growth in each community, based on appropriate interregional cooperation.
 - Ensuring the stability of infrastructure and utilities in communities in the face of increased demand resulting from the influx of internally displaced persons and the establishment of additional production facilities. This includes maintaining the functionality of water supply and sewage systems, waste management and disposal, public transportation, commercial networks and ensuring adequate capacity of power lines, among other aspects.
 - Ensuring the quality provision of public services at the level of territorial communities that receive evacuated individuals, taking into account the significant increase in population, with the necessary additional staffing and material-technical resources, and leveraging the opportunities of international technical assistance. For example, in Ukraine, the “Diia” application and online portals for government services are partially used for such purposes. In Zakarpattia oblast, a separate application called “Dopomoha Zakarpattia” has been created, and it primarily focuses on internally displaced persons.
- 5) Organizing mental, psychological and educational adaptation programs for internally displaced persons (IDPs) and preventing conflicts between IDPs and the local population, including by involving IDPs in the processes of self-organization within the host communities.
- 6) Based on the experience of Zakarpattia oblast, we emphasize that in large-scale forced internal migrations, the construction of temporary housing (such as modular houses) is a useful step; however, it does not solve the problem of accommodating internally displaced persons (IDPs), the majority of whom either rent housing or stay with individuals who have provided them shelter. As mentioned above,

this situation leads to a sharp increase in rental and property prices. Therefore, other relevant steps include, firstly, providing financial assistance to IDPs to partially cover their housing expenses, as well as making payments to individuals who offer free shelter to IDPs (particularly to compensate for their utility expenses, etc.).

- 7) The experience of Zakarpattia demonstrates the effectiveness of using digital tools such as the developed Ukrainian application «Dii» (Eng. «Action») and the information portal «Dopomoha Zakarpattia» (Eng. «Help Zakarpattia») created based on it. Such tools are valuable in the face of challenges related to the registration of displaced persons and the dissemination of relevant information for them.

Finally, it should be noted that in the face of economic and humanitarian challenges, the responsibility for monitoring the situation and making timely decisions to address pressing issues lies not only with central authorities but also with regional and local governments. It is objectively recognized that state structures may not always be able to provide timely and effective solutions to urgent problems in all spheres. Therefore, it is important to realize the potential of collaboration between government and civil society, including non-governmental organizations, volunteers, experts, the scientific community, and so on.

References

1. ADEOLA R (2021) The Internally Displaced Person in International Law. *International Journal of Refugee Law*. 2021. Vol. 33. Pp. 366-378.
2. ARAKELOVA I (2017) The influence of internally displaced persons on the social and economic development of regions in Ukraine. *Baltic Journal of Economic Studies*, 3(5), 6-12. <https://doi.org/10.30525/2256-0742/2017-3-5-6-12>.
3. CANTOR D, SWARTZ J, ROBERTS B et al. (2016) Understanding the health needs of internally displaced persons: A scoping review. *Journal of Migration and Health*. 2021. Vol. 4. Pp. 2-8.
4. NAHORNIAK T. (2016). Social and political factors and consequences of migration processes in Ukraine (2014-2016). *Political life*, no. 3, pp. 32-45. URL: <https://jpl.donnu.edu.ua/article/view/2788> [in Ukrainian].
5. DUSTMANN, C., VASILJEVA, K., DAMM, A. (2016). Refugee migration and electoral outcomes. *CREAM DP*, vol. 19, pp. 16. URL: www.cream-migration.org/publ_uploads/CDP_16_16.pdf.
6. Mapping the Situation and Needs of Displaced People in Zakarpatska Oblast (9 – 27 Nov 2022). URL: <https://dtm.iom.int/reports/mapping-situation-and-needs-displaced-people-zakarpatska-oblast-9-27-nov-2022>.
7. SMAL, V., POZNYAK O. Internally displaced persons: social and economic integration in hosting communities. 2016. URL: http://pleddg.org.ua/wp-content/uploads/2016/10/IDP-REPORT_V.Smal_ENG.pdf.
8. ALEKSEYENKO L., TULAI O., PETRUSHENKO Y., KUZNIETSOV A., DERKASH J. Affordable housing for internally displaced persons: the priorities for investment and development in Ukraine. *Investment Management and Financial Innovations*. 2021. 18(1). P. 101-113. <http://dSPACE.wunu.edu.ua/handle/316497/45150>.
9. More than UAH 3 billion in taxes have been paid to the local budgets of Zakarpattia. Zakarpattia online. URL: <https://zakarpattya.net.ua/News/227489-Do-mistsevykh-biudzhetiv-Zakarpattia-splacheno-ponad-3-mlrd-hrn-podatki> [in Ukrainian].
10. The Regional Forum «Start life from zero» dedicated to support for displaced persons was held in Zakarpattia. Zakarpattia online. URL: <https://zakarpattya.net.ua/News/225737-Na-Zakarpatti-vidbuvsia-rehionalnyi-forum-pro-pidtrymku-pereselentsiv-Zhyttia-z-nulia-FOTO> [in Ukrainian].
11. TNew Residents of Zakarpattia: Situation and Needs of Displaced Population. The National Institute for Strategic Studies. URL: <https://niss.gov.ua/news/statti/novi-meshkantsi-zakarpattya-sytuatsiya-ta-potreby-peremishchenoho-naseleння> [in Ukrainian].

Applying language Competences when working with Ukrainian Refugees in helping Professions

M. Olah (Michal Olah)³, M. Mackinova (Monika Mackinova)¹, T. Planka (Tomas Planka)¹, M. Mackinova (Michaela Mackinova)², S. Wimmerova (Sona Wimmerova)^{1,2}

¹ Department of Social Work, Faculty of Education, Comenius University in Bratislava, Slovakia

Original Article

² Research Institute of Child Psychology and Pathopsychology in Bratislava, Slovakia

³ St. Elizabeth University of Health and Social Work in Bratislava, Slovakia

E-mail address:

planka3@uniba.sk

Reprint address:

Tomaš Planka
Department of Social Work
Faculty of Education
Comenius University in Bratislava
Soltessovej 4
811 08 Bratislava
Slovakia

Source: *Clinical Social Work and Health Intervention*
Pages: 57 – 65

Volume: 15
Cited references: 5

Issue: 2

Reviewers:

Johnson Nzau Mavole
Catholic university of Eastern Africa, Nairobi, KE
Daniel J. West, Jr.
University of Scranton, Department of Health Administration and Human Resources, USA

Keywords:

Language Competence. Communication. Social Worker. Health Worker. Volunteering. Psychology.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 57 – 65; DOI: 10.22359/cswhi_15_2_09 © Clinical Social Work and Health Intervention

Abstract:

The topic of linguistic competence and its practical, creative and, above all, effective application in practice is an extremely important one. It becomes a particularly important and sensitive topic in helping professions, where language needs to be handled with the utmost precision, efficiency and appropriateness.

Among the basic premises of the conducted research, we rank a number of factors that influence and shape the communication and understanding process itself. The most important

factors that constitute the research starting points are: the **effectiveness of communication**, which represents the degree of understanding and the ability to communicate with each other; the **barriers and communication challenges** that cause difficulties in communication or make it impossible, and these barriers need to be overcome in order to provide assistance in an effective way; **cultural sensitivity**, which refers to the degree of work sensitivity that occurs in multicultural communication, taking into account the cultural differences of environments; **education and professional development**, which highlight and reflect the need for language competence and foreign language teaching for flexible communication and language competence management in professional life.

Set and Methods

Targeted respondents directly involved in the care of refugees from Ukraine participated in the survey. All the respondents work in the fields of health and social work, which are the disciplines that have been at the frontline of providing emergency health and humanitarian assistance. The sample consisted of 100 undergraduate social work respondents and 100 undergraduate health respondents. The other part of our study sample was 100 respondents from the field of social work in the work process and 100 respondents from the field of health care in the work process. The total number of research participants was a sample of 400 respondents. We conducted the survey in the period September 2022 - October 2023 in the form of an anonymous questionnaire, purposively selecting social work and health professionals who have experience working directly with refugees from Ukraine.

Introduction

Since the outbreak of war in Ukraine in February 2022, several million Ukrainian refugees have fled their homes and sought refuge in all countries of the European Union and beyond. War refugees from Ukraine have brought with them the stress and trauma of the environment from which they fled. They have escaped life-threatening situations and lost family members, but even the transit itself was a stressful event for them. They were frightened, vulnerable and paralyzed by the change. The uncertainty of social security and the legal status in a new country, poor living conditions, and a lack of resources and food added to their stress. Since the beginning of the Russian invasion of

Ukraine, approximately 8 million refugees have fled to neighbouring European countries. In response to this humanitarian crisis, the European Commission's Temporary Protection Directive 2001/55/EC [1] was activated for the first time, allowing immediate access to health care for Ukrainian refugees. The practice of caring for refugee patients varies in different European countries, as co-payments for medicines and medical services, mental healthcare and dental care programmes are different in each country. According to statistics from the Ministry of the Interior, there were approximately 38,000 Ukrainian refugees in Slovakia in June 2023. If we apply the average 2022 health care costs of Slovak insured persons to them, we estimate that their full health care needs would amount to approximately €33.1 million, which is 0.6% of last year's healthcare expenditure (assuming that Ukrainian expatriates have similar health problems and would receive health care in the same way as the majority).

Because potential vulnerability exists for all refugees and the intersection of multiple vulnerabilities creates unique cases, governments should take vulnerability into account when providing assistance to all refugees and should explicitly protect the rights of vulnerable migrants through their national laws and policies. Based on their recognized status, refugees from Ukraine have varying degrees of access to and scopes of healthcare. They are entitled to urgent healthcare, but the Ministry of Health may determine the scope of medical procedures reimbursed beyond urgent care. "If they obtain permanent or temporary residence, they are entitled to the full range of health care, and Slovak providers are obliged to

conclude a health care agreement with these patients. However, most of the refugees have the status of temporary refuge, i.e., they are only entitled to urgent and necessary health care,” notes a study by the Institute of Health Analysis (IZA) under the Ministry of Health.

During each refugee wave, health and social workers were constantly on the ground providing health and social assistance. Social workers were expected to provide social services, humanitarian assistance and to work with people with whom they could not speak directly, which may have affected the quality of services provided. Ideally, the social worker would have knowledge of the refugee’s specific mother tongue or they could find another language that both parties understand. In most cases, however, interpretation is needed.

The role of the interpreter is very important in such a sensitive process, as the refugee understanding the problem he/she is facing and consequently the social worker’s assistance and interventions depend on the interpretation. The interpreter can be a great help, but also a burden. An experienced interpreter can help overcome language and cultural barriers and enable the social worker to better understand the needs of the refugee migrant. However, if the interpretation is of poor quality, incomprehensible or inadequate, information can be distorted, misunderstood and misinterpreted. In this case, trust and respect can be broken, which can lead to mutual conflict or to the termination of social work and assistance provision. The choice of the interpreter, his/her qualities and skills are therefore crucial in social work with foreigners. When choosing an interpreter, it is important to consider various factors such as age, gender, religion, etc.

Language and the ability to both communicate and understand each other is an imaginary building block on which we can then build (Okech, Otieno, V. 2017). All cooperation and the subsequent provision of social and humanitarian aid depend on understanding. If we understand every single human life as an activity that is carried out by human beings, an essential part of it is communicative language (Muránsky, 2018). Therefore, as a result of the ability to speak a foreign language, we point out the need for education in a foreign language and the importance of communication.

According to the results of the sociological study Language Competence in Slovakia (<http://www.goethe.de/ins/sk/bra/sk7654856.htm>), which was prepared and published in May 2011 by the Institute for Public Affairs, 89% of the young population of Slovakia in particular is convinced that it is not enough to know only English in order to do well in employment. However, in the 2011/12 school year, the teaching of English as the first compulsory foreign language was introduced in Slovakia, and there are discussions about dropping the teaching of a second foreign language in primary school. SUNG – The Society of German Language Teachers and Germanists of Slovakia, ARS – The Association of Russian Studies in Slovakia, SAUF – The Slovak Association of Teachers of French and AESPE – The Slovak Association of Teachers of Spanish have therefore decided to initiate a public discussion on the current forms of language education in Slovakia, the need to master several foreign languages and the advantages of multilingualism, as well as the possible pitfalls of the current changes in the teaching of foreign languages.

Foreign language as a means of substantive communication has its own specific features, which result primarily from its use as a means of mutual communication between members of individual socio-professionally defined groups, as well as its use among individual groups. The demands placed on substantive communication are also reflected in the demands placed on language teaching as a means of this type of communication. Additionally, they influence the foreign language training of university students, as well as the training of professionals - both practitioners and theoreticians in relevant fields.

The aspect of international communication serves to develop and consolidate linguistic competences such as fluency and writing and deepen grammatical structures within professional language and its lexical and stylistic aspects. Emphasis is also placed on mastering the terminological base of a foreign language, its translation into Slovak and the expression of the Slovak terminological base of the discipline in the respective foreign language.

The aim of this study was to find out the linguistic competence of students in undergraduate studies, their practical skills and experience with

the application of a foreign language in practice. Subsequently, we wanted to find out what language skills are possessed by employees in the health and social spheres, since due to the influence of migration flows to Europe, the Slovak Republic has become a country with an influx of migrants from all over the world. Consequently, it is necessary that people working in the social and health spheres possess sufficient language competences.

Language teaching usually aims to prepare graduates to function smoothly in the environment of both the target discipline and the target country. The language system in the target country has emerged as a consensus of codifiers and users of a given language who have agreed on the meanings of the various units of the language.

Ultimately, every communication is the result of mutual agreement and respect of the communicators (Laca – Laca, 2020). In teaching a foreign language as a means of professional communication, there comes a moment when the student learning a foreign language not only demonstrates the ability to practically use textual models, but above all, demonstrates his/her ability to be creative in this language and show his/her potential to convey his/her own thoughts and ideas.

Research

One main aim of the research is to find out more about the use of language competence in helping professions in crisis situations, with a focus on the application of foreign languages in crisis situations (refugee crisis). Another main aim is to identify language competence in working with refugees.

Sample of respondents

The survey targeted respondents in the workforce from the fields of health, social work, psychology and volunteering. The sample consisted of 100 respondents from health care, 100 respondents from social work, 15 respondents from psychology and 50 student volunteers. All respondents worked with and assisted Ukrainian refugees in humanitarian centres and detention camps. They also provided health care and humanitarian aid to this target group.

The survey was conducted between September 2022 and October 2023 in the form of an

anonymous questionnaire. Questionnaires were sent out to respondents with questions related to foreign language skills and their use in practice. The total number of questionnaires distributed was 400, and the return rate was 320 (80%) questionnaires. Incomplete questionnaires were excluded from the analyses, and the final number was 265 fully completed questionnaires, representing 66.25% of the research sample.

Statistical processing

We used descriptive statistics to describe the population. Since all our data are categorical, we used frequency tables. For statistical analysis, we used the Chi-squared test of homogeneity with a significance level of $\alpha = 0.05$.

Results

The survey sample consisted of 100 social work respondents, 100 health care respondents, 15 psychology respondents and 50 student volunteers. We further stratified the in-service respondents by age, namely, respondents up to and including 40 years of age (age ≤ 40 years) and respondents over 40 years of age (age > 40 years). There were 45 respondents in the health care work process in the age category up to and including 40 years and 55 respondents in the age category above 40 years. In the social work work process, there were 22 respondents aged up to and including 40 years and 78 respondents aged over 40 years. In the work process in the field of psychology, there were 8 respondents up to the age of 40 years, and in the age over 40 years there were 7 respondents. Fifty volunteer respondents, all under the age of 25, also participated in the survey. The oldest respondents were in the social work group.

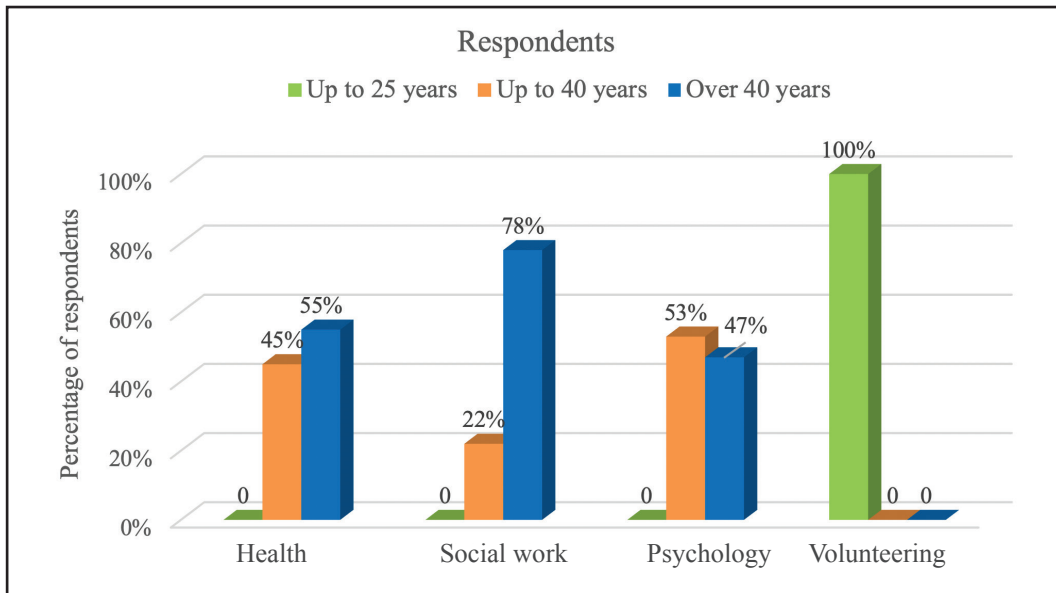
The age distribution of respondents in each job category is shown in Figure 1. Following Figure 1, we present the processed responses to the questions from the distributed questionnaire.

Question: **Communication level and foreign language skills**

In the health care work process, out of 45 respondents under the age of 40, 33 respondents are proficient in at least one foreign language, and 15 of them are proficient in two or more foreign languages.

In the social work work process under the

Figure 1 Age of respondents in different job classifications



age of 40, 17 respondents out of 22 know at least one foreign language, and 11 know two or more foreign languages.

In the work process of psychology, 8 respondents under the age of 40 answered that they know at least one foreign language, and 3 respondents know two or more languages.

In the age group over 40 years in the health care work process, 38 respondents out of 55 know at least one foreign language, and 13 of them know two or more foreign languages. In the social work workforce over 40 years, 69 out

of a total of 78 respondents speak at least one foreign language, and 28 speak two or more foreign languages. In the work process of psychology, out of a total of 8 respondents over the age of 40, 7 respondents answered that they know at least one foreign language, and 2 respondents know two or more languages. In the area of volunteering, all of them have proficiency in at least one foreign language, and 16 have proficiency in two or more languages.

The language proficiency of the respondents is detailed in Table 1.

Table 1 Language proficiency of respondents

Age	Work process						Volunteering	
	Health		Social work		Psychology		Any language	At least one language
	Any language	At least one language	Any language	At least one language	Any language	At least one language		
Up to 25 years	-	-	-	-	-	-	0	50 (100%)
Up to 40 years	12 (26,7%)	33 (73,3%)	5 (22,7%)	17 (77,3%)	0	8 (100%)	-	-
Over 40 years	17 (30,9%)	38 (69,1)	9 (11,5%)	69 (88,5%)	0	7 (100%)	-	-
Together	29 (29%)	71 (71%)	14 (14%)	86 (86%)	0	15 (100%)	0	50 (100%)

The table below shows the numbers and % of respondents in the age categories of each job classification.

As Table 1 shows, the highest proportion of respondents who know at least one foreign language was in the volunteer group and in the group from the field of psychology, where all respondents (100%) know at least one foreign language. In the field of social work it was 86%, and in the field of health care it was only 71%. There was a statistically significant difference in language proficiency between the groups by area of work, $p < 0.001$.

There was also a statistically significant difference between age groups ($p = 0.002$). In the youngest age category, all respondents (100%) know at least one foreign language. In the over 40 age category it is 81.4%, and in the 26-40 age category 77.3% of the respondents know at least one foreign language.

Question: Use of a foreign language in the work process

The answers to this question are presented in Table 2.

When asked about the use of a foreign language in practice by respondents in the work process in the health sector, out of 45 respondents under 40 years of age, 10 respondents use a foreign language in their profession regularly, 22 respondents answered sometimes and 10 respondents do not use a foreign language in their profession at all. In the age category over 40 years, 22 out of 55 respondents use a foreign language in their profession regularly, 12 respondents sometimes and 22 respondents do not use a foreign language in their profession at all.

In the social work workforce under the age of 40, all 22 respondents interviewed reported

that they only practice language skills in their profession sometimes. In the over 40 years category, 8 out of the total 78 respondents use a foreign language in the practice of their profession regularly, 26 respondents use a foreign language sometimes and 44 respondents do not use a foreign language in their profession at all.

In the psychology work process, all interviewees, regardless of age, communicate with clients in a foreign language at least sometimes. In the age category up to 40 years, 5 respondents use a foreign language in regular communication, and only 3 respondents answered that they only sometimes communicate in a foreign language in the performance of their work. In the age category over 40 years, 2 respondents answered that they use a foreign language in practice on a regular basis, and 5 respondents use a foreign language for communication only sometimes.

In the area of volunteering, 32 respondents use a foreign language regularly, and 18 respondents said that they use a foreign language when carrying out their work only sometimes.

The graph in Figure 2 shows the use of a foreign language in practice in different work processes, regardless of age. As can be seen from the graph, volunteers (64%) communicate most regularly with clients in a foreign language. After this comes employees in the psychology work process (47%) and is followed by employees in the field of health care (40%). Employees carrying out social work (only 8% of respondents) use foreign language communication in practice the least. In the group of respondents in the field of social work, 44% of respondents stated that they do not use a foreign language for commu-

Table 2 Use of a foreign language in practice

	Work process						Volunteering
	Health		Social work		Psychology		
	Age ≤ 40 years	Age > 40 years	Age ≤ 40 years	Age > 40 years	Age ≤ 40 years	Age > 40 years	Age ≤ 25 years
Yes, regularly	10 (22,2%)	30 (54,5%)	0 (0%)	8 (10,3%)	5 (62,5%)	2 (28,6%)	32 (64%)
Sometimes	25 (55,6%)	8 (14,5%)	22 (100%)	26 (33,3%)	3 (37,5%)	5 (71,4%)	18 (36%)
No	10 (22,2%)	17 (30,9%)	0 (0%)	44 (56,4%)	0 (0%)	0 (0%)	0 (0%)

The table below shows the numbers and % of respondents by age in each work process.

nication at all. There is a statistically significant difference ($p < 0.001$) between the groups of respondents according to their work occupation when it comes to the use of foreign language in communication with refugees.

Similarly, in Figure 3 we can see how the frequency of using a foreign language in their work varies by age. The largest number of respondents using a foreign language in their work is in the

under 25 group, which is the same as the number of respondents in the volunteer group. This is logical as all respondents under 25 were only in the volunteer group. Therefore, we only made comparisons of foreign language use in practice between the under 40 and over 40 groups. Again, there was a statistically significant difference ($p < 0.001$) between the under 40 and over 40 respondents.

Figure 2 Use of a foreign language by occupation

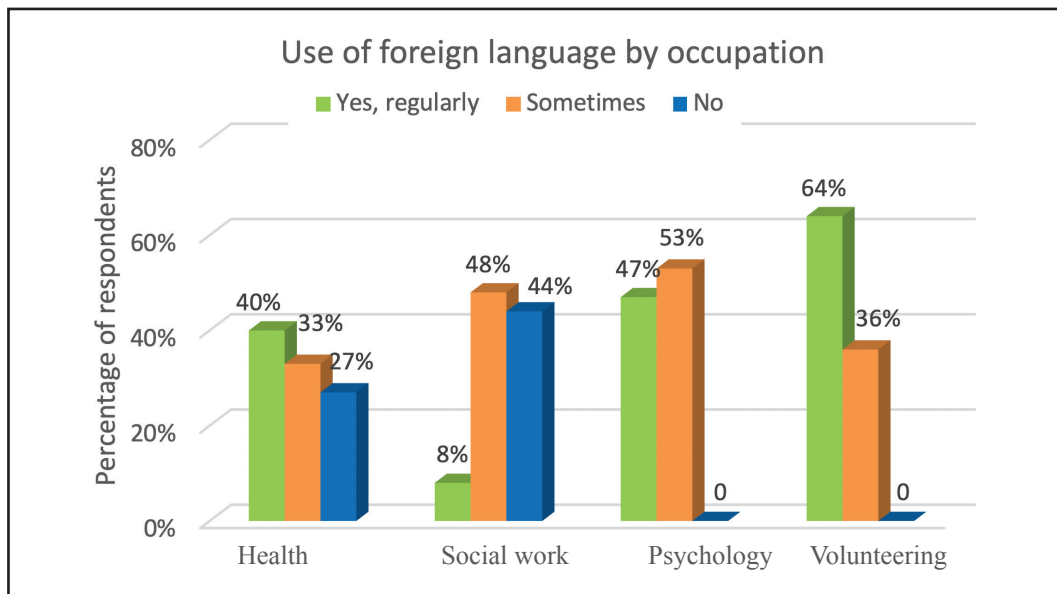
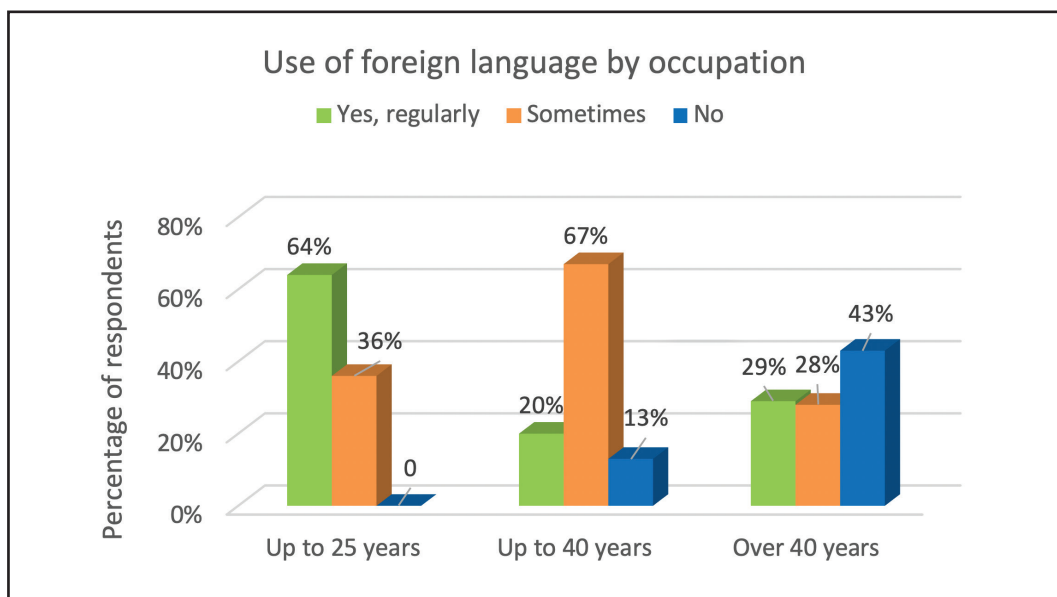


Figure 3 Foreign language use by age



Question: What foreign language have you used in your work with Ukrainian refugees (if you have used more than one, please tick all that apply)

The next question asked which language respondents used in their work: English, Ukrainian, Russian, interpreting, or another language. The answers to this question are presented in Table 3.

English was the language most frequently used by respondents in all categories, by both work process and age. Overall, out of 265 respondents, 221 respondents used English, which is 83.4%. Interpreting into a foreign language was also frequently used, and in our study there were in 98 (37%) respondents reporting having done this. Not a single respondent in the analysis set reported using another language. Ukrainian and Russian languages were equally used by 30 (11.3%) respondents.

Question: What kind of assistance have you provided to Ukrainian refugees (if you have used more than one form, please tick all that apply)

The responses of respondents from the work process - all three forms - are presented in Tables

4-6. While respondents in the Health work process provided only basic health care to Ukrainian refugees, respondents in the Social Work work process, in addition to basic counselling, also provided humanitarian assistance, crisis intervention and dealt with refugees in terms of accommodation. All 15 respondents in Psychology provided counselling, crisis intervention and consultations. As for volunteers, all 50 provided humanitarian assistance to refugees, arranged leisure activities and assisted with data collection.

Question: Improving the level of foreign language proficiency

When asked whether the respondents would like to improve and increase their level of language skills for their profession, all respondents answered unanimously “yes”.

Conclusion

Foreign language as a means of substantive communication has its own specific features that result primarily from its use as a means of communication between members of individual socio-professionally defined groups, as well as between these groups.

Table 3 What kind of language did you use when working with refugees?

Language	Work process						Volunteering
	Health		Social work		Psychology		
	Age ≤ 40 years	Age > 40 years	Age ≤ 40 years	Age > 40 years	Age ≤ 40 years	Age > 40 years	Age ≤ 25 years
English	33 (73,3%)	38 (69,1%)	17 (77,3%)	68 (87,2%)	8 (100%)	7 (100%)	50 (100%)
Ukrainian	0 (0%)	0 (0%)	5 (22,7%)	6 (7,7%)	3 (37,5%)	0 (0%)	16 (32%)
Russian	10 (22,2%)	0 (0%)	6 (27,3%)	12 (15,4%)	0 (0%)	2 (28,6%)	0 (0%)
interpreting	22 (48,9%)	20 (36,4%)	10 (45,5%)	15 (16,2%)	8 (100%)	7 (100%)	16 (32%)
Other language	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

The % share is calculated from the actual number of respondents in each category.

Table 4 Health work process

What kind of assistance have you provided to Ukrainian refugees?	Age ≤ 40 years		Age > 40 years	
	number	%	number	%
Basic health care	45	100%	55	100%
Specialised health care	0	0%	0	0%

Table 5 Work Process - Social Work

What kind of assistance have you provided to Ukrainian refugees?	Age ≤ 40 years		Age > 40 years	
	number	%	number	%
Basic advice	22	100%	78	100%
Specialised advice	0	0%	0	0%
Crisis intervention	20	90,9%	50	64,1%
Humanitarian aid	22	100%	70	89,7%
Accommodation	15	68,2%	49	62,8%

Table 6 Work Process - Psychology

What kind of assistance have you provided to Ukrainian refugees?	Age ≤ 40 years		Age > 40 years	
	number	%	number	%
Advice	8	100%	7	100%
Crisis intervention	8	100%	7	100%
Consultation	8	100%	7	100%

The conducted empirical investigation was carried out on respondents working with refugees from Ukraine, and the respondents came from the field of social work and health care. Volunteers providing assistance to refugees were also involved. The research provided us with results regarding foreign language proficiency, communication levels and use in practice.

- MURANSKY M (2018) Conduct and morality. College scripts for the subject of philosophy. Bratislava: Slovak education publishing s.r.o., 2018. 104 p. ISBN 978-80-89934-05-1.

References

- GOETHE INSTITUTE (2011) *Language competence in Slovakia*. 2011. [online]. [cited 2023-12-07]. Available from: <http://www.goethe.de/ins/sk/bra/sk7654856.htm>.
- INSTITUTE OF HEALTH ANALYSIS (2023) In Dennik N. Providing health care to those leaving Ukraine. 2023 [online]. [cited 2023-12-07]. Available from: <https://dennikn.sk/blog/3581164/poskytovanie-zdravotnej-starostlivosti-odidencom-z-ukrajiny/>.
- OKECH OTIENO V (2017) A literature review on the roles of social factors in the etiology of dissocial/antisocial behaviours in children and adolescents IN: *Social work/ Social work : ERIS Journal - Summer 2017*. - Vol. 17, No. 4 .2017, pp. 5-17. ISSN 1805-885X.
- LACAP, LACA S (2020) *The concept of philosophy and ethics in social work*. Příbram: Institute of St. Jan Nepomuk Neumann, 2020. 314 p. ISBN 978-80-88206-20-0.

Possibilities and Limits of forensic Social Work in the prison Environment

T. Planka (Tomas Planka)¹, M. Mackinova (Monika Mackinova)¹, M. Mackinova (Michaela Mackinova)², M. Olah (Michal Olah)³

Original Article

¹ Department of Social Work, Faculty of Education, Comenius University in Bratislava, Slovakia

² Research Institute of Child Psychology and Pathopsychology in Bratislava, Slovakia

³ St. Elizabeth University of Health and Social Work in Bratislava, Slovakia

E-mail address:

planka3@uniba.sk

Reprint address:

Tomaš Planka
Department of Social Work
Faculty of Education
Comenius University in Bratislava
Soltessovej 4
811 08 Bratislava
Slovakia

Source: *Clinical Social Work and Health Intervention*
Pages: 66 – 73

Volume: 15
Cited references: 12

Issue: 2

Reviewers:

Gabriela Lezcano
University of California, San Francisco, USA
Roberto Cauda
Institute of Infectious Diseases, Catholic University of the Sacred Heart, Rome, IT

Keywords:

Forensic Social Work. Legal System. Prison Environment. Practice. Prevention. Communication.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 66 – 73; DOI: 10.22359/cswhi_15_2_10 © Clinical Social Work and Health Intervention

Abstract:

The term forensic refers to anything related to the justice system, the legal system of a state and the responsibilities of social workers in dealing with and resolving legal problems. The very meaning of the term suggests as much. Forensic social work can be broadly characterized as a specialization in social work that focuses on law, legal issues and litigation. In a narrower sense, forensic social work refers to the knowledge, skills, measures and procedures applied when working with forensic social work clients. With this narrower definition, forensic social work can be considered synonymous with the

term criminal justice social work (Neszméry, 2021).

The primary purpose of our study is to empirically state and define the possibilities, roles and importance of social work in the prison setting. The ethical and legal framework and position of the forensic social worker in the prison setting, as well as their role and scope of practice in this setting, are directly related to this. Secondly, we analyze crime in the prison environment and its prevention, as forensic social workers also encounter this socio-pathological phenomenon in addition to many others. In connection with this topic and the focus of the study, we also provide a definition of basic terms in the field of forensic social work.

We include a number of factors that influence the functioning of a forensic social worker in the prison environment and shape the actual practice of the forensic social worker as the basic starting points of the conducted study and empirical research. The most important factors, which represent the basic starting points of the empirical research and the conducted study, are ranked as follows: practice, representing the basic performance and delivery of social work in the prison environment; prevention, meaning the prevention of criminal behavior and other forms of undesirable behavior in the prison environment; the position of the forensic social worker and all the related possibilities for the performance of his/her position, but also the limitations of the performance of his/her activities in the prison environment; and finally, communication, which constitutes the basic tool and means of communication between the forensic social worker and his/her client in the prison environment, between the state authorities, other organizations and the forensic social worker, but also between the convicted person and his/her family.

Organisation and conduct of research

The elaboration of a comprehensive empirical study consists of a number of steps that follow logically one after the other. Together, these individual steps ultimately determine not only the course of the study design, but also the course of the research itself.

- Selection of the research topic and study of literature and expert sources

The first step in the compilation of this study was the selection of the topic we planned to work on. This was followed by the study of literature and familiarization with the research topic from a professional point of view so the theoretical part could be effectively processed.

- Processing the theoretical basis of the study

This part of the study is used to introduce the topic and familiarize oneself with the subject matter. From the theoretical part of the study

comes the empirical part of the study, which includes setting research objectives, defining the research problem and formulating research questions.

An empirical investigation begins with the setting of research objectives, based on which we define the research problem. The research problem represents the area to be investigated. Subsequently, we set the research questions.

- Defining the research population and selecting the research sample

The research population represents all people who meet the conditions we have set and can, therefore, participate in the research. However, since the population is broad for the research, we selected the sample on which the research would be conducted.

- Choice of research methods

The chosen research methods are semi-structured interviews, questionnaires and data analy-

sis. "Developing a questionnaire is a practical and commonly used method" (Neszmer, 2018, p. 8).

- *Contacting respondents and transcribing interviews*

In order to conduct the research, we contacted individual research respondents and arranged a meeting. Subsequently, the interviews were transcribed for further processing and evaluation.

- *Evaluation of the responses obtained and data analysis*

The transcripts were processed using open coding, and the individual data obtained were analyzed.

We define the main research objective as the theoretical definition and empirical confirmation of the position of forensic social work and those that carry out this work - the social worker - in the prison system. Additionally, an emphasis was put on the possibilities of operating in the prison system, the limitations that govern it and those that limit the scope of its activities.

Research problem

The research problem is the cornerstone of empirical inquiry. From the research problem, we derive all the stated research objectives and research questions. We can refer to it as what inspired us to start the research, as we start from the research problem throughout the investigation and build on it. Because of the broadness of the research topic and the overall scope of all research topics, we need to specify a specific research problem that narrows down the topic. "A research topic is a framework that provides the researcher with many opportunities for research. However, a topic is a broad field that is not ready for a research design. Only a specific research problem can be investigated" (Gavora, 2010). Based on our research topic, we set the following research problem:

The scope and possibilities of the practical implementation of forensic social work in the prison environment, the possibilities of implementing social prevention, its scope, form and performance in the prison environment. The possibilities of forensic practice, the scope of the social worker in the prison environment and the limits affecting the performance of this practice that are carried out through the social worker in his/her penitentiary activity.

The research problem determines and defines our research aim and the area in which we want to conduct the research. From the chosen research problem, we derive specified research objectives that reflect the areas of interest occurring in the research problem. On this basis, we have defined research questions that enable us to accurately address the phenomenon we want to study.

- I. The research will be concerned with forensic social work itself in the prison setting and how it is defined and understood by its practitioners.
- II. The position of forensic social work in the prison system within the scope of the practitioner's ability to perform and operate within the constraints that circumscribe the practice.
- III. Social prevention and its scope, form and the way it is implemented in the prison environment.

The research question, which represents the main objective of the investigation, is as follows in the framework of our conducted empirical study:

How do social workers perceive their status and position in the prison environment, the possibilities of forensic practice and the limitations of this practice?

The research question highlights the position of the social worker and their competencies for the possibilities of practicing forensic social work. However, it does not only point to the possibilities, it displays how far the possibilities extend, i.e., the limits. The research question relates us to the research aim and our stated expectations about the empirical results achieved. Specifically, the research question focuses on the perception and understanding of the possibilities of social work in a prison setting by the workers who carry it out. How do social workers perceive all the possibilities of social work in the prison setting and what limits the profession and therefore their practice of forensic social work?

Sample of respondents

The research sample is the final population on which the research will be conducted. "The sample is not usually large, and there is no strict rule by which its size can be determined. In principle, sample selection in qualitative re-

search is deliberate, sequential and based on the willingness of participants to cooperate” (Skutil et al., 2010; In Bačíková - Janovská, 2018, p. 120). There is no uniform rule for the size of a sample, but a sample is selected on the basis of choice.

Our study and empirical research address the topic of the possibilities and limits of forensic social work in the prison setting. Based on this topic and our stated research problem, our research population is represented by social workers working in a prison setting. We selected our research sample from the population by what is known as available sampling - picking and choosing.

There are certain reasons for choosing available sampling for our research. The first is the amount of such workers, and the second is their availability. As there is not a single forensic social worker in the Slovak Republic who performs forensic social work in prison conditions (we do not have such a position and classification in place), our research sample consists of social workers working in prisons and performing forensic social work. Another and very serious problem for forensic social work is the workforce itself (Neszmary, 2020). Since these social workers work in a closed environment and even have an industry-specific role within the field of social work, finding and contacting them is not easy.

Research methods

The research methods used in our empirical research were semi-structured interviews that were processed and evaluated using open coding. This was followed by data analysis of the individual responses obtained in the conducted interviews. However, the primary research method was the individual research interview. “The research interview is a scientific method that is pre-planned. It is an asymmetrical situation, i.e., the researcher conducts the interview and asks the questions, and the respondent answers them. The answers are recorded by the researcher and later evaluated. The interview not only lets you capture the facts, it allows you to delve deeper into the motives and attitudes of the respondents. It is also possible to observe the external reactions of the respondent and to guide the further course of the interview accordingly” (Gavora, 2010).

In their work, Bačíková and Janovská de-

scribe the research interview according to Ferjenčík. Unlike Gavora, they do not describe the interview on the basis of its substance, but they describe the interview as a method and process of data collection. “Interviewing is a research data collection technique that is widely used in the social and behavioral sciences, including education and psychology. It is a verbal (and non-verbal) interaction between two or more actors, which may have different goals. It is a mediated and highly interactive process of data acquisition” (Bačíková - Janovská, 2018, p. 122).

A semi-structured research interview is a method of data collection where there are pre-prepared research questions that the researcher poses to the respondents. There is not a set, fixed structure, and the researcher often asks follow-up questions. This type of interview is not tightly planned. No strict agenda is followed as in a structured interview, nor do we conduct an open-ended interview without guidelines as in an informal interview. In this type of research interview, we have a planned outline that we stick to.

“This type of interview has been developed to ascertain subjective theories and shares common features with the guided interview. The interview guide is constructed according to topic areas, which are always introduced by an open-ended question that the interviewee is expected to answer immediately on the basis of his or her knowledge” (Hendl, 1997, p. 90).

The basis of the research methods used is to ascertain a body of information that, when processed and analyzed, will ultimately point us to the output data that represents the output of the empirical investigation - the findings. However, for correct empirical research, it is necessary to observe several principles (Muránsky, 2018). Among the basic principles, we rank adherence to the code of ethics and attention to social rights. “They should facilitate education and also create the appropriate conditions that are necessary for the application and development of individuals’ abilities for the good of society” (Neszmary, 2020, p. 9).

Data processing and analysis

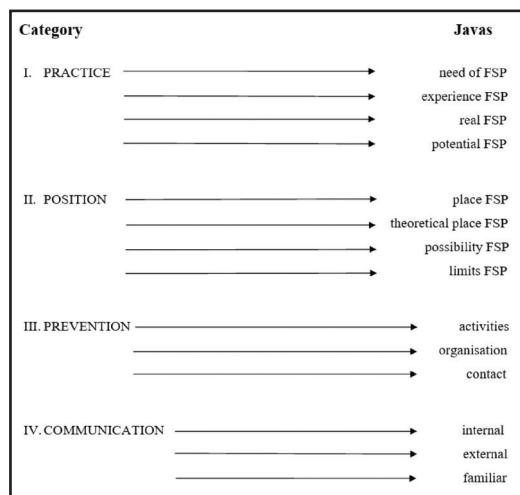
The data we worked with in our research were collected using direct, individual, semi-structured interviews conducted with re-

search respondents who represent social workers in a prison setting and who practice forensic social work. All interviews were recorded and then carefully transcribed, thus providing us with transcripts that we can work with and analyze further.

We processed the interview transcripts using open coding. The principle of open coding is to analyze the data and label important themes - categories. We then assign codes to these categories that represent the categories and describe them. "The code should be a generalization of the information and can take the form of common words or technical terms. As a rule, we return to the naming of codes in the course of working with the text and modify and refine them. At the next stage, we compare the codes, hierarchically arrange them into groups and create categories" (Bačiková - Janovská, 2018, p. 132).

Once we have created the categories, we assign the appropriate phenomena to them. Under the categories are phenomena - areas that are directly related to the category and represent important phenomena in the category. Throughout the coding process, we base our coding on the research questions. In our research study, we created the following categories that emerged from the interviews we obtained through coding: Practice, Position, Prevention and Communication. These categories represent the main themes that relate to our research questions and research problem. However, all of these categories and

Pic. 1 Concept of categories and phenomena



Source: own processing

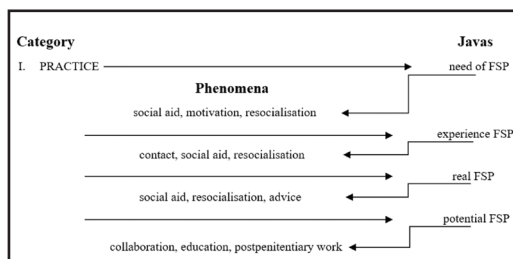
the individual phenomena that fall under them were displayed and emerged after conducting open coding. Based on these categories, we are then able to infer the objectives and provide an interpretation of the data obtained.

Results

Finally, we present the results we found after coding the transcripts and analyzing the individual interview questions. For the results, we present the interpretation of the data and our findings regarding each category.

The first category that emerged for us was Practice. This category combines the actual practice of forensic social work in a prison setting, the respondents' experience of practice, the reasons for the need for social work in the VTOS and the possible future potential of FSPs in the VTOS.

Pic. 2 Practice



Source: own processing

As we can see, the results of coding and data analysis give us the following data. The main components of the Practice category are social assistance and resocialization. These two components appear in every single phenomenon of this category. Thus, we report the following results:

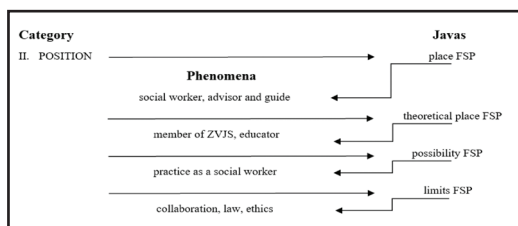
The object of practice of a social worker performing forensic social work in a prison environment is to provide social assistance and help with solving the social problems of clients serving a prison sentence. The subject of practice for these workers is also the socialization and preparation of clients serving a prison sentence for release and for re-entry and integration into society.

We base our results on the literature by Leskova titled "Social Worker in Penitentiary and Post-Penitentiary Care." "Social work with convicted and accused persons during imprisonment

is carried out from the time they are charged to the end of their VTOS in order to alleviate or eliminate social problems, and it also prepares convicted persons for a proper life after VTOS” (Lešková, 2013, p. 54).

The second category of coding results is Position. This category represents the social worker’s place in the prison environment - their position within the prison system. It also includes the theoretical place of the social worker performing FSP in the prison environment if they had not created their own place within social work. However, it also includes the possibilities and limits to the practice of forensic social work, as these are also phenomena that affect the social worker’s position and determine the range of their performance and authority.

Pic. 3 Position



Source: own processing

The coding and data analysis performed showed us the results that can be seen in the processed output of the coding and analysis. The social worker stands out to us as the main phenomenon in the Position category. However, we can see that most of the other phenomena that emerged also touch on the social domain. As a result, we report the following:

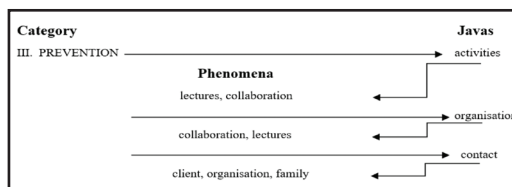
The position of the social worker performing forensic social work in the prison system is fixed in the social work domain - the social worker is referred to in the prison system as a member of the CJS in the place of a social worker. In his/her position, he/she has sufficient space to practice in collaboration with other professional members of the ZVJS while operating within the limits of the code of ethics, the law and the instructions of the supervisor.

We base our findings on the Order of the Director General of the Prison and Judicial Guard Corps No. 60/2008 - Social Work. “In institutions for the execution of imprisonment, social work is carried out with convicts by a social

worker. Social work with accused and convicted persons in a detention centre shall be carried out by a social worker or an educator in charge of social work. The social workers shall be methodically guided and supervised by an official of the Department of Detention and Sentence Enforcement of the General Directorate of the Penitentiary and Judicial Guard Corps” (ZRGR ZVJS, Order No 60/2008, §3).

Prevention is the third category and one of the main themes that were displayed in the coding results. Prevention encompasses all the prevention activities implemented in the prison environment, cooperating with organizations implementing prevention and focusing on improving the integration of ex-convicts into society. It also involves contacts for those released from the VTOS. However, this also includes the provision of contacts and liaison within the framework of social work in the prison environment between convicts and external organizations, authorities and family.

Pic. 4 Prevention



Source: own processing

In the category of prevention, we saw lectures and collaboration as the main phenomena within the category as a whole. These two phenomena are represented in two of the three phenomena that this category contains. However, the third phenomenon also contains phenomena that are related to prevention activities. On this basis, we report the following:

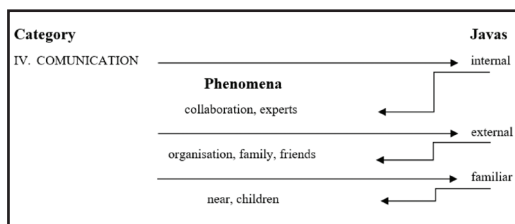
Preventive activities implemented by social workers in the prison environment within the framework of forensic social work are carried out in the form of lectures and with the help of cooperation from external organizations. These preventive lectures are carried out by social workers and experts on various topics. They also deal with contact and communication, since these aspects also fall within the educational procedures when working with convicts.

Our findings are supported by the Order of

the Director General of the ZVJS No. 26/2005: “In order to implement the Crime Prevention Strategy in the Slovak Republic in the practical activities of the Corps, the social prevention activities in the penitentiary institutions and the participation of civic associations, foundations and churches in the social prevention activities with convicts were methodically guided. The training of lecturers and professionally qualified personnel in the field of social-psychological training was methodically coordinated with the aim of orienting them to the performance of special educational procedures in the treatment of convicts” (ZRGR ZVJS - Commentary, Order No. 26/2005).

The last category that came up as an output of our coding and data analysis is communication. Communication itself runs through all the categories and plays a role in each. However, as a category in its own right, communication encompasses different types of communication. This includes internal communication within the working professional team of the CJSW, as well as in the context of working with a client in a prison setting. Then there is external communication, which the social worker also helps to provide; this communication takes place between the client in the SVSO and external organizations, family and friends. Lastly, we include family communication when the convicted person interacts with his/her relatives, acquaintances and children (Neszmary, 2019).

Pic. 5 Communication



Source: own processing

Communication as a separate category does not contain any recurring phenomena that would point us to something specific. However, it also contains phenomena such as organizations, experts and cooperation, among others. We can place all these phenomena in the official domain, and on this basis we can assume that the main aspect in the category of communication is the

professional, official communication itself. According to what was reported, we present the following:

Communication as such is an essential part of life. With the help of communication, we can progress in life and solve everything necessary. However, convicts experience a disadvantage in this regard. They need the help of a social worker when communicating outside the VTOS, whether it be formal or informal. Communication with the authorities, organizations and even family is extremely difficult, and the wait for a result is often long. On this basis, we argue that convicts are at a considerable disadvantage when it comes to external communication.

We support our assertions with literature from Leskova, who draws similar conclusions. “Communication/correspondence between the client and the institutions is difficult, as institutions are often unwilling to accept and discuss assistance directly with the client who needs it based on the recommendation of the social probation officer alone” (Lešková, 2013, p. 113).

Conclusion

The aim of the empirical exploration in the present study was the position of the forensic social worker in the prison environment. In the theoretical definition part, we discussed the social worker carrying out his/her work in the prison environment, his/her possibilities in carrying out forensic social work and the limitations that restrict his/her performance. Thus, we have defined the activity of the social worker in the context of penitentiary practice. The results of our research yielded findings that reflected theory and yielded insights that the theory itself did not provide. Thus, the possibilities of work performance in both of the aforementioned directions are defined theoretically and supported by the research part of the thesis. The limitations related to forensic social work in the prison system were found mainly in three directions, which are the qualification of the workers, the compliance with the legal framework and the adherence to the code of ethics. These limitations were also confirmed in the research conducted, as the respondents pointed out these three directions in the limitations they felt in their performance in the prison environment. No other limitations were identified that would affect the perfor-

mance and operation of forensic social work in the prison setting.

References

1. BACIKOVA M, JANOVSKA A (2018) *Fundamentals of educational-psychological research methodology. A guide for teacher education students*. Kosice: SafarikPress, 2018. 154 p. ISBN 978-80-8152-695-4.
2. GAVORA P (2010) *Electronic textbook of educational research* [online]. Bratislava: Comenius University, 2010 [cit. 2023-4-3]. ISBN 978-80-223-2951-4. Available from: <http://www.e-metodologia.fedu.uniba.sk>
3. HENDL J (1997) Prague: Karolinum, 1997. 243 p. ISBN 80-7184-549-3.
4. LESKOVA L (2013) *The social worker in penitentiary and postpenitentiary care*. Brno: Tribun EU, 2013. 137 p. ISBN 978-80-263-0554-5.
5. NESZMERY S (2018) The position of the European Family Law Commission in the European family law system in the context of its objectives and scope of action. In *Review of social sciences and humanities*, vol. 6, 2018. no. 3, pp. 1 - 11. ISSN 1339-259X.
6. NESZMERY S (2019) In *Revue of social sciences and humanities*, vol. 6, 2019. no. 1, pp. 1 - 13. ISSN 2336-3479.
7. NESZMERY S (2020) Applying basic strategic principles in social work. In *Review of social sciences and humanities*, vol. 8, 2020. no. 1, pp. 1 - 11. ISSN 1339-259X.
8. NESZMERY S (2020) Social rights and their application in crisis situations. In *Review of social sciences and humanities*, vol. 8, 2020. no. 3, pp. 1 - 17. ISSN 1339-259X.
9. NESZMERY S (2021) Forensic social work. In *Proceedings of the International scientific and professional conference on forensic social work. Theoretical and practical bases of social work with offenders and victims of delinquent activity*. Bratislava: Comenius University in Bratislava, Faculty of Education, Department of Social Work, 2021. p. 8 - 13. ISBN 978-80-223-5294-9.
10. MURANSKY M (2018) *Conduct and morality. University scripts for the subject of philosophy*. Bratislava: Slovak education-publishing s.r.o., 2018. 104 p. ISBN 978-80-89934-05-1.
11. COLLECTION OF ORDERS OF THE DIRECTOR GENERAL OF THE FORCE OF THE CIVIL AND JUSTICE GUARD No. 60/2008 of 15 December 2008 (2008) Collection of orders of the Director General of the Prison and Judicial Guard Corps on social work in the Prison and Judicial Guard Corps.
12. COLLECTION OF ORDERS OF THE DIRECTOR-GENERAL OF THE PRISON AND JUSTICE GUARD No 26/2005 of 1 November 2005 (2005) Collection of Orders of the Director-General of the Prison and Judicial Guard Corps on the protection of the health of defendants in custody and convicts serving prison sentences against the harmful effects of smoking.

Possible social Risk and Risks arising from Information and Telecommunication Tools in the Hands of second primary Education Stage Pupils in Slovakia

K. Vankova (Katarina Vankova)¹

Original Article

¹ Constantine the Philosopher University, Faculty of Social Sciences and Health Care, Institute of Romological Studies, Nitra, Slovakia

E-mail address:

kvankova@ukf.sk

Reprint address:

Katarina Vankova
Constantine the Philosopher University
Faculty of Social Sciences and Health Care
Institute of Romological Studies
Kraskova no. 1
949 01 Nitra

Source: *Clinical Social Work and Health Intervention*
Pages: 74 – 82

Volume: 15
Cited references: 9

Issue: 2

Reviewers:

Steve Szydowski
University of Scranton school of education, USA
Michael Costello
University of Scranton school of education, USA

Keywords:

Information and Telecommunication Tools. Pupils. Social Threats. Risk. Social Prevention.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2024; 15(2): 74 – 82; DOI: 10.22359/cswhi_15_2_11 © Clinical Social Work and Health Intervention

Abstract:

The current era is characterised by many technologies with online access. This paper lists the most significant negative phenomena associated with the use of modern technologies: the harmfulness of Internet use in general, Internet addiction, bullying through information and communication technologies (ICT), sites with toxic content, defamation and intolerance, false and fraudulent messages and conspiracies, radicalization, communication with unknown people via the Internet and explicit content. Other risks include: the spread of child pornography, sexting and cyberbullying. Our research and its results will show how information and telecommunication technologies are used by second primary education stage pu-

pils attending selected primary schools. The paper concludes with recommendations for practice that emerged from the empirical findings.

Current status of the issue under study

Information and communication technologies have become one of the cornerstones of modern society and are becoming more and more important. They have changed the way humanity communicates, exchanges and acquires information. However, there are various threats and risks associated with the use of ICT. With the rapid development of technology, various negative phenomena and addictions are developing through information and telecommunication technologies, online games, mobile phones, the Internet, etc. The fact remains that an increasing number of children and adults are abusing and becoming addicted to information and communication technologies.

We list the most significant negative phenomena associated with the use of modern technologies: the harmfulness of the Internet in general, Internet addiction, bullying through ICT, sites with toxic content, defamation and intolerance, false and fraudulent messages and conspiracies, radicalization and communication with unknown people via the Internet. Other risks include the spread of child pornography, sexting and cyberbullying.

According to new findings, a person checks their phone on average every 12 minutes during the day (Brejčák, 2019). One of the motives for parents to get a mobile (or smartphone) phone for their child is to be able to check on them. Since the mid-2000s, when researchers first used the term “problematic mobile phone use” in conjunction with the Internet, problem users have reported feelings of addiction and urge. Also frequently reported are physical health consequences such as neck, shoulder and arm pain, headaches, concentration problems and fatigue (Randler et al., 2016). The results show a negative association between ICT use time and psychological well-being in children and adolescents (Twenge, Campbell, 2018). They point to the risk of increasing incidence of brain tumours, physical illness, psychosocial difficulties and cognitive impairment in younger people. Many studies have found that excessive smartphone use is associated with several health risks rang-

ing from psychosocial disorders such as anxiety, depression and sleep problems to potentially fatal injuries caused by car accidents. Cross-cultural research involving 10,930 adolescents from six European countries has shown an association between problematic Internet use and a higher risk of overweight/obesity through various information and communication technologies as well as reduced academic performance (Tsitsika et al., 2016; Raudsepp, Kais, 2019).

Internet addiction

Although Internet addiction is not yet included in the International Classification of Diseases ICD-10, it is only a matter of time. Nevertheless, this term has been used by experts in various publications. According to Kusý (2013), Internet addiction is one of the newest non-substance addictions that, broadly speaking, is an activity to which an individual devotes a lot of time and one that limits his or her social functioning. According to Sejčová (2018), Internet addiction (e-mail, surfing, chatting, online games, online shopping, virtual sex) is an addictive disease of non-chemical nature, a so-called non-substance addiction. This phenomenon is called netholism. Netholism is defined as an individual’s behaviour leading to pathological phenomena in the mental, school (professional) and social spheres that is caused by excessive use of the Internet.

Symptoms of Internet addiction

The main symptoms include trance-like states, resistance to parental interventions and inability to adhere to time limits set for online activities. Other symptoms of this kind of addiction include: getting less work done, feeling empty when not on the computer, loss of control over the time spent on the computer, getting up early to use the computer or staying up late on the computer, growing nervous and restless when unable to be on the Internet for long periods of time, thinking about the computer when not using it, stealing money to buy games, spending more and more time on the Internet to satisfy oneself, lying about one’s addiction,

a means of escaping personal problems, disrupted relationships with family, neglecting learning, abandoning earlier interests and friends, and deteriorating school performance.

Diagnostic tools for Internet addiction

A number of assessment tools have been used to diagnose Internet addiction or problematic Internet use. Young's Internet Addiction Test, the Problematic Internet Use Questionnaire (PIUQ) developed by Demetrovics, Szeredi and Rozsa, the Compulsive Internet Use Scale (CIUS), among others, are examples of tools used to assess this disorder (Cash et al., 2012). In 2014, a review study was published focusing on questionnaires measuring Internet addiction as well as various subtypes thereof (diagnostic measurements of non-substance addiction), stating that there were at least 45 of them at the time of the study, and more are being added (Laconi, Rodgers, & Chabrol, 2014). A useful research tool for diagnosing Internet addiction is the Problematic Internet Use Questionnaire (PIUQ). There are three forms of this questionnaire consisting of different numbers of items (18, 9 and 6 items). All the forms have a reliable composition, as research has proven their validity across different types of data collection and age cohorts. Only the 6-item version of the Problematic Internet Use Questionnaire used in the research by Demetrovics et al. (2016) pointed out the acceptability of three psychometric factors (obsession, neglect and impaired control).

All of these risk factors for Internet addiction reduce the quality of life of an individual, which is an important factor for social prevention and the work of school social workers and school psychologists in this field.

Objectives and methods of research

Our main objective was to find out how information and telecommunication technologies are used by second primary education stage pupils attending selected primary schools (aged 11 to 15 years). As part of the sub-objectives, we studied which ICT is used most often, for what activities and how much time pupils spend using technology. Based on the research objectives, we developed 9 questions that formed Part I of the questionnaire. Part II of the questionnaire was aimed at identifying the existence of the risk of

problematic Internet use using the PUIQ-6 questionnaire. The results are presented in the form of a graphical representation.

Sub-objectives of the research:

- C1: Find out what technologies are most often used by pupils.
- C2: Find out what activities pupils use information and telecommunication technologies for.
- C3: Find out how much time pupils spend with information and telecommunication technologies.
- C4: Find out how many pupils are at risk of problematic Internet use.
- C5: Identify and compare differences based on the age and gender of pupils.

Research ethics was ensured in the following way:

Prior to the collection of questionnaires, written informed consent was obtained from pupils' legal representatives, and verbal consent was obtained from pupils. Pupils were guaranteed anonymity and were allowed to choose the option "I do not have", "I do not use", "I do not spend time" for each question.

Research sample

The basic research population consisted of five groups of pupils from 5th to 9th grade, i.e., pupils in the second primary education stage. In agreement with the principals of the selected primary schools and after obtaining informed consent for pupils to complete the questionnaire from their legal representatives, we personally distributed 285 questionnaires in printed form to primary schools. For our research we used 233 relevantly completed questionnaires, which constituted 100% of the respondents. The research sample consisted of 128 (55%) girls and 105 (45%) boys.

Research methods

After collecting the respondents' answers to each question, we mainly used the computer programs Microsoft Excel 2019 and Microsoft Word 2019. The data are presented in graphical form with absolute and percentage values.

Statistical data processing was used to obtain the results. The sum of numbers from all six questions concerning the frequency of Internet

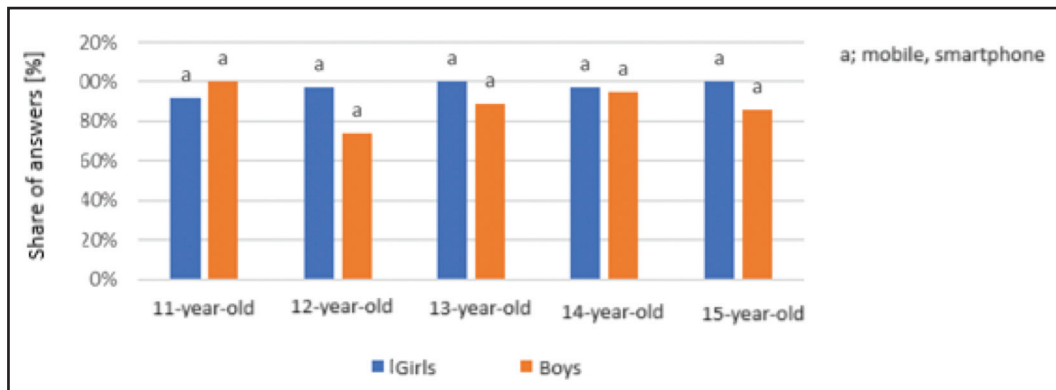
use gave us the number of respondents classified as pupils with problematic Internet use, i.e., with a total of 15 points or more. The results are again shown in graphical form (in percentage).

Of the 285 questionnaires distributed, we evaluated a total of 233 collected questionnaires. Some questionnaires could not be evaluated because they were incomplete or had not been returned for various reasons.

Research results

What technologies are most often used by pupils

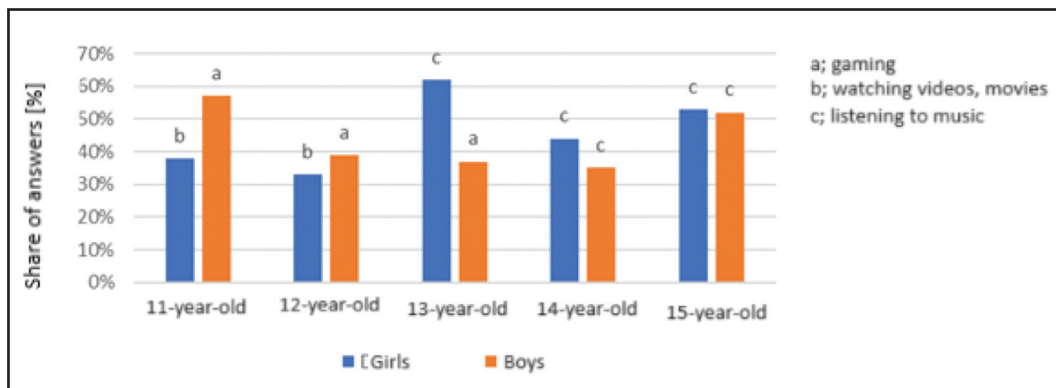
Chart 1 Most commonly used information and communication technologies



Finding: The results of our research show that the most used technology among girls of all ages is a mobile phone or smartphone. The same is true for boys. Our research shows that the use of ICT technology for different activities differs neither in terms of gender nor in terms of age.

Activities using information and telecommunication technologies

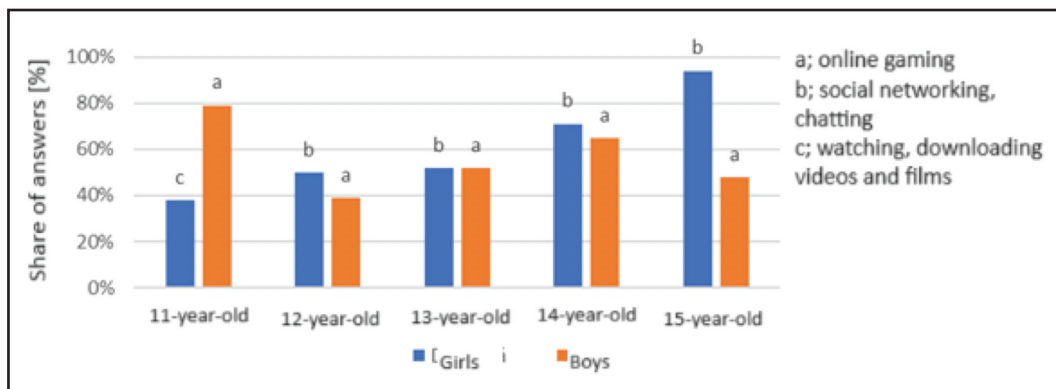
Chart 2 Activities using information and communication technologies without Internet access



As an additional dimension, we assessed activities without Internet access. The results showed that girls aged 11 (38%) and 12 most often watch videos and movies, and girls aged 13 (62%), 14 and 15 said they listen to music. Boys aged 11 (57%), 12 and 13 (37%) mainly play games using ICT without online access. Like girls, boys aged 14 and 15 reported listening to music. The difference in activities in terms of gender is significant for 11- and 13-year-old pupils.

In the above categories of pupils, we found a significant percentage of answers between girls and boys. We concluded that girls at younger ages engage in different activities than boys at the same ages.

Chart 3 Activities using information and communication technology with Internet access

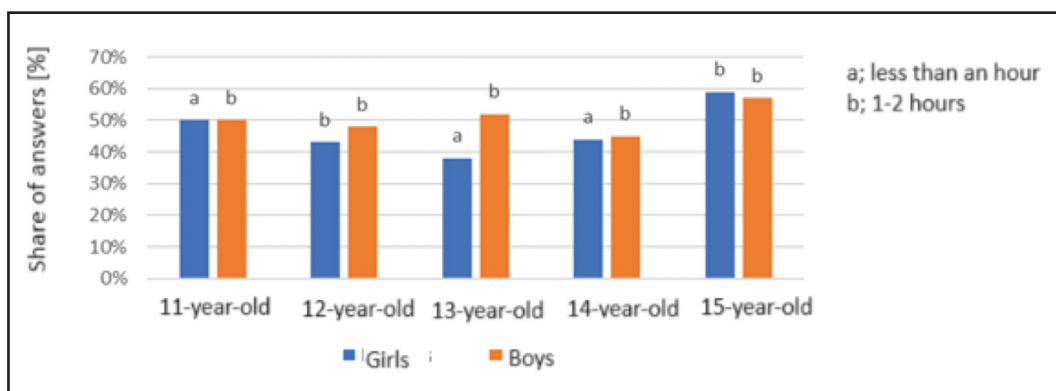


Our findings for Internet access were as follows: 10 (38%) girls aged 11 most often use ICT to watch/download videos and movies, and all other age groups we surveyed, i.e., 12-, 13-, 14- and 15-year-old girls, indicated social networking as the answer. In contrast to girls, boys at all ages preferentially use ICT for online gaming. The research showed a difference in activities with Internet access between genders across all ages.

In terms of age, we can see that almost all girls reported the same activity; for boys of all ages, the most common way of using ICT is online gaming. The most significant difference in answer rates is in the category of 11- and 15-year-old pupils. 79% of boys aged 11 most often play online games, whereas for 96% of 15-year-old girls social networking and chatting dominate.

Time spent with information and telecommunication technologies

Chart 4 Time spent without Internet access



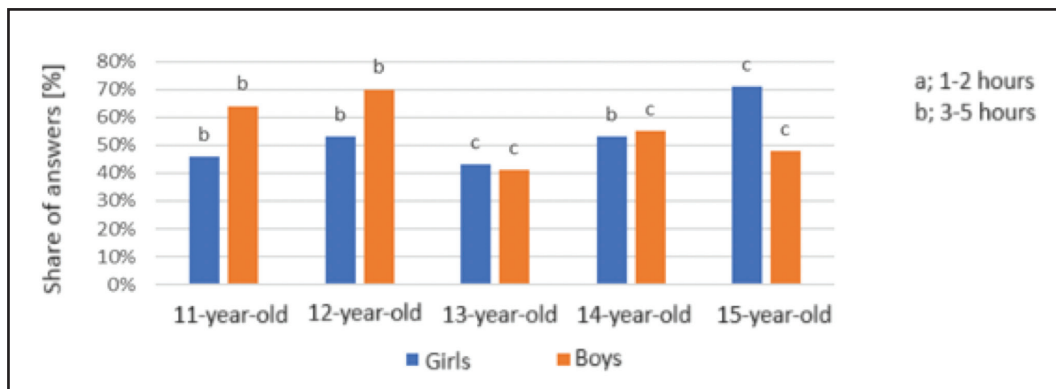
We found that 11-, 13- and 14-year-old girls on average spend less than an hour of time per day on non-Internet activities, and for 12- and 15-year-old girls it is an average of 1-2 hours per day.

In terms of age, there was no difference in time spent on the Internet for boys, with all respondents averaging 1-2 hours per day without Internet access.

The survey showed that girls spend less time without Internet access than boys. The highest

percentage determining the amount of time spent offline on the Internet was observed in the group of 13-year-olds.

Chart 5 Time spent with Internet access

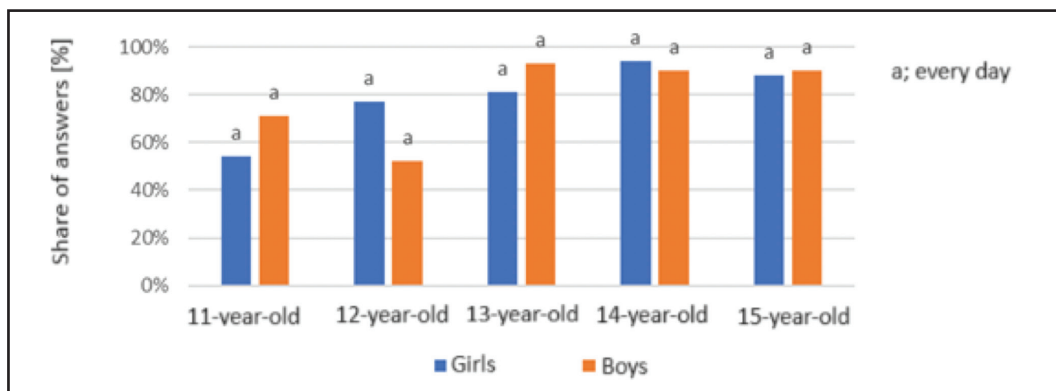


The average time spent with Internet access for girls aged 11, 12 and 14 is 1-2 hours per day. 13- and 15-year-old girls spend on average more time on the Internet (3-5 hours per day). 1-2 hours on average per day was the answer chosen by the category of boys aged 11 and 12. For boys aged 13,14 and 15, it is 3-5 hours per day on average.

We found that 14-year-old boys’ Internet access per day is on average longer than that of the girls. We also found a significantly higher percentage of answers among girls aged 11, 12 and 15 and boys of the same age. While 46% of 11-year-old girls spend 1-2 hours of time on the Internet, this figure rises to 64% for boys and 53% for girls aged 12. The latter also reported spending 1-2 hours on the Internet, but the same time was reported by around 70% of boys. As noted above, there was also a significant difference in girls aged 15 (71%) who were online for 3-5 hours, compared to 48% of boys spending an average of 3-5 hours online each day.

Number of days spent on the Internet

Chart 6 Number of days on the Internet



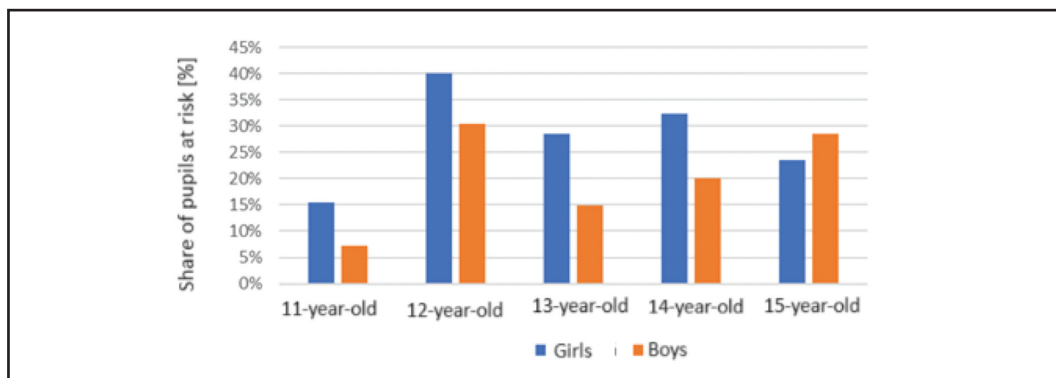
101 (79%) out of 128 girls across all ages were most likely to respond that they spend time every day with the possibility of connecting to the Internet. 84 (80%) of the 105 boys in all surveyed categories also use the Internet every day.

The research tells us that there is no difference in the observed dimension in terms of gender

or age. However, 54% of girls aged 11 go online every day compared to 79% of boys. In terms of gender, we observed a difference in the group of 12-year-old pupils. 77% of girls and only 57% of boys said they go online every day. With the 13-year-old respondents, the percentage of answers is less significant, as 81% of girls and 93% of boys spend time online every day.

Occurrence of the risk of problematic Internet use

Chart 7 Occurrence of the risk of problematic Internet use



We found that in terms of age cohort, there is a difference when it comes to demonstrating the occurrence of risk of problematic Internet use, as well as a difference in the occurrence in terms of age.

Our results show that the occurrence of risk is higher with girls aged 11, 12, 13 and 14 compared to boys of the same age. The highest percentage at risk of problematic Internet use is among 12-year-old girls - 43% (boys 26%), followed by 14-year-old girls - 32% (boys 20%), followed by 13-year-old girls - 29% (boys 15%), and the lowest percentage was found among 11-year-old girls - 15% (boys 7%). A change was noted in 15-year-old pupils. We know from the research that girls (24%) at this age are slightly less at risk than boys (29%).

Discussion

Our findings are not only interesting, but also highlight the risks and social threats posed by the information and telecommunication tools in the hands of second primary education pupils.

What technologies are most often used by pupils

A question in the questionnaire aimed at finding out what technologies are most frequently used by children and adolescents gave us the following results: Out of 233 respondents, 218 (94%) respondents indicated that they use a mobile and smartphone the most often, 8 (3%) respondents out of the total number use a desktop computer, 4 (2%) respondents chose a laptop as their answer and 3 (1%) respondents use a tablet for their activities.

Activities using information and telecommunication technologies

To find out what activities pupils do with ICT, we divided the questions in the questionnaire into:

- activities carried out via ICT without Internet access
- activities carried out via ICT with Internet access

The results showed that the highest number, i.e., 79 respondents (34%), use ICT without Internet access to listen to music, 54 respondents (23%) play games and 52 respondents (22%) use ICT offline to watch videos and movies. Further, answers such as making telephone calls were given by 13 (6%) respondents, and 14 (6%) respondents indicated that they use ICT for other unlisted activities. 9 (4%) respondents answered that they use technology without online access to prepare for school, 6 (3%) respondents send

text messages and MMS messages, and 6 (3%) respondents stated they do not use ICT without Internet access at all.

Through another question on the questionnaire we found that 101 (43%) respondents do online activities through ICT on social networking sites including chatting, 65 respondents (28%) play online games and 22%, i.e., 52 respondents, watch videos and movies. Surfing was chosen as the answer by 4 respondents (2%), 4 respondents (2%) chose school preparation and 5 (2%) respondents chose the answer "other". 2 respondents (1%) use ICT with Internet access for emailing.

Time spent on information and telecommunication technologies

Two questions from the questionnaire section were devoted to finding out how much time children and adolescents spend using ICT. To find out the time spent by pupils using ICT, we divided the time into two categories, namely:

- how much time pupils spend using ICT without Internet access
- how much time pupils spend using ICT with Internet access

The first of the above questions led to the following finding: Of the total respondents, 102 (44%) use ICT without Internet access for an average of 1-2 hours per day, and 82 (35%) use it for less than an hour. Our other finding is that 31 (13%) respondents use ICT for an average of 3-5 hours per day, 12 (5%) respondents for more than 5 hours and 6 (3%) respondents do not use ICT without Internet access at all.

Our finding from the second question: 102 (44%) respondents use ICT with Internet access for 1-2 hours, 78 (33%) respondents spend on average 3-5 hours, and 31 (13%) spend less than an hour on the Internet per day. We further found that 22, which is around 9% of the respondents, spend more than 5 hours of their time using ICT with Internet access.

The time spent on the Internet also included the number of days that children and adolescents spend using ICT with Internet access. 187 (80%) respondents go online every day, 32 (14%) respondents go online 3-5 times a week and 14 (6%) respondents use ICT with Internet access 1-2 times a week.

Occurrence of the risk of problematic Internet use

The second part of the questionnaire was devoted to finding out the occurrence of the risk of problematic Internet use, i.e., the number of pupils who are at risk of Internet addiction. Respondents were allowed to express their opinion on each question using the corresponding scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often and 5 = always/almost always). In our research, we were guided by the number of points obtained for the answers. The total number of possible points scored was 30. We established four levels of risk of problematic Internet use:

- I. Score: 1-14 no signs of threat
- II. Score: 15-20 mild signs of threat
- III. Score: 21-25 moderate signs of threat
- IV. Score: 26-30 risk of problematic Internet use

By evaluating the questionnaire, we found that out of 233 respondents, 23% of the respondents (53 children) showed moderate signs of being at risk of problematic Internet use, i.e., they scored 15-20 points. Four (2%) respondents had a total score of 21-25 and thus belong to the medium risk level. Two (1%) of the respondents showed the highest risk level. Based on the problematic Internet use questionnaire, we found that out of 128 girls, 37 (30%) were at risk of some degree of problematic Internet use. Another of our findings is that out of 105 boys, 22 (20%) showed some degree of risk. We note that a total of 59 respondents showed some degree of risk of problematic Internet use, which means that 174 respondents belong to the group who are not at risk of problematic Internet use at all.

Differences in observed dimensions in terms of age and gender

We previously reported the results of the research for all respondents. In this subsection, we presented the differences in ICT use in terms of the age and gender of the respondents, the results of which are shown graphically.

Conclusion

Technology has become commonplace in the lives of children and adolescents. They can look up a lot of data in seconds, use it to communicate, prepare for school and play games with anyone in the world. They spend a lot of time on

various activities through ICT, which is associated with a lot of negative phenomena.

We pointed out the many risks associated with them and the need for social prevention in this area.

From the findings of our survey, we have drawn several **recommendations for practice**:

- conduct more extensive research (involving more primary schools across the country, a larger number of respondents) to point out the activities and time spent using ICT, both without and with Internet access
- carry out experiential learning more widely outside of school and offline
- use prevention programmes in schools to raise awareness and address the potential risks of virtual space, draw attention to victims of cyberbullying from real cases and encourage a responsible approach to ICT use
- teach pupils how not to become victims of cyberbullying - defence and protection
- promote the healthy use of ICT in schools

References

1. BREJČAK P (2019) How to tell if you're addicted to technology and how to embark on a digital detox. [online]. News and Media Holding. [cited 2023-03-23]. Available from: <https://www.etrend.sk/technologie/jako-find-out-if-you-are-dependent-on-technology-and-how-to-get-into-digital-detox.html>
2. CASH HILARIE et al. (2012) Internet Addiction: A Brief Review of Research and Practice. [online]. 2012, Current psychiatry reviews vol. 8,4: 292-298. doi:10.2174/157340012803520513. [cited 2023-04-28]. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3480687/>.
3. DEMETROVICS Z et al. (2016) Psychometric properties of the Problematic Internet Use Questionnaire Short-Form (PIUQ-SF-6) in a nationally representative sample of adolescents. [online]. PLoS One. 2016; 11(8): e0159409. Published online 2016 Aug 9. doi: 10.1371/journal.pone.0159409. [cited 2023-04-16]. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4978438/>.
4. KUSY P (2013) The dangers of non-substance addiction in the 21st century. In: Proceedings of the international scientific conference: the Electronic Journal of Mental Health. ISSN 1339-4614, vol. 2013, č. 1.
5. RANDLER CH et al. (2016) Susceptibility to smartphone addiction in relation to sleep and morning freshness in German adolescents. In: 1, no. 2, pp. 1-2: Journal of Behavioral Addictions [online]. 2016, vol. 5, no. 3 [cited 2023-09-04]. Available from: <https://doi.org/10.1556/2006.5.2016.056>.
6. RAUDSEPP L, KAIS K (2019) Longitudinal associations between problematic social media use and depressive symptoms in adolescent girls. Preventive Medicine Reports [online]. 2019, vol. 15 [cited 2023-10-19]. Available from: <https://www.sciencedirect.com/science/article/pii/S2211335519300993?via%3Dihub>.
7. SEJCOVA L (2018) Internet and computer addiction. In: social prevention. 2/2018. ISSN 1336-9679.
8. TSITSIKA AK et al. (2016) Association between problematic internet use, sociodemographic variables and obesity in European adolescents, In: Sociological Journal: European Journal of Public Health [online], vol. 26, Issue 4, p. 617-622 [cited 2023-06-29]. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27114408>.
9. TWENGE M, CAMPBELL K (2018) Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study. Preventive Medicine Reports Available from: <https://doi.org/10.1186/1471-2458-11-66> [online], vol. 12, pp. 271-283 [cited 2023-05-25].

No. 2, Vol. 15, 2024

Editor-in-chief: Prof. DDr. med. Dr. habil Claus Muss Ph.D.

CLINICAL SOCIAL WORK *AND HEALTH INTERVENTION*

Indexed by:

Web of Science/ESCI

ERIH

Alexander Street

ProQuest

ScienceOpen

Ulrich's

CrossRef Similarity Check Powered by iThenticate

Journal DOI 10.22359/cswhi

Issue DOI 10.22359/cswhi_15_2

