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SOCIOLOGY AND HEALTHCARE

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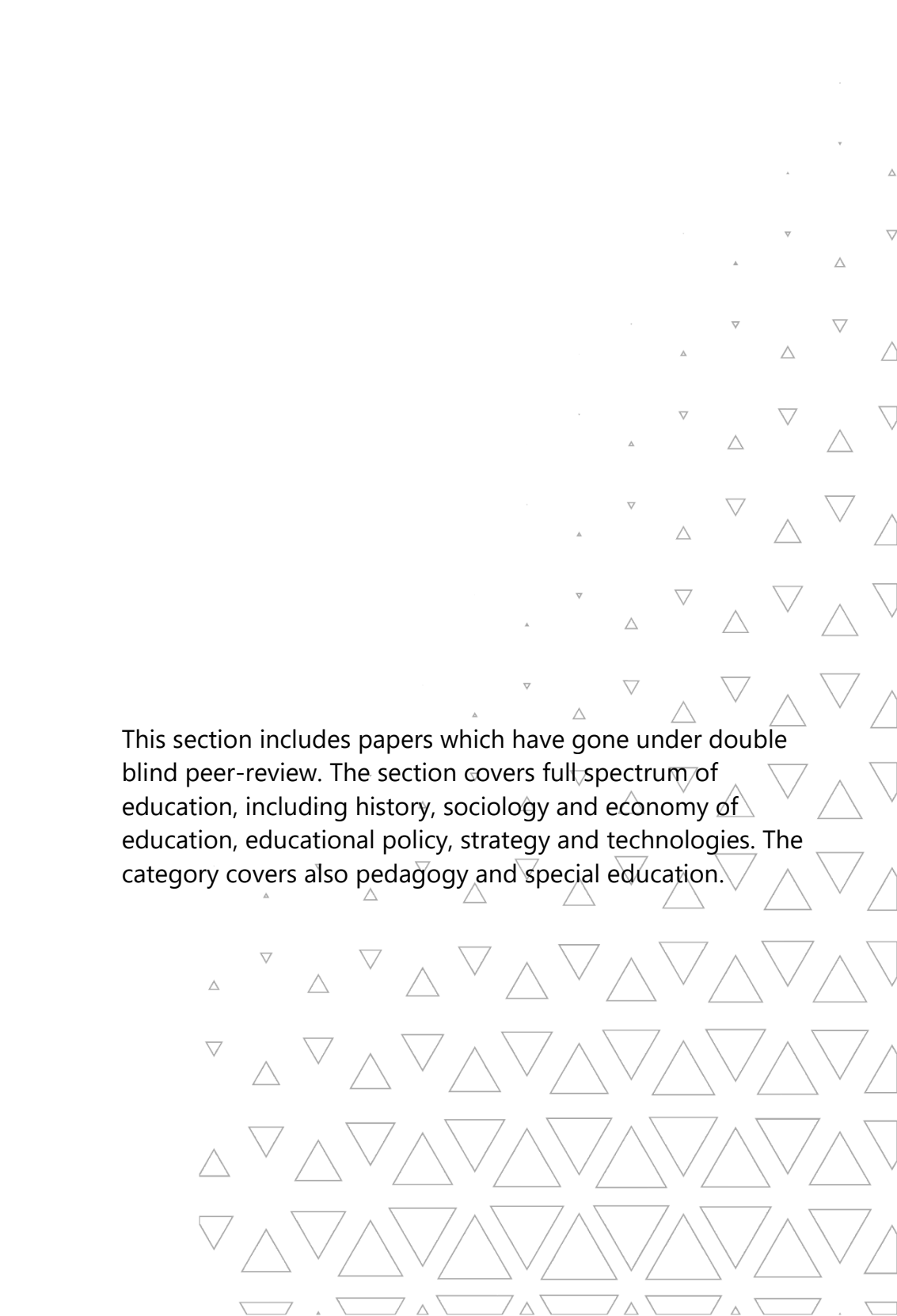
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Section

EDUCATION AND EDUCATIONAL
RESEARCH

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This section includes papers which have gone under double blind peer-review. The section covers full spectrum of education, including history, sociology and economy of education, educational policy, strategy and technologies. The category covers also pedagogy and special education.

ANALYSIS OF THE EDUCATION SYSTEM FOR PRIVATE SECURITY PERSONNEL IN SLOVENIA

Žiga Božjak, mag.¹

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ABSTRACT

The paper analyzes the education system of private security personnel in Slovenia. Through the presentation and comparison of education and training programs for obtaining national professional qualification (hereafter: NPQ) and secondary and post-secondary education programs, it indicates shortcomings and opportunities for improvement. The theoretical part used a descriptive method and an analysis of professional literature, legal, and by-laws in the field of private security and education. On this basis, the historical background and current regulation in the Republic of Slovenia were presented. The analysis and comparison consisted mainly of education programs and programs for obtaining NPQ. In the empirical work, the focus group included security personnel based on different ways of obtaining education, certification or ID card for security personnel, as well as security managers and lecturers at various levels of education and training. The findings show that the subjects in the field of private security in the training and education programs are very similar in content, they are also comparable in terms of duration and the ratio between theoretical and practical work. Since the programs are not adequately upgraded according to the level of education, it would be necessary to update the programs and at the same time ensure the competence of the practitioners of the pedagogical process. It would also make sense to regulate the conditioning of the approach to training for different NPQs with work experience. The findings are useful especially for creators of education and training programs and proponents of laws regulating private security, secondary and higher education, and NPQ. They could also be important for other countries that have a similarly organized private security personnel education system and/or want to reform their existing system.

Keywords: *private security, education, training, security guard, private security manager*

INTRODUCTION

In addition to state protection, various protection options have begun to develop in many modern societies, which provide additional security to clients and other users of security services. To the greatest extent, it concerns the protection of the assets of individuals or practitioners of many activities who want to prevent loss of profit. Thus, many non-state organizations in the field of

security began to develop in the Republic of Slovenia (hereafter: RS). It is about the pluralization of police activity, which represents the process of transferring the implementation of typical police tasks to another state, local and also private police, security, and control organizations [5].

In accordance with the development of private security, institutions dealing with the education and training of security personnel began to appear, various professions developed, and also professional standards and catalogs of skills were defined [11]. This started the development of training and development of security personnel. In the course of its work, the latter has at its disposal a number of measures and other means that interfere with human rights and their fundamental freedoms, which is why we attribute a great deal of responsibility to them [1], [10]. This is precisely why employees in the field of private security must undergo professional training and further training with the aim of acquiring and improving professional knowledge and skills according to programs for professional training and development of security personnel (hereinafter: programs) determined by the minister responsible for internal affairs, according to the type of work performed by security personnel in the field of private security [14]. At the same time, the purpose is not only to raise the level of knowledge, but to consolidate and upgrade the skills, abilities [12], and the practical implementation of individual measures of security personnel.

Private security education and training programs

According to the Private Security Act [14], security personnel must meet general (Article 32) and special conditions (Article 33) in order to obtain an ID card for private security personnel, which is mandatory for working in private security. One of these conditions is that the applicant is professionally qualified for the type of work he will perform. He can demonstrate professional competence if he has (Article 40):

1. completed an educational program in the field of private security, in accordance with the regulations governing public educational programs,
2. completed professional training and advanced training, as stipulated in the Private Security Act, and obtained a national professional qualification in the field of private security in accordance with the regulations governing national professional qualifications, or
3. a national professional qualification in the field of private security obtained in another way in accordance with the regulations governing national professional qualifications, if professional training and further development, as stipulated in the Private Security Act, is not mandatory.
4. Depending on the type of work performed by security personnel, we know the following national professional qualifications [1], [14]:
 - security watchman,
 - security guard,
 - security supervisor

- security control center (SCC) operator,
- security bodyguard
- security manager
- security technician
- authorized security systems engineer.

Educational programs in the field of private security include secondary professional education and vocational-technical education Security Technician and the post-secondary program Security [2], [11]. The Security Technician high school program provides candidates with a V. level of education and was prepared based on the professional standards for a security guard, a security supervisor and a Security Control Center (SCC) operator. Upon completion of the post-secondary program, candidates obtain the title of security engineer and VI. level of education. It was prepared based on the professional standard of security manager and bodyguard.

In the following, we will focus only on an NPQ security guard and a security manager, as these are two key professions in private security, and at the same time, they are the most suitable for comparing the programs and competencies of security personnel.

Training to obtain NPQ security guard and security manager

In order to obtain a certificate for an individual type of work, individuals must meet entry and special conditions, namely obtain and submit a medical certificate of medical fitness for the work of a security guard, issued by a doctor specializing in occupational and sports medicine, have a certificate of completion of at least elementary school and a certificate of participation in training [4]. According to the Order on the determination of the professional training program for the security guard (2017) and the Order on the determination of the professional training program for the security manager (2019), the candidate or candidates for obtaining the NPQ security guard and security manager must attend training prescribed by the Ministry of the Internal Affairs and successfully pass a written, practical and oral knowledge test. This is done in front of a commission determined by the Republic Examination Center (REC). The professional training program for a security guard is implemented in the scope of 102 school hours. The program is divided into 11 substantive sections, for which the number of hours of theoretical and practical work is also foreseen. The professional training program for a security manager is implemented in the scope of 90 school hours. The program is divided into 8 substantive sections, for which the number of hours of theoretical and practical work is also foreseen. Sufficient participation in the training is considered if the candidate attends at least 80% of the scheduled hours for each content component [9].

Security Technician High School Program

The secondary school professional program for Security Technicians lasts four years and ends with a vocational high school diploma, if the student has successfully completed general education subjects, compulsory professional modules, optional professional modules and open parts of the curriculum with positive grades. The vocational matriculation exam includes a mandatory written and oral part in Slovenian and private security. The optional part consists of a written and oral exam in either a foreign language or mathematics and the product or service and its presentation [2].

Secondary school professional education is divided into general education subjects and professional modules. Among the first are Slovene language, two foreign languages, mathematics, art, history, geography, psychology, physics, chemistry and physical education. We will not focus on the latter, but we will compare the following professional modules with the other programs: Protection of people and property, Technical security, Safety and health at work, Protection against fires, Supervision of security services, Operation of the Security Control Center and interventions, Crimes and criminology, Security of public gatherings, Transport of cash and other valuable shipments, Security in logistics, Security information systems [2].

It is also important to mention adult education, which enables adults to obtain the fifth level of education or appropriate qualifications and competences for the needs of the labor market. It is education according to publicly valid vocational and professional education programs, which are regulated by the Act on Vocational and Professional Education and the Adult Education Act. It is carried out as an extraordinary education in such a way that the same standard of knowledge as in regular secondary education is ensured, and students are given certain adjustments, such as time coordination, flexibility in checking and evaluating knowledge and promotion.

As part of the focus group, Assoc. prof. Ph.D., who is the head of professional training and a lecturer at Čas – Private School for Security Education, says that their education for adults takes place in such a way that, for example: for the subject Protection of people and property at secondary school, students are invited to a lecture on NPQ security guard to content sections: normative regulation of private security, use of measures and other means, practical procedure and self-defense, and communication and conflict management. Thus, students listen for almost 70 hours in this subject, which basically means 20% of the lectures in the subject in the regular program (340 hours). In addition, candidates are provided with consultations, access to materials and use of online classrooms.

Security engineer university (post-secondary) program

The higher education Security Engineer program lasts two years, is evaluated with 120 credit points according to the ECTS system, and ends when the student completes all program obligations, namely: all mandatory modules, two of the optional modules, an optional subject, and a thesis. In each year, 34 weeks of educational work are prescribed, of which 24 weeks of lectures, seminars, laboratory exercises, and 10 weeks of practical training with employers [2].

A candidate who wishes to enroll in the security engineer study program must have completed a general or vocational high school diploma or completed appropriate education according to previous regulations. The conditions are also met by anyone who has passed a master's, supervisor or management exam, three years of work experience, and has passed a knowledge test in general education subjects to the extent specified for the vocational high school diploma [2].

The curriculum consists of six modules and their associated subjects and an optional subject. Three modules are compulsory, and the student chooses another two and one optional course from the three electives. Compulsory modules are Business Communication, Security and Regulations, and Security and Organization. Optional courses are Protection of persons and property, Security management and Security technical systems [2]. In the following, we will focus primarily on those modules and subjects that are directly related to private security, as they are key for the comparison (for example: Introduction to private security in the Security and regulations module; Security planning in the Security Management module).

The university program is carried out as full-time and part-time studies. The school can adapt the organization and scope of education to part-time students. It adjusts the scope in such a way as to enable the student to achieve the credits defined by the study program. This means that both full-time and part-time students must fulfill the obligations necessary to obtain credits, except that part-time students have more adjustments. For example, the education company Abitura offers a post-secondary program for a security engineer part-time, and the program is no different from a full-time one. The program is implemented modularly and lasts two years. The implementation of the program is adapted in terms of time and implementation to busy students. Lectures, exercises, and seminar work are organized 2 to 3 times a week in the afternoon or on Saturday mornings.

Comparison of security personnel programs and competencies

Comparison by content

After reviewing the programs, we note that the content of the NPQ security guard program and the high school security technician program are very similar,

while the post-secondary school security engineer program differs the most. The program for an NPQ security manager can be placed among the mentioned programs, as it includes content important for leadership and management, but it is significantly less compared to the post-secondary program.

The NPQ security guard and high school program include the following content: protection of people and property, technical security, safety and health at work, fire protection, criminal behavior and criminology, and protection of public gatherings. The NPQ security guard also offers action according to the security plan and in case of emergencies, first aid, and communications, while the high school program also provides supervision of security services, operation of SCC, transport of cash and other valuable shipments (security guards have 16 hours of specialist training) and one of the optional subjects: security in logistics or security of information systems. Based on this, we can conclude that, with a few exceptions, the two programs are very similar, as both cover the most key subjects or contents. Both programs provide candidates with knowledge of the normative regulation of private security, measures and use of other means and duties of security guards, criminal conduct and criminology, and basic human rights and freedoms. They also know how to put this knowledge into practice [2], [4], [8].

The university program in the syllabus, just like the program for an NPQ security guard and the secondary school program, covers the normative regulation of private security, criminal law and criminology, safety and health at work, measures of security personnel, organization of transport, interventions and public gatherings and subjects of technical security. These are subjects that are comparable to subjects or content sets in other programs, so we will focus on them. It also covers additional content, such as business communication, law and state regulation, administrative law, and content related to the protection of persons and property, which includes planning for the protection of persons, tactics of personal protection, specialist driving and weaponry and shooting. The safety management module contains subjects related to management, planning and monitoring protection or safety, and such or similar items can only be found in the program for the NPQ safety manager [2], [3], [7].

In addition to these contents, the security manager program for obtaining the NPQ also covers the normative regulation of private security, measures and other means of security guards and their duties, criminal conduct and criminology, technical security, and communications, which represents a repetition and upgrade of the knowledge acquired in the NPQ security guard program [3], [7].

We made a comparison of the high school program, the post-secondary program, and the training program for the NPQ security guard, and for this purpose, we compared the same or similarly named courses and determined what the substantive differences are in the programs [2], [8].

Based on a comparison of the content of the subject Protection of Public Gatherings, which is based on the Act on Public Gatherings, we can conclude that the content of the programs is exactly the same. The content is written in other words that retain the same or very similar meaning.

When comparing the subject Transport and protection of cash and other valuable items in the secondary and higher education program [2], and the professional development program for the transport and protection of cash and other valuable items [6], we came to the same conclusions as when comparing the subject Protection of public gatherings. Candidates at all three levels learn the same content, without a significant upgrade. All candidates learn about the regulations, standards and requirements in the field of security and transport of money and valuable shipments, know the measures to protect valuable shipments, separate classes of protected shipments, and know personal protection, vehicles and other technical equipment.

Comparison by duration

Professional training for a security guard lasts 102 school hours [8]. The professional training for a security manager lasts 90 school hours and, like the training for a security guard, it devotes most of its hours to the security guard's measures and other means. There is more emphasis on the content of private security arrangements and the planning and implementation of internal control, where 12 school hours are prescribed for an individual content set [7].

The secondary school program lasts four years, except in the case of adult education, where students can complete their education earlier through an adapted program. The curriculum consists of general and professional subjects, but for the purposes of the article, we will focus only on the latter. There are 11 professional modules, two of which are optional. A total of 1,462 school hours are prescribed, to which 568 school hours of practical lessons, 304 hours of practical training with work and 352 hours of other forms of educational work must be added. This applies to the regular 4-year program for students who have completed primary school. These are students who do not have any practical experience.

In the Republic of Slovenia, the protection techniques program is often implemented as adult education or self-education, so we will take into account the duration of such education for comparison with other programs. As an example of adult education, we take Čas – Private school for safety education, where candidates study for two years and, as a rule, have lectures on professional subjects for at least 20% of the scheduled 1462 hours, i.e. around 300 hours, and self-educators have extended consultations.

The higher education study program Security lasts two years, during which the student completes the obligations in the subjects from three compulsory and two optional modules, as well as the obligations in the optional subject. If we

ignore subjects in the security engineer program where the content is not exclusively private security (e.g. business communication module), we find that students complete a total of 324 school hours in the first year. Of this, 240 hours of lectures, 72 hours of seminars, and 12 hours of laboratory exercises. In the second year, for the compulsory module, 202 school hours (128 hours of lectures and 84 hours of seminar exercises), and for two optional subjects, a total of 324 school hours (the number of hours of lectures and exercises varies depending on the chosen module).

Students in the higher education program have 240 hours of lectures in the first year, and 128 hours in the second year of the compulsory module. As an example, let's assume that a student in the second year chooses the optional modules protection of persons and property and security management. In the first module, the student completes 66 hours of lectures, and in the second, 112 hours. In total, the student in the higher education program has 546 hours of lectures during the two years of education. If we were to compare this with the training to obtain the NPQ, we have to take into account the hours for the NPQ security guard (102 hours), bodyguard (130 hours) and security manager (90 hours), which in total amounts to 322 hours. Here we see that the higher education program includes a large number of lecture hours, as well as laboratory and seminar exercises. However, it should be emphasized that candidates for the NPQ gain work experience immediately after completing the NPQ as a security guard and before completing the NPQ as a bodyguard and security manager, while students only after completing schooling.

We compared the high school program by using only two mandatory modules of the high school program (security and regulations and security and organization) for comparison, as only these cover the same or similar content related to private security. Thus, we find that at a higher school, lectures in these subjects last 368 hours, which is very comparable to adult education (around 300 hours), which is the most common form of education for security technicians.

The relationship between theoretical and practical education or training

The professional training program for a security guard consists of 102 school hours, of which 44 hours are practical work, or 43% of all contact hours. Professional training for a security manager within the framework of 90 school hours foresees only 18 school hours of practical lessons or 20% of all hours and only in the content related to measures and other means of security guards [7], [8].

The secondary school program for a four-year education specifies a total of 1,462 school hours of lectures, to which 568 school hours of practical lessons and 304 hours of practical training with work must be added. In total, the practical part of education represents approximately 37% of all contact hours.

The university program stipulates 562 hours of lectures for subjects in the field of private security, which are comparable to subjects in high school and to content sections for NPQ security guards. In these courses, approximately 260 hours of seminar exercises are planned (depending on the selected module), i.e. approximately 46% of all contact hours. It is a different kind of practical work that we have shown in other described programs.

From what has been described, it can be concluded that the ratio between theoretical and practical education or training is similarly distributed and that there are no major deviations, if we consider that candidates are being educated or trained as a security guard, security technician, security manager or security engineer.

Other comparisons

When comparing different programs in terms of content, duration, and the ratio between theoretical and practical content, it is necessary to mention two more important comparisons related to security guards with NPQ and security technicians and also security managers with NPQ and security engineers (security managers).

Security guards with NPQ and security technicians

So far, we have shown comparisons of programs where, in training for security techniques, we focused only on professional courses in the field of private security. In the following, we compared the implementation program for security techniques, which are trained on the job, in the scope of 20% of lectures or 300 hours (program for adults), with the program for obtaining the NPQ security guard (102 hours). After finishing school, with appropriate work experience, security technicians can, in addition to the tasks of a security guard, also perform the tasks of a security supervisor, SCC operator, transport and protection of cash and other valuable shipments, and security of events in night clubs, because they also have lectures for these subjects within the 300 hours.

If a security guard with NPQ wants to perform these tasks, he must complete NPQ for SCC operator (42 hours), NPQ for security supervisor (34 hours), transport and protection of cash and other valuables (16 hours) and security of events in night clubs (18 hours), a total of 110 hours. Thus, a security guard with NPQ must complete a total of 212 hours of lectures and close to 300 hours as a security technician.

At the same time, it should be noted that security guards with NPQ must already have 2 years of work experience to obtain NPQ operator SCC and one year for NPQ security supervisor, and the security technician must acquire this experience only after completing the education program.

Safety manager with NPQ and safety engineer

There is also a special feature when comparing the safety manager with NPQ and the security engineer, where 90 hours of lectures are planned for the safety manager with NPQ, and 112 hours for the security management module for the security engineer. In this case, it is necessary to take into account that a candidate for NPQ security manager must have at least a higher education and at least 3 years of work experience in the field of private security, where measures and other means of security are implemented [3]. To enroll in the security engineer (security manager) program, secondary professional education is required, whereas work experience in the field of private security, where measures and other means of security personnel are implemented, is not required.

Thus we encounter two problems:

- a candidate with higher professional education or with higher education than this cannot apply for training as a security manager before he has three years of work experience,
- after completing the education, a security engineer cannot obtain an ID card or work as a security manager until he has gained three years of work experience in the field of private security, where measures are implemented and other means are used.

CONCLUSION

Based on the collected findings, both after reviewing programs for obtaining NPQ and programs for secondary and higher education, as well as after talking with experts, we found that there are deficiencies in the current arrangement of education and training in the Republic of Slovenia. These are primarily the inadequate upgrading of knowledge and competences through programs from training for NPQ to post-secondary education, inadequate training of the practitioners of the pedagogical process (professional courses) at secondary schools, and requirements for work experience for performing professions in private security. Therefore, below we present proposals for changes.

Upgrading of skills

We propose to modernize the programs of secondary and post-secondary education in such a way that the differences in the minimum standards of knowledge required for the successful completion of these programs will be visible. In this article, based on a comparison of private security subjects at training and education, we showed that it is only a matter of differently structured programs, which do not provide for upgrading by individual levels. The training programs for obtaining the NPQ must be considered as a basis and must cover the minimum standards for practicing the profession (which is already regulated by law), and the high school and especially the post-secondary school program must

be properly upgraded with additional content and more detailed requirements in the subjects of private security (protection of people and assets, transportation and cash protection, technical protection, etc.).

Qualification of the practitioners of the pedagogical process

The current legal regulation enables the subject Protection of people and property in the secondary school security technician program to be taught by anyone who has completed a university study program in security studies, law, psychology and economics or a higher education professional study program in security studies [2]. This means that the measures and other means, which are considered one of the most important subjects, can be learned by those who have not encountered them in practice never before. Such an arrangement reduces the credibility and quality of the program, so it would be necessary to introduce changes and thereby improve the system of education of security personnel. Subjects in the field of private security should not be taught by teachers without adequate training or experience in working in private security or the police. As suggested also by a lecturer at a secondary school, it would make sense to introduce or increase the number of professional trainings for providers of all programs and to further unify compulsory and additional literature.

Work experience

We have indicated that security personnel with multiple trainings for various professions in private security, after completing the training hours, come very close to those who have completed a program of security techniques after an adult education program. The latter must acquire work experience only after completing their matriculation, while those who have decided to undergo training can start gaining experience for the profession of security supervisor and VNC operator already after completing the NPQ security guards qualification. We propose that two years of work experience should be required to obtain a Security Supervisor ID, not just one. These are people who supervise the work of security guards, and therefore we believe that one year of experience is not enough for such a job.

Security managers who complete the security engineer program must, like those who have at least a VI. level of education at any other school, after completing education or training, have at least three years of work experience in the field of private security, where measures and other means of security are implemented, to be able to work as security managers - as persons responsible for providing private security in a private security company. It should be emphasized, however, that persons cannot apply for the position of NPQ security manager before they meet the requirement of three years of work experience in the field of private security. The reason for this is that the writers of the NPQ catalogs and programs equated the conditions for joining the training to the conditions for obtaining an ID card. In Article 57 of the Constitution of the Republic of Slovenia, it is written that education is free and that the state creates opportunities for

citizens to acquire an appropriate education [13]. Despite the fact that we are talking about training and not education, we find it controversial that work experience is a condition for approaching training. Therefore, we suggest that the training is not conditional on work experience and that candidates for the NPQ security manager can approach the training without work experience and then perform the duties of a security guard with the NPQ security manager and gain relevant work experience. After gaining three years of work experience, they can obtain an ID card for a manager.

REFERENCES

[1] Čas, T. et al, Učbenik za pridobitev NPK varnostnik. Ljubljana: Čas – Zasebna šola za varnostno izobraževanje, Slovenia, 2019.

[2] Center RS za poklicno izobraževanje, Programi srednjega strokovnega oz. tehniškega izobraževanja in višješolskega izobraževanja, Slovenia, n.d.

[3] Katalog standardov strokovnih znanj in spretnosti Varnostni menedžer/varnostna menedžerka, <http://www.npk.si/katalog.php?katalogid=4781-123-1-2>, Slovenia, 2019.

[4] Katalog standardov strokovnih znanj in spretnosti Varnostnik/varnostnica, <http://www.npk.si/katalog.php?katalogid=4408-258-1-2>, 2017.

[5] Modic, M., Lobnikar, B. in Dvojmoč, M., Policijska dejavnost v Sloveniji: analiza procesov transformacije, pluralizacije in privatizacije. Varstvoslovje: revija za teorijo in prakso varstvoslovja, 16(3), 217–241, Slovenia, 2014.

[6] Odredba o določitvi programa strokovnega izpopolnjevanja za prevoz in varovanje gotovine ter drugih vrednostnih pošiljk, Uradni list RS, Slovenia, 2017.

[7] Odredba o določitvi programa strokovnega usposabljanja in programa obdobjnega strokovnega izpopolnjevanja za varnostnega menedžerja, Uradni list RS, Slovenia, 2019.

[8] Odredba o določitvi programa strokovnega usposabljanja za varnostnika, Uradni list RS, 2017.

[9] Pravilnik o izvajanju strokovnega usposabljanja in izpopolnjevanja varnostnega osebja, Uradni list RS, Slovenia, 2012.

[10] Savski, S., Rozman, J., Velički, D., Polutnik, B. in Hartman, J., Varovanje ljudi in premoženja: učbenik za izobraževanje program tehnik varovanja, Slovenia: Zbornica za razvoj slovenskega zasebnega varovanja, 2017.

[11] Sotlar, A. in Dvojmoč, M., Profesionalizacija zasebnega varstva v Sloveniji. Varstvoslovje, 18(3), 358–380, 2018.

[12] Torrington, D., Hall, L., Taylor, S. in Atkinson, C., Human resource management. Harlow: Financial Times Prentice Hall, 2011.

[13] Ustava Republike Slovenije, Uradni list RS, Slovenia: 2021.

[14] Zakon o zasebnem varovanju (ZZasV-1), Uradni list RS, Slovenia, 2011.

CREATIVITY, VECTORS OF STIMULATION AND ARTS EDUCATION

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ABSTRACT

The work CREATIVITY, STIMULATION VECTORS AND PLASTIC EDUCATION aims to investigate from multiple points of view the issue of the creative act in relation to education, the environment, the enabling factors that can influence creativity. The environment that stimulates and valorizes creativity is vital for the field of plastic creation, but especially for the environment in which plastic education activities are carried out; thus, a critical environment, which does not offer the framework of an emulation, a place to exhibit artistic productions, or a forum for fertile discussions, in the absence of an enthusiasm that the individual who takes part in these educational activities, does not show (regardless of whether it is in the role of the educator or the educated), they will not increase fluency, originality, the flow of new ideas, but they will increase the critical spirit in excess, which is often harmful to the imposition of new ideas.

In conclusion, in order to have all the necessary conditions for the manifestation of creativity, an environment that stimulates and appreciates creative ideas is needed; with all the internal resources necessary for creative thinking, the intrinsic motivation of the creator, and a personality predisposed to interact flexibly and persistently with the field of knowledge in which it operates.

Keywords: *creativity, stimulation vectors, environment, plastic education, motivation*

INTRODUCTION

[6] "What is the desired, ideal trainer? A MAN who has the nostalgia of age, but who has no age or gender in relation to students and colleagues. Cultivated, trained to be tolerant (not permissive), with a great openness of spirit and "mobility of sight", i.e. of angles of complex and diverse analysis.

He is a good educator, attentive to everyone, to his experiences, possibilities and wishes, caring towards the collective entrusted to guide them in respecting, valuing and valuing the environment, family, school, society...

The role of the trainer is defined as *the organizer of contexts* favoring learning in all its forms, direct and/or indirect. It is, then, the one who *adequately intervenes* on the moment, place, contents, methods, means, rhythm, level, etc.,

in order *to support self-training*. In other words, he *facilitates* learning in different contexts and activities, *guides and evaluates*, is the scriptwriter of active (interactive) learning actions, *expert in formulating and even building higher knowledge, skills and abilities*."

These lines define the creed expressed by Mr. Prof. Laurențiu Șoitu, in the work "Communication Pedagogy", published in Iași, in 2001, at the European Institute publishing house, on the role assumed by the teacher educator/trainer in the complex learning process.

We also ask ourselves the rhetorical question: can we, from this role of educator/trainer, transmit alongside the technical, artistic, educational procedures and the unconscious signals of creativity of the transmitter of the didactic act, the main attributes of creativity: fluency of ideas, flexibility of thinking, originality, and together with these, the context, the enriched, supportive environment, which itself became the germ of creativity, or, according to **Arthur Koestler's statement**, - *that reactivity is a special learning process, in which the student and the teacher are one and the same person*.

To create from a psychoanalytical perspective, according to **Didier ANZIEU**, [1] "would represent a way to fight against death, to affirm a belief in immortality even if only "in an immortality crowned with laurels". Or man, more precisely the man - and it has been noted, indeed, to what extent men are so far more numerous, among creators, than women - would thus find a compensation for his natural inability to bear children, bringing in the world cultural productions capable of surviving, more or less, by themselves, as an illusion or as a symbol of descent."

[4] Without question, the entire evolution of the educational process carried out in the area of visual arts, throughout the entire history of art, has shown us that such a complex process of *learning creativity*, first developed starting from the self-taught creative act, at the dawn of humanity, in the primitive commune, when the artist left the traces of his passage on the walls of the caves, and later on the primitive dwellings dug into the rock or earth, incising or painting scenes from the life of the community using the most accessible means of artistic expression - the gesture of the hand loaded with the yellow or red clay, the white of the lime or the black of the slag extinguished in the fire, suggesting human or animal silhouettes, which even today seem like living scenes, enlivened as if by the battle cries of hunters and the pattering of herds of hunted animals.

Later, however, in the dark Middle Ages and then in the Renaissance, Baroque and Rococo, the development of creativity is this time assumed by the master, by the one who acquires fame, proves through his own achievements that he is a valuable artist, and the gentlemen of the era entrust his descendants towards the acquisition of artistic craft and perfection. The apprentice followed the master's advice, tried to acquire through observation, listening and practice, the

techniques of artistic expression, even if at first he was only allowed to mix the pigments to be used by the master or his apprentices - the most advanced in the craft, and only much later these apprentices were entrusted, (according to the results obtained), to carry out parts of the orders received by the master. During this entire period of time, which could last 5-6 years, the apprentice learned alongside the knowledge of technique and artistic mastery and that part of unconscious contagion of the master's talent, of his specific means of developing creativity.

For example, Peter Paul Rubens (1577-1640), known as an extremely prolific Baroque painter, created about a thousand paintings during his 63-year life, of course supported by his disciples who continued what he began, starting from a preparation of the fondue with sepia charcoal, on a layer of fig juice. This unpretentious background, neutral and welcoming like a layer of earth, which brought him close to the archetypal, the primitive, the beginnings, like a primordial womb, helped Rubens to be inspired, to draw his grandiose compositions, which were then continued by disciples and again imprinted by the master towards the end. The disciple thus departed from a field already prepared by his master, to predispose him to a certain type of specific creativity, developed by the master artist.

With the appearance of neoclassicism, the first art academies also appear, where artistic education promotes other, much stricter values: the rigor of drawing, strong chromatic and value contrasts, the purification of passions, the return to ancient principles: good, truth, beauty. These much more restrictive and critical art academies strongly limit the artists' creativity, by imposing civic norms, the artist no longer paints the scenes he imagines, but those required by the patrons of the time. The subjective point of view, personal affections, however, return with romanticism, the century of passions, and thus the creative impulse is stimulated again, artists rediscover new sources of inspiration, turning their eyes to the heroes of the past, the techniques become much freer, develops easel painting.

Realism returns to the present and refocuses artistic interest on contemporaneity, drawing regains its rights, color only supports the duct of the line, artists look for their subjects in the present, and although they are formed by academies, they try to break away from their teachings, becoming independent artists promoting their own style, rejecting that of the masters of the great academies of the time.

Impressionism and other currents contemporary to them, such as divisionism, cloisonnism, post-impressionism, will accentuate the tendencies of individuation of the creator and detachment from the outdated trend of art academies, which through their constraining, stiffening actions, only cause reactions of rejection from artists who followed their courses, a reaction that is also preserved in the art after 1900, until today. The role of art schools will be to support the artistic

educational act, without a rigid involvement on the part of teachers, encouraging the development of creativity, by stimulating the imagination, of innovative procedures at the technical level (with the explosion of new ideas and techniques from pop-art, that draw their inspiration from advertising graphics of the 60s) and by finding new subjects, which support the constant media interest in new modern art events.

We ask ourselves, what exactly influences creativity? What conditions should be met so that pupils, students, self-taught, creators of any age are stimulated, prepared for everything that represents the challenges of a creative act in any area it takes place.

[3] "Where do geniuses get their ideas from? What do the thinking style of the person who created the Mona Lisa and the person who discovered the theory of relativity have in common? What thinking strategies did brilliant minds like Einstein, Edison, da Vinci, Darwin, Picasso, Michelangelo, Galileo, Freud or Mozart use? What can we learn from them? - asks Michael Michalko rhetorically - geniuses do not think through imitation, in other words reproductively, but productively. When they have a problem to solve, they think about how many ways they can look at it, how they can rethink it, how many different solutions they can come up with, instead of thinking about what they've been taught to solve that problem".

Naturally, throughout the history of art, each individual creator has imagined, researched, perfected his own methods of cultivating creativity, searching for ingenious solutions, inviting the right hemisphere to take part in these processes, but a thorough, systematic, scientific research is of recent date, and we will review some significant moments from this evolution of the science of creativity, naturally integrated in the field of psychology - *the science of the soul*, of the conscious processes of searching for solutions to a certain problem, of the cognitive processes involved in this work, but also of the mysterious unconscious processes that take place in the *depths of the iceberg*, in the *creative workshop* inside, that place so intimate, personal and deeply specific to each individual creator.

Systematic research on creativity began around the 1950s, in the USA when at the urging of Guilford, president of the American Psychological Association (APA), psychologists began to pay more attention to a neglected but particularly important field, and several institutes were established of research in the field of creativity.

[5] Robert J. Sternberg and his team synthesized in the work "Manual of Creativity", six major obstacles in the research of creativity, from a scientific perspective:

- a) The origins of creativity research in the tradition of mysticism and spirituality that seem independent or even contrary to the scientific spirit.
- b) The impression created by the pragmatic, commercial approach to creativity that her research lacks theoretical psychological grounding or validation through psychological experiments.
- c) The thematic and methodological distancing of the initial studies of creativity from the main current of theoretical and experimental psychology turned creativity into a marginal phenomenon in relation to the central concerns of the entire psychological sphere.
- d) Difficulties in defining and establishing the criteria of creativity that gave the phenomenon an elusive or trivial belonging.
- e) Approaches that insinuated that the creative phenomenon is an exceptional product of current processes and structures, and its isolated research does not seem to be a necessity.
- f) Unidisciplinary approaches to creativity tend to confuse a partial aspect of creativity with the phenomenon as a whole, often revealing a limited view of creativity and the perception that its scope is not as comprehensive as it actually is.

These major obstacles to creativity research have resulted in minimal concern for the study of creativity in the world's major psychological education institutes. In many faculties of psychology, there is no discipline that even presents the problem of creativity of future psychologists, but nevertheless according to Sternberg, "most psychologists of the 20th century (such as Freud, Piaget, Rogers and Skinner) treated very seriously the creative nature, so that currently it can be said that research in this field is downright explosive. It was observed that the maturation of professional interests is reflected by the increase in the number of specialized magazines. Creativity research has now been dedicated to its own academic journal (Creativity Research Journal) and this topic is attracting more and more attention in the mass media and the popular press."

CONCLUSION

In creativity and in the act of creation, it is absolutely necessary that there is a balance between the imaginative and the critical function. Thus, the hypertrophy of the critical function will lead to the cancellation of ideas in the bud - a phenomenon specific to inventive-ideal people, but ultimately unproductive, and the hypertrophy of the imaginative function, in the absence of a balanced correlation with the critical one, will lead to fabrication. Commenting on the relationship between imagination and physical thinking, **Alex Osborne**, records that our intellect is dual: on the one hand a critical faculty that analyzes, compares, chooses; on the other hand, a creative faculty that visualizes, foresees, and generates ideas. The critical faculty guides the imagination, and this illuminates the rational approach. The phenomenon of the production of the visual image, of an idea, or of the objectification of the image, represents the ability to visualize

ideas. This phenomenon is reversible - we can speak of a visualization of ideas, but also of an idealization (in the sense of logicalization) of images, that is, of a conversion of them into ideas. The idea of the image must find its counterpart in an object.

A phenomenon of movement of thinking from the abstract to the concrete is realized precisely by visualizing ideas and by objectifying images.

In addition to the cognitive capacities presented above, the individual must know enough information in a certain field to be able to make important contributions, and to be able to approach problematic situations that arise, in a different way than in the past.

[2] "Creativity is no longer a trait worthy of admiration only in Einstein or Mozart, it is not only a talent of those gifted by God. Today, creativity has become a life strategy, it is a response to change, it is proof of the ability to adapt to the world in which we live. We all need to be creative - teachers, students, parents, engineers, athletes, financiers; there is practically no field where creativity is not needed."

Personality traits such as: individual effectiveness and willingness to overcome obstacles, take reasonable risks and tolerate ambiguity play an important role in creative performance. So to aspire to creative thinking and behavior, the individual must be willing to challenge prejudice.

Another influence on the creative process is intrinsic motivation. Studies by researchers such as Amabile (1983, 1996) have shown that truly creative products are often due to increased pleasure and concern for the activity and not for its potential benefits.

Sternberg concludes, that in order to have all the necessary conditions for the manifestation of creativity, "an environment that stimulates and appreciates creative ideas is needed; with all the internal resources necessary for creative thinking, but without the support provided by the environment (for example, a forum in which these ideas can be communicated), the human creative potential would never have the opportunity to develop."

The environment that stimulates and valorizes creativity is vital for the field of plastic creation, but especially for the environment in which plastic education activities are carried out; thus, a critical environment, which does not offer the framework of an emulation, a place to exhibit artistic productions, or a forum for fertile discussions, in the absence of an enthusiasm that the individual who takes part in these educational activities, does not show (regardless of whether it is in the role of the educator or the educated), they will not increase fluency, originality, the flow of new ideas, but they will increase the critical spirit in excess, which is often harmful to the imposition of new ideas. Those who contribute to the act of

education from both positions, both as a master and as a student, must strive to support each other in creating an environment conducive to the development of skills and knowledge in the field of fine arts, and outside of it, in order to could expand the areas of knowledge to other fields as well, which will considerably ease the creative process through the possibility of finding ingenious solutions outside the field, reframed, internalized and reformatted in new patterns of plastic expression.

Over time, visual artists have resorted, depending on the historical time in which they lived and created, to different methods of stimulating creativity or renewing their visual language.

Max Ernst, famous Surrealist artist in the 20th century, he found that two or more objects captured in a collage stimulated his imagination and encouraged his metaphorical thinking. When the imagination captures two or more images in a collage, it transforms them into an entirely new reality, broken from that of each individual element.

Often the metaphor helps us to analyze in detail the deep aspects of the problem. Leonardo da Vinci used the analogy between the earth and the human body to explain its anatomy, Mozart's music was likened by the artist to the preparation of a meal, to explain the composition process. Disney believed that his task was to create metaphors, and Freud studied deeply the metaphorical meaning of symbols and dreams in order to understand psychology."

In conclusion, in order to have all the necessary conditions for the manifestation of creativity, an environment that stimulates and appreciates creative ideas is needed; with all the internal resources necessary for creative thinking, the intrinsic motivation of the creator, and a personality predisposed to interact flexibly and persistently with the field of knowledge in which it operates.

REFERENCES

- [1] Anzieu Didier, *Psychoanalysis of creative work*, Ed. Trei, Bucharest, 2004, pp 22- 23.
- [2] Claxton Guy, Lucas Bill, *Be creative!* Court Ed. Old, Bucharest, 2006.
- [3] Michalko Michael, *Secrets Creativity*, Ed. Amaltea, Bucharest, 2008, pp10.
- [4] Micu Adriana, collective volume: *Education for communication. Tribute volume dedicated to Professor Laurentiu Șoitu*, ed. University "Al. I. Cuza", Iasi, 2015
- [5] Sternberg J. Robert, *Manual of Creativity*, Ed. Polirom, 2005, pp 14.
- [6] Șoitu Laurențiu, *Communication Pedagogy*, Ed. European Institute, Iasi, 2001, pp 134-135.

DIDACTIC STRATEGIES FOR TEACHING CULTURAL HERITAGE AT ELEMENTARY LEVEL OF EDUCATION

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ABSTRACT

Cultural heritage is recognized as a strategic resource and an important investment in social and cultural capital. As an important part of any nation's identity, the preservation of cultural heritage must be encouraged from the youngest age. This article presents the empirical research conducted among Slovenian primary school teachers at the elementary level. The aim of the research was to determine the implementation of didactic strategies when teaching about cultural heritage in Slovenian Elementary schools. Results show that the didactic strategy that teachers most often use to teach heritage content is experiential learning. Teaching heritage content outside the classroom is performed 2 to 4 times per year, mostly in collaboration with museums. The results also show that teachers believe that they are sufficiently trained to teach cultural heritage content, but there is still a tendency for additional training. Shorter teacher training courses focused on cultural heritage content lessons should be planned and implemented, using modern didactic strategies that encourage students' activity and they should be based on the constructivist theory of learning and teaching.

Keywords: *cultural heritage, primary school, cultural capital, teachers, didactics, social studies*

INTRODUCTION

In elementary school, students at the primary level get acquainted with and adopt the goals of the contents of cultural heritage in several school subjects, as the contents of cultural heritage are integrated into the curricula of various school subjects. The contents of cultural heritage are mostly and explicitly presented in the curriculum of environmental science subjects in the first three grades and social science in the fourth and fifth grades of elementary school. These two subjects are presented briefly below. The subject of environmental science is taught in the first three grades of elementary school and is intended for 315 school hours. The school subject "environmental science" includes the continuation and orientation of spontaneous children's exploration of the world and the discovery of connections and interdependence in phenomena and processes in the natural and social environment. Prior knowledge, which arises from direct experience in the environment or through the media, is formed, expanded and deepened in the classroom" [1]. The subject of social science is taught in the fourth and fifth grades of elementary school and is an upgrade of the social science goals, contents and

activities of the subject of environmental science from the first three grades. The subject contents cover a total of 175 school hours. It includes goals from geography, sociology, history, ethnology, psychology, economics, politics, ethics, and ecology. Goals are intertwined and interconnected. During the lessons of the subject of social science, students develop, among other things, an understanding of their social, cultural and natural environment in time and space, and develop attitudes and values in the context of environmental, civic and patriotic education and education for democracy and human rights. The emphasis of the subject is to get to know the relationship between the individual, society and the natural environment [2]. Both current curricula for the subject of social science and the subject of environmental science are conceived from the constructivist theory of learning and teaching. Plut-Pregelj [3] defined constructivism in education as theories of knowledge and derived theories of teaching based on the assumption that knowledge is a human construct, whether it is a consequence of human individual, narrower or broader social activity. The constructivist theory of learning and teaching derives from the idea that students must be active in the classroom, as their knowledge will be stronger and more holistic if they based on their prior knowledge and experience with the help of teachers build new knowledge and integrate it into their already existing concept of knowledge [4,5]. Therefore, the constructivist approach to teaching emphasizes the active role of students and, accordingly, teachers should choose such forms and methods of work in which students are more active than in the traditional or transmissive approach to teaching. The transmissive approach to teaching is mainly based on the transfer of ready-made knowledge, so students do not go through the cognitive process, as they are only acquainted with the findings resulting from someone else's cognitive path [6]. Schools as institutions in the future will not be able to successfully perform their function of transmitting knowledge if they do not adopt at least some principles, recommendations and approaches based on constructivist assumptions [7].

How and in what way teachers will teach the contents of cultural heritage, with which methods, forms of work or didactic strategies, depends on each teacher individually. The primary characteristics of postmodern didactics of social sciences are changing, so how to teach the contents of cultural heritage is relevant. As the essential feature of the postmodern didactics of social sciences, Židan [8] points out its constant openness, the search for new challenges and its constant dynamism. Židan (p. 39) also writes that "it is always ... important to think about the question: What (which) are the didactic paths to a more permanent social science, humanistic knowledge than human capital?" The educational environment with all the included contents and elements actively creates the individual's capital in society. It is reasonable, and Marentič Požarnik [7] agrees that teachers combine the methods they will use in the classroom according to the subject's objectives, circumstances and students.

Given the didactic recommendations and knowledge of the principles of the constructivist theory of learning and teaching, it would be expected that teachers

use the following teaching methods in which students are active: research lessons, experiential lessons, project lessons. In all these strategies, students are more active than in the traditional form of teaching, the frontal form. In defining active learning, it is necessary to consider mental activity and independence in regulating one's learning. Therefore, we can speak of active learning when most of the learning activities are carried out and regulated by the students themselves [9] Accordingly, the modern student is an active, participatory constructor (builder) of their social science knowledge, behaviors, beliefs [8].

METHODOLOGY

The purpose of the study was to determine the state of teaching the contents of cultural heritage at the primary level of primary education in the Republic of Slovenia.

The authors in broader research examined more aspects and characteristic of teaching cultural heritage at elementary level. In this article authors focuses on didactic strategies that are used for teaching cultural heritage at elementary level of education.

The study was based on a descriptive and non-experimental method of empirical research and was carried out individually and anonymously. The authors included a random sample of 395 primary education teachers teaching on 1st level of elementary education in year 2018 in Slovenia.

The research sample has the largest number of first grade teachers, namely 106, which represents 26.8% of all participating teachers. 19.5% of the participating teachers teach in the third grade (77 teachers), 19.2% of the participating teachers teach in the 4th grade (76 teachers) and 18.5% of the participating teachers teach in the second grade (73 teachers). Fifth grade teachers are the least represented in the research sample, 63, which represents 15.9% of all participating teachers.

Authors compiled the survey questionnaire and it consists of two parts. In the first part, we obtained data on the generals of teachers: the length of service of their teaching, the class of teaching and the environment in which their primary school is located, in which the surveyed teachers teach. The second part of the questionnaire consists of several types of questions: dichotomous questions, multi-choice questions: questions with ranked answers, a cluster of questions, questions with verbal answers, questions with graded answers, and questions with a combination of judgments and levels. Validity was ensured with reviewing and pre-testing our questionnaire on a sample. Reliability was controlled from the start of creating questions since we were careful to provide detailed instructions and unambiguous specific questions. Reliability was also monitored when processing data since we compared the answers to content-related questions. The objectivity

of instrument was based on individual interviewing without the presence of an assessor.

Data was collected with a survey questionnaire intended for primary school class teachers. We obtained the web addresses of primary schools on the Ministry of Education, Science and Sport website and sent the schools an e-mail including the link to an online survey, carried out at <https://www.1ka.si/>. Once we completed the survey, there were 395 fully completed questionnaires in our database.

The data obtained from the questionnaires were analysed by using the SPSS statistics programme. For data processing, we used basic descriptive statistics and frequency distribution. For examining the differences in teachers' attitudes in accordance with their period of employment and the grade they are teaching, we used the Kruskal-Wallis test for independent samples; and for examining the differences in teachers' attitudes towards the teaching environment, we used the Mann-Whitney test.

RESULTS

How often do teachers use individual didactic strategies in teaching cultural heritage content?

Teachers were offered four strategies of teaching, for which they had to indicate how often they use them in teaching cultural heritage contents. Teachers marked the frequency of use for experiential lessons, research lessons, classic lessons (the methods of explanation and conversation prevail) and project lessons. The results are presented in the table below.

Table 1. Numbers (f), structural percentages (f%) and mean (\bar{x}) of frequency for the methods of integrating cultural heritage contents during the school year

Individual teaching strategy	Frequency of use				
	Never f f%	Rarely f f%	Often f f%	Total f f%	\bar{x}
Experiential teaching	7 1.8 %	152 38.5 %	236 59.7 %	395 100.0 %	2,58
Research teaching	13 3.3 %	178 45.1 %	204 51.6 %	395 100.0 %	2,48
Classic teaching	6 1.5 %	162 41.0 %	227 57.5 %	395 100.0 %	2,56
Project teaching	37 9.4 %	252 63.8 %	106 26.8 %	395 100.0 %	2,17
Other	22 52.4 %	15 35.7 %	5 11.9 %	42 100.0 %	1,60

Source: Own elaboration

The results show that teachers most often use experiential teaching to teach cultural heritage contents ($\bar{x} = 2.58$) and also classic teaching, which focuses on the method of explanation and conversation ($\bar{x} = 2.48$). Research teaching is used by teachers more often than project teaching ($\bar{x} = 2.17$), which is rarely used by teachers.

Also, for this question, we performed the χ^2 test for each individual teaching method for the frequency of using a particular teaching method for teaching cultural heritage contents according to the years of experience, the grade and the teaching environment. At this point, we present only those results of the χ^2 -test in which it was shown that there are statistically significant differences between teachers. According to the grade, the results show statistically significant differences ($\chi^2 = 17,039$, $P = 0,030$) among teachers in the frequency of use of experiential teaching. Teachers in the first three grades use experiential learning more often in environmental science than their colleagues in the subject of social science in the fourth and fifth grades. There are no statistically significant differences in the frequency of use of research teaching according to the years of experience, grade and teaching environment. There is a statistically significant difference in the implementation of classic teaching ($\chi^2 = 6.421$, $P = 0.040$) among teachers based on the teaching environment, and teachers in urban schools more often carry it out. The results of the χ^2 test also show statistically significant differences between teachers according to the grade in the use of project work ($\chi^2 = 16,968$, $P = 0,030$), as project teaching is more often carried out in the teaching of social science in the fourth and fifth grade than in the teaching of environmental science in the first three grades of elementary education.

How often do teachers teach cultural heritage contents outside the classroom?

Teachers chose from five answers to this question, at least once a month, once every two months, two to four times a year, once a year and never. The results show that most teachers teach outside the classroom two to four times a year (51.6%). 18.2% of teachers teach cultural heritage content outside the classroom once every two months, and 16.7% of teachers teach it at least once a month. 1.3% of teachers or five surveyed teachers never teach cultural heritage contents outside the classroom. We did a χ^2 test of differences between teachers in the frequency of teaching cultural heritage contents outside the classroom according to the years of experience, grade and teaching environment. Teachers who teach in rural elementary schools are statistically significantly more likely to teach cultural heritage contents outside the classroom ($\chi^2 = 10.784$, $P = 0.029$).

Do teachers cooperate with institutions and associations, in the planning of cultural heritage content during lessons?

In the planning and implementing lessons outside the classroom, teachers can cooperate with various institutions, associations, galleries, archives, the Institute for the Protection of Cultural Heritage and more. We were first interested in whether teachers use these options when planning cultural heritage content during lessons.

The results show that most teachers (71.9%) cooperate with various institutions, associations, etc., in planning their teaching of cultural heritage contents outside the classroom. When analysing the statistically significant differences between teachers, we found statistically significant differences regarding cooperation with other institutions in planning the teaching of cultural heritage contents outside the classroom according to the years of experience, grade, and the teaching environment. Teachers with more years of experience work more with institutions, associations than their younger colleagues with fewer years of experience ($\chi^2 = 10,757$, $P = 0.013$). Also, the difference between teachers is statistically significant according to the grade, as teachers of higher grades cooperate more with institutions and associations than teachers of lower grades ($\chi^2 = 12,522$, $P = 0.014$). Most teachers who cooperate with institutions and associations in planning the teaching of cultural heritage contents outside the classroom cooperate with museums (33.0%). 25.4% of them cooperate with various associations, and 18.1% cooperate with galleries.

CONCLUSION

According to the results, teachers most often use experiential learning when teaching cultural heritage content. Teachers in the first three grades use experiential learning in environmental studies subject more often than their colleagues teaching social studies in fourth and fifth grades. Based on the theoretical part of our master's thesis, we know that experiential learning connects direct experience (experiencing), observation, cognition, and conduct. All these elements form an inseparable whole, and a comprehensive personal experience is the most important part of this method [2]. Both curricula for environmental and social studies subjects encourage and guide teachers to carry out active learning in the form of experiential learning. Given that teachers most often use experiential learning in teaching cultural heritage content, we can conclude that in teaching cultural heritage content, they follow the principles of constructivist teaching. Therefore, through their own activity, pupils build new knowledge on the basis of their previous knowledge and experience, and incorporate it into their existing concept of knowledge. In this context, we can only assume that teachers teaching in the first triad may find it easier to teach outside a classroom because, as a rule, it is easier to implement inter-subject connections, which allows them to achieve the goals of several subjects at the same time, including outside a classroom. In the fourth and fifth grades, however, teachers expect such planning to be more demanding and, therefore, probably use it less often.

In terms of frequency of use, second place is taken by classical teaching, with the method of explanation and conversation in the forefront. In traditional or classical concept of teaching, teaching is often illustrated as one-way didactic communication: (*teaching material*) – *teacher* – *teaching material* – *pupils*. Therefore, the frontal form of teaching prevails. We would also like to highlight an interesting item that, considering the frequency of implementing classical teaching, the results show a statistically significant difference between teachers in terms of their teaching environment, namely, it is more often carried out by teachers in urban schools. A more thorough interpretation would require an additional analysis of all the factors influencing the occurrence of differences between rural and urban schools.

Teachers also use research-based teaching more often than project-based teaching. Research-based teaching is one of didactic strategies, where pupils are active, and which also introduces elements of scientific work into teaching [10]. In both curricula, research-based teaching is also mentioned as a guideline for teaching environmental and social studies subjects. We can summarise that teachers teach according to didactic recommendations.

According to the results, project-based teaching is the least often used by teachers in teaching cultural heritage content, and project-based teaching is more often carried out in social studies lessons in fourth and fifth grades than in environmental studies lessons in the first three grades of elementary education. In the research conducted by Jančič and Hus [11] in the 2015/2016 academic year among Slovenian teachers of social studies subject in fourth and fifth grades of elementary school, it was also found that teachers only occasionally use project-based lessons in social studies subject. Research results provided a partial answer as to why such a situation occurs, namely that teachers partly agreed with the statement that the project work is too difficult for pupils. It is also interesting to note that teachers believe that the school environment does not sufficiently encourage them to use project-based teaching, as they only occasionally receive an incentive to carry out project-based teaching. According to Novak [12], some principals encourage greater teacher's autonomy and, consequently, teachers can take responsibility for their own initiatives, personal development, and education, in spite of bureaucracy and increased teaching obligations. It is precisely due to the increasing bureaucratisation and control that some schools are afraid of autonomy.

According to the results, most teachers implement lessons outside a classroom two to four times a year. Teachers teaching in rural elementary schools statistically significantly more often teach cultural heritage content outside a classroom, and teachers teaching in rural areas also statistically significantly more often work with institutions and societies in planning lessons outside a classroom. According to the results, when planning lessons of cultural heritage content outside a classroom, most teachers cooperate with various institutions, societies, and the like. Teachers with more years of service work more intensively and carry

out a greater volume of work with institutions, societies, and others than their younger colleagues with less years of service. Most teachers work with museums. According to Trškan [13], the pedagogical role of museums in Slovenia is becoming increasingly important because many museums began offering various pedagogical activities intended for children and adolescents of all ages. Museums are resources for learning about and studying history and can be an integral part of field trips, fieldwork, or other forms of lessons outside a classroom. Trškan also writes that for teachers, a museum is an opportunity for additional extracurricular activities in which theoretical knowledge is combined with practical knowledge, and a museum also increases young people's interest in what has happened in the past [13]. The surveyed teachers also intensively cooperate with various societies and galleries. The didactic recommendations of the curricula for environmental and social studies state that the goals should also be achieved outside a classroom, by moving across Slovenia, in the field, and by field trips.

Based on the findings of our empirical research, we suggest the following activities as an upgrade to the existing practices that can, inter alia, increase the cultural capital of pupils:

It would be necessary to prepare model teaching preparations for the implementation of lessons with cultural heritage contents, which would follow the guidelines of post-modern didactics of social sciences.

Shorter teacher training courses focused on cultural heritage content lessons should be planned and implemented, using modern didactic strategies that encourage students' activity and they should be based on the constructivist theory of learning and teaching.

REFERENCES

- [1] Kolar, M., Krnel, D. in Velkavrh, A. (2011). *Učni načrt. Program osnovna šola. Spoznavanje okolja*. Ministrstvo za šolstvo in šport, Zavod RS za šolstvo.
- [2] Budnar, M., Kerin, M., Umek, M., Raztresen, M in Mirt, G. (2011). *Učni načrt. Program osnovna šola. Družba*. Ministrstvo za šolstvo in šport, Zavod RS za šolstvo.
- [3] Plut-Pregelj, L. (2004): Konstruktivistične teorije znanja in šolska reforma: učitelj v vlogi učenca. In B. Marentič Požarnik (Ed.), *Konstruktivizem v šoli in izobraževanje učiteljev* (p. 17–40). Center za pedagoško izobraževanje filozofske fakultete.
- [4] Martin, D. J. (2001). *Constructing Early Childhood Science*. Delmar Thomson Learning.
- [5] Maxim, G. W. (2010). *Dynamic Social Studies for Constructivist Classrooms*. Pearson Education, Inc.

[6] Rutar Ilc, Z. (2007). Aktivno učenje in procesni pristop – pot do konceptualnega razumevanja. In *Kurikul kot proces in razvoj* (p. 109–122). Zavod RS za šolstvo.

[7] Marentič Požarnik, B. (2008). Konstruktivizem na poti od teorije spoznavanja do vplivanja na pedagoško razmišljanje, raziskovanje in učno prakso. *Sodobna pedagogika*, 59 (125), 4, 28–51.

[8] Židan, A. (2015). *Temeljne značilnosti postmoderne didaktike družboslovja*. Fakulteta za družbene vede.

[9] Šteh, B. (2004). Koncept aktivnega in konstruktivnega učenja. In B. Marentič Požarnik (Ed.), *Konstruktivizem v šoli in izobraževanje učiteljev* (pp. 149–164). Ljubljana: Center za pedagoško izobraževanje filozofske fakultete.

[10] Blažič, M., Ivanuš Grmek, M., Kramar, M., & Strmčnik, F. (2003). *Didaktika* [Didactics]. Visokošolsko središče, Inštitut za raziskovalno in razvojno delo.

[11] Jančič Hegediš, P. & Hus, V. (2017). Project-based learning in social studies. In *Proceedings of IAC 2017 in Budapest, International Academic Conference on Teaching, Learning and E-learning and International Academic Conference on Management, Economics and Marketing, Budapest, Hungary*. (p. 268–275). Czech Institute of Academic Education.

[12] Novak, B. (2006). *Moč družbe in transformacija šole*. Pedagoški inštitut.

[13] Trškan, D. (2005). Muzejske pedagoške dejavnosti in pouk zgodovine v Republiki Sloveniji. *Časopis za zgodovino in narodopisje*, 76 (3-4), 451–459.

FURTHER CORPORATE VOCATIONAL EDUCATION – INSTRUMENT OF STABILIZATION AND DEVELOPMENT OF HUMAN RESOURCES

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ABSTRACT

The aim of the paper is to identify suitable methods of education for individual types of voluntary further corporate professional education, which could be applied also when changing the physical teaching environment to virtual or hybrid learning environment, and to propose the methods of education suitable for companies and attractive for the participants of the corporate trainings. In the empirical research, the questionnaire method and the interview method were applied. The respondents (140) were selected from two sections of the Statistical Classification of Economic Activities of the Slovak Republic, SK NACE Rev.2. The research results presented in the tables characterize the types of education in relation to the educational methods applied in the companies analyzed. The suitability of education methods is characterized also in terms of teaching environments, the physical, virtual and hybrid environments. The results of the research confirm that the methods of education affect the interest of the participants in all types of education.

***Keywords:** further professional corporate education, adult education, methods of education, learning environment*

INTRODUCTION

Further professional corporate training of employees is conducted in connection with the increasing requirements on the performance of individual work activities. It is a type of targeted education and is linked to economic activity. Its essence can be seen in creating and maintaining optimal harmony between subjective qualifications, i.e. the real working capacity of the individual and the objective qualification that results from the requirements of a specific profession and the tasks of the workplace, employee's qualification and job qualification. [7], [5]

Educational methods play an important role in ensuring educational activities in the company. Their choice depends on many factors such as educational aims, educational content and the nature of the issue, educational principles, target group, the personality of the lecturer, time and funding of education, as well as learners' preferences. From the learner's point of view, the method is an important

tool that not only motivates interest in education, but is directly related to the results of education and learning. Methods affect the process of memorizing and acquiring knowledge and skills and stimulate the learning of an adult individual.

The aim of the paper is to determine, based on empirical research, the methods of education, which may be used even when changing the physical learning environment to a virtual or hybrid learning environment for individual types of voluntary further corporate professional education, and to propose educational methods suitable for the company and attractive and motivating for learners. The paper is part of the primary research project VEGA No. 1/0328/21 “Post-pandemic business management: identifying temporary and sustainable changes in sequential and parallel management functions in the context of the COVID-19 pandemic.”

FURTHER PROFESSIONAL EDUCATION IN AN ENTERPRISE

Further corporate professional education is an important part of adult education. Mandatory education includes educational activities that result from the legislation in force and from the internal organizational regulations aimed at updating training for certain professions and authorizing an employee to perform certain work activities.

Since the conclusion of the employment relationship, the employee completes entry training, which, in addition to initial learning and training for a new job, also includes mandatory education for all employees, namely occupational safety and health protection (OHS) and fire protection [8]. Mandatory education in the company includes also other trainings related to the renewal of skills and specified in the internal regulations of organizations.

METHODS OF EMPIRICAL RESEARCH

The research was carried out using the interview method and the questionnaire method. The interview was applied in the preliminary research and in the preparation of the questionnaire. For the implementation of the research, the opinions of respondents employed in food production, beverages and catering were taken into account. The respondents were selected by random selection; the year 2022 was decisive, so that we have comparable files for the year 2019 and the year 2022. In terms of the Statistical Classification of Economic Activities SK NACE Rev. 2, we selected respondents from Division 10 Manufacture of food products and Division 11 Manufacture of beverages, Section C – Manufacturing and from Division 56 Restaurant and hospitality activities, Section I – Accommodation and food service activities. The research took place in the periods February – April 2019 and February – April 2022. The total number of respondents was 140, namely 66 respondents from Section C and 74 respondents from Section I. [1]

In Section C there were companies of all size categories; in Section I small and micro companies prevailed. To evaluate the research results, we used the method of descriptive statistics. Two types of methods were applied for the statistical processing of the collected data: manual processing (the comma method was used for some types of questions) and automated processing (we analyzed the collected data in MS Excel). The results of statistical processing are processed in statistical reports in tables and are verbally interpreted.

CORPORATE MANDATORY EDUCATION AND APPLIED METHODS

Mandatory education is perceived as a periodic verification and regular renewal of work performance competences [7]. Mandatory education covers first of all the courses in occupational health and safety, fire protection courses, leading to demonstrating the knowledge and skills and professional competences in given occupations. In the analyses of companies, the mandatory education includes the education resulting from the legislation and the needs of organizations listed in internal company regulations.

MANDATORY – NORMATIVE EDUCATION IN ORGANIZATION

Mandatory training of employees mainly relates to those educational activities that obligate the employer to provide education and the employees to participate in the educational activities required [2]. Most of the mandatory educational activities intended for all employees of a particular employer entity relate to occupational safety and health protection, fire protection and are carried out by every employee after taking up employment, and then repeated with a certain periodicity.

The basic framework delimiting not only the area of mandatory trainings in securing health and safety at work but also the activities resulting from the necessity to complete regular trainings and also updating occupational training is Act No. 124/2006 [11]. Fire protection training (FPT) can be included in compulsory education. Pursuant to §20 of Decree No. 121/2002 On fire prevention, employee training shall be carried out before starting employment and repeated within 24 months. Employees who remain at the workplace after working hours, for instance police officers, have to take the training once every twelve months. It is essential that all employees participate in the training, including contract employees and part-time workers [9]. Similar to OHS training, FP training is conducted either in the physical learning environment or in the virtual one. Health and safety education is conducted under the guidance of safety technicians.

As part of mandatory education, other educational activities aimed at regular professional testing and renewal of skills may be described. This applies to various special job positions and activities where specialized training is required.

In the context of our respondent sample, we should mention hygienic minimum for workers in the food industry, first aid courses, training for professional drivers, forklift operators, etc [3]. Considering our research sample, the most important training is the hygienic minimum for workers in the food industry. Every worker in the food industry who has not completed a secondary or university education in the relevant field in accordance with Decree of the Ministry of Health of the Slovak Republic, No. 585/2008 Coll. as amended [10] shall acquire a diploma – Certificate of Professional Competence – to perform epidemiologically significant activities in the manufacturing, handling and distribution of food and meals. First aid courses organized by the Slovak Red Cross are an important educational activity in the analyzed companies. [11], [12]

Mandatory educational activities also include professional driver training according to Act No. 280/2006 Coll. On the mandatory basic qualification and regular training of some drivers and the training of low-level and high-level forklifts operators once in five years [13]. Act 124/2006 Coll., on Health and Safety imposes on the employer the obligation to authorize only the holders of a valid operator's licence for the given class and type of forklift. [11]

Other mandatory educational activities that belong to specialized training are not discussed in this paper due to the respondent sample in the empirical research and the minimal occurrence of other educational activities in the analyzed companies. Mandatory educational activities include entrance training, which is usually provided by the personnel department staff, as part of the entire process of the employee joining the organization, or when transferring to another workplace or supervised by senior employees.

METHODS OF EDUCATION APPLIED IN FURTHER MANDATORY CORPORATE EDUCATION

Educational methods in further corporate professional education, either ensuing from the existing legislation or from the organization's needs, are conducted through a careful selection of educational methods. From the numerous typologies of methods, we have selected the classification in terms of the learner – instructor interaction. Within the framework, two groups of methods may be characterized, namely: traditional methods (including monological methods) and active methods (dialogical methods, situational methods, skill developing methods), and practical methods. These methods and their application are further specified in Table 1 below.

RESULTS OF EMPIRICAL RESEARCH

In the course of empirical research, we recorded results for the years 2019 and 2022. This paper contains a summarizing comparison of the changes arisen as a result of the better conditions for the application of ICT in education.

The primary division in the table is the education methods, which are subdivided into blocks. The basis is the classification into traditional and active methods of education. Their selection depends on the focus of education (cognitive, affective or psychomotor one). The aim of education represents the result of education, i.e. what the training participant will be able to do after completing the training event. In addition to the physical environment, virtual and hybrid environments are used. In the research, we also examined the application of these methods in relation to the type of teaching environment.

The basis of every training was the lecturer's monologue. All interviewed respondents confirm that their companies provide training in occupational health and safety trainings as well as hygiene minimums for workers in the food industry and entry training. Professional driver training, high-level and low-level forklift operation and first aid courses are not organized in all the companies analyzed. Traditional methods were followed by active, mainly dialogical teaching methods used in large groups but also in teaching individuals. At the same time, skills-developing methods and practical methods were applied. Dialogical teaching methods for small groups (brainstorming, Gordon method, and synectic method) and also situational methods were not used in 2019. All educational activities were implemented in the physical learning environment.

The empirical research was repeated in 2022. The changes that occurred in this year may be summarized as follows: the lower number of respondents for the operation of high-level and low-level forklifts; the decline observed is almost by half. Respondents explained that given the repetition of the training once in five years, it was not necessary to deal with these kinds of activity. All other educational activities were conducted in companies. The lecture remained to be a basis of corporate training; all other lectures (except the first-aid courses held in the physical environment) are either virtual or hybrid, in order to meet the needs of all participants of education. We observed differences in active methods of education. As compared with the year 2019, the application of active methods increased in 2022. The focus of learning environment was on the physical environment, although some methods were also used in the virtual environment. Dialogical methods in teaching small groups and situational methods were not used in 2019.

Table 1. Comparison in timeline development of changes in further corporate education

Methods of education			Types of educational activities		Further professional educational activities Changes (index number) 2022/2019				
					QT				RT
			A.	B.	C.	D.	F.		
a.	Monological methods	Lecture	1	1	1,369	0,857	2,125		
b.	Dialogical methods (large groups)	Learning conversation	1,0114	0,947	1,16	1,029	1,75		
		Chain discussion				0,968	1,5		
		Parliamentary method							
		Public discussion				1,217			
		Panel discussion							
	Dialogical methods (small groups); oriented to problem solving	Brainstorming				1,161			
		Gordon discussion method							
		Synecitic method							
	Dialogical methods (individuals)	Coaching				1,5			
		Mentoring				0,809			
		Counselling	1,181			1,55			
		Assisting	0,928	1,022			1,8		
		Consultations	1,565		1,857		2,16		
b.	Situational methods –comprehensive problem solving	Case study			3,83				
		Syndicate method							
		Role playing			5,66				
b.	Skill developing methods	Simulation			7				
		Demonstration	1,222	1,809	2,55	1,608			
b.	Practical methods	Instruction	0,8469	1	1,171		2		
		Transfer of specific responsibility			1,928	3			
		Transfer of special tasks			1,821	3,25			

Source: Results of own research.

Explanatory notes: QT – Qualification training, A – Adaptation training (100% respondents), B – Initial training (100% respondents), C – Special purpose training (46 %), D – Development of key qualifications (100% respondents), E – Enhanced training (0 respondents—not mentioned here), RT – Requalification training; F – Requalification in a related field (cca 12% respondents)

The indicated ratio figures characterize changes in the number of respondents who mentioned the application of individual education methods for individual types of further professional corporate education. In the case of high- and low-level forklifts operation, changes are not indicated since the number of respondents was not the same. However, in the year 2022, also the method of demonstration in the physical learning environment was applied in the case of forklift operation. In individual types of corporate education simulation method and demonstration method were used. The former was applied in the first aid courses in the hybrid learning environment and in entry trainings held in the virtual environment. The latter was used in not only for high- and low-level forklifts operation trainings, but also in the virtual environment entry trainings.

A distinctly higher application of skills developing methods was recorded. In OHS and FP educational activities, the increase from 18 respondents to 48 respondents may be noticed in the demonstration method. A similar high increase occurred in the first aid trainings. An increased use of the simulation method, may be observed in the training in the hygiene minimum for food industry workers (from 9 respondents to 23 respondents). The highest increase occurred in the instruction method in entry trainings, where it rose from 11 respondents to 49 respondents. [3]

In active methods, we can observe also a decline in applying panel discussion in the hygiene minimum trainings for food industry workers. Methods of education are affected by scientific and technological development as well as the ICT development, and that in turn leads to continuing innovations. [6]

DISCUSSION AND CONCLUSION

The research results indicate that monological methods based on the lecturer's interpretation are still highly preferred. The traditional lecture method is complemented with active educational methods applied with regard to individual types of corporate education.

Companies apply a creative approach to mandatory education, mainly in entry training activities. As part of the initial trainings for the given research group, we recommend to use the FRED online platform, i.e. library of interactive training materials. This training is mainly intended for restaurant workers.

Mobile learning, i.e. learning through the Internet or network, needs to be recommended for corporate trainings. Currently, social media (e.g. LinkedIn, Facebook, YouTube, or Skype) may be recommended for mandatory corporate trainings.

Learners' learning motivation may be supported by means of videos with simple, short and entertaining animations. We recommend to use microlearning [4] in corporate training. Owing to a large number of mobile phone users, recently, a small volume of information content has been on the rise in education.

In the applied methods reported by respondents, we missed situational methods. Gamification and game-based learning may be recommended as an effective way of simulating situations encountered by employees and improving their decision-making skills. Similar goals in education may be achieved with artificial intelligence (AI), virtual reality (VR) and augmented reality (XR) technologies.

REFERENCES

[1] EUROSTAT. Your key to European statistics. NACE Rev. 2 - Statistical classification of economic activities. <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-ra-07-015>

[2] HR Glossary. Quit genius. What is Mandatory Training? 2022. <https://www.quitgenius.com/hr-glossary/mandatory-training>.

[3] Hygienické minimum (Minimum hygiene standards) – na prácu s potravinami, n.d. <http://global-education.sk/seminare/hygiena/hygienicke-minimum-pre-pracu-v-potravinarstve.html>.

[4] Latkar, Sh., Traditional Training Processes vs. Micro Learning. Oust labs, 15 March 2017. Updated 2021. <https://www.oustlabs.com/post/traditional-training-processes-vs-micro-learning>

[5] Okumu, E. L., Kiflemariam, A., Mang'unyi, E., Effects of Employee Training on Employee Performance: A Case of the Judiciary of Kenya. International Journal of Research in Management, Economics and Commerce, volume 08/ issue 09, pp 39-47, 2018.

[6] Ostrowski Martin, B., Kolomitro, K. & Lam, T., Training Methods: A Review and Analysis, February 2013 Human Resource Development Review, vol. 13/issue 1, pp. 11-35, 2013. DOI: 10.1177/1534484313497947.

[7] Palán, Z., Výkladový slovník Lidské zdroje. Prague: Academia, 2002.

[8] Team prevent SANTÉ. (n.d.). <https://www.team-prevent.sk/sluzby/bozp-a-opp>.

[9] Vyhláška (Decree) č. 121/2002 Z. z. Ministerstva vnútra Slovenskej republiky z 3. marca 2002 o požiarnej prevencii.

[10] Vyhláška (Decree) 585/2008 Z.z. Ministerstva zdravotníctva Slovenskej republiky z 10. decembra 2008, ktorou sa ustanovujú podrobnosti o prevencii a kontrole prenosných ochorení.

[11] Zákon (Act) č. 124/2006 Z. z. o bezpečnosti a ochrane zdravia pri práci a o zmene a doplnení niektorých zákonov [e-source] 2022.

[12] Zákon (Act) č. 355/2007 z 21. júna 2007 o ochrane, podpore a rozvoji verejného zdravia a o zmene a doplnení niektorých zákonov.

[13] Zákon (Act) č. 280/2006. Zákon o povinnej základnej kvalifikácii a pravidelnom výcviku niektorých vodičov.

PERSONAL CHARACTERISTICS OF TEACHERS AND THEIR RELATION TO CLASSROOM MANAGEMENT STYLES

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ABSTRACT

Among all the factors that create the school environment and influence the creation of a favorable atmosphere for more healthy development and education of students, the role of teachers stands out as crucial. Classroom management can be seen as the next important factor that stimulates the learning and teaching process and as a tool to create an environment in which the educational process would take place smoothly and develop a healthy and positive relationship between students and between teachers and students. The main goal was to examine whether there is a connection between teachers' characteristics and the dominant classroom management style. The self-assessment teaching style inventory (Đigić, Stjolković, Janjić, 2011), including an interactionist, intervening, and non-intervening management style was applied to a sample of 300 respondents, as well as a questionnaire on teachers' characteristics constructed for this research. The results confirmed the connection between the style that dominates the classroom management of teachers and certain personal characteristics, such as gender, desire to have their child in education, attendance at education and the reason for choosing a profession.

***Keywords:** teacher, classroom management style, teachers' personal characteristics*

INTRODUCTION

The role that the teacher-student interaction has, both in academic achievement and in the construction of individual characteristics of the student's personality, has proven to be very significant. In a meta-analysis of more than 100 studies, Marcano [6] concludes that the quality of the teacher-student relationship is crucial for all aspects of classroom management. Namely, the analysis showed that teachers who have high-quality interaction with students have 31% fewer problems with discipline, compliance with rules and similar problems during the school year compared to teachers whose relationship with students is assessed as being of lower quality. It is important to mention that the essence of classroom management is not to control students and demand perfect behaviour. It is to support students in becoming independent during the learning process [3]. For teachers, discipline is not a goal that is sufficient and valuable. It is only a prerequisite for teaching and learning to achieve. In addition to discipline, i.e., a

satisfactory level of student behaviour control, when establishing a quality relationship with students, teachers should also achieve an appropriate level of cooperation with students and respect their basic needs. In addition to discipline, respectively a satisfactory level of student behaviour control, when establishing a quality relationship with students, teachers should also achieve an appropriate level of cooperation with students as well as respect students' basic needs.

Based on what is believed satisfactory and appropriate level of control and cooperation, teachers differ from each other according to the dominant classroom management style. According to the distribution of classroom management styles by Martin and Baldwin [5], the management style in which teachers show a high degree of control and slightly freedom of choice for students and who, in case of disobedience, resort to punishments is called intervening. The complete opposite is the non-interventionist style, which describes teachers who have a low degree of restriction and control, where children have freedom and unlimited choices, but without order. Between these two extremes is the interactionist style that tends to maintain the dignity of the teacher and respect the needs of the students. Students are given freedom of choice, but within limits that ensure respect for all. In previous research, this style has proven to be the most successful [1]. During teachers' college education, but also within professional development, not enough attention is paid to teacher training in the field of classroom management, consequently, the classroom management style that dominates teachers mostly depends on the personality and some other personal and social characteristics of the teacher.

Research on classroom management deals with different aspects of the teacher's actions, which purpose is to create an environment that is stimulating for learning, but also with the characteristics of the teacher's personality, competencies, beliefs and their relationship with the learning and teaching process [2].

RESEARCH METHODOLOGY

The goal of this research was to determine if there is a connection between some personal characteristics of teachers and the dominant style of classroom management. The sample included teachers working in primary schools in Bosnia and Herzegovina. The research was conducted on a random sample of 300 teachers in 2019.

Instruments

The Classroom Management Inventory, authored by Gordana Đigić and Snežana Stojiljković (2009), was used to examine classroom management styles. The theoretical basis of the developed Self-Assessment Inventory is the model of Martin & Boldvin, 1993, which distinguishes three styles of classroom management: intervening, interactional, and non-intervening. Within a non-

interventionist classroom management style, the teacher has minimal control because the approach is based on the belief that a person has their own needs that tend to express and accomplish them. Intervening classroom management style is based on the belief that the external environment (people and facilities) affects human development in a certain way, therefore that the teacher tends to achieve complete control. interactionist classroom management style is focused on what an individual does to change the environment, as well as how the environment affects the individual. In this case, control over the situation in the classroom is shared between teacher and students. The questionnaire formulates 30 description items for each of the three styles of classroom management. The descriptions of teachers' professional behaviour are related to 10 different teaching situations and three descriptions are formulated for each of these situations - one for each style. Reliability was determined by the Cronbach alpha coefficient. The Cronbach coefficient for the intervening style is $\alpha = .722$, for the interactionist $\alpha = .861$, and for the non-intervening $\alpha = .787$.

A questionnaire on teachers' characteristics was constructed for this research.

RESULTS AND DISCUSSION

Determining the correlation of teachers' characteristics with classroom management styles, we included the main characteristics that directly concern the professional development of teachers.

To determine the correlation, we used the Spearman coefficient.

Based on the results (Table 1) teacher's *educational profile* shows a significant correlation with the interactionist classroom management style. *The wish for one's child to work as a teacher* shows a statistically significant correlation with the interactionist and non-interventionist classroom management style. Results also showed a significant correlation between *attending professional training* and the interactionist, as well the non-interventionist classroom management style. There is also a significant correlation between *the reason for choosing a profession* and the interactionist classroom management style.

Table 1. Correlations of personal characteristics with classroom management styles expressed by the Spearman coefficient

			Intervening	Interactionist	Non-intervening
Spearman coefficient	Seniority	correlation coefficient	-.091	.009	.048
		Sig. (2-tailed)	.116	.880	.409
		Total	300	300	300
	Degree of education	correlation coefficient	.103	.067	.084
		Sig. (2-tailed)	.075	.245	.148
		Total	300	300	300
	Educational profile	correlation coefficient	-.087	.137*	-.103
		Sig. (2-tailed)	.134	.017	.075
		Total	300	300	300
	The class teacher	correlation coefficient	-.047	-.084	.088
		Sig. (2-tailed)	.417	.148	.130
		Total	300	300	300
	The wish for one's own child to work in education	correlation coefficient	-.007	-.150**	.144*
		Sig. (2-tailed)	.898	.009	.013
		Total	300	300	300
	Attending professional training	correlation coefficient	.068	-.140*	.193**
		Sig. (2-tailed)	.243	.016	.001
		Total	300	300	300
	Reason for choosing a profession	correlation coefficient	.026	-.138*	.055
		Sig. (2-tailed)	.655	.017	.338
		Total	300	300	300

Research has shown [4] that teachers who have just started to work put more effort into achieving cooperation with students and have an interactionist, while experienced teachers tend towards an intervening classroom management style. However, in this research, seniority did not prove to be statistically significant.

To determine the tendency of teachers with different educational profiles toward a certain classroom management style, we used the Kruskal-Wallis test.

Table 2. *The dominance of the classroom management style according to the teacher's educational profile (Kruskal-Wallis-ov test)*

Classroom Management Style	Educational profile	N	Average value of ranks
Intervening	Science	60	162.87
	Social science	67	153.08
	Art	4	196.00
	Faculty of Education	169	144.01
	Total	300	
Interactionist	Science	60	139.76
	Social science	67	130.90
	Art	4	165.00
	Faculty of Education	169	161.74
	Total	300	
Non-intervening	Science	60	159.18
	Social science	67	165.28
	Art	4	120.50
	Faculty of Education	169	142.27
	Total	300	

Table 3. *Test statistics (Kruskal-Wallis-ov test)*

	Intervening	Interactionist	Non-intervening
Kruskal-Wallis H	3.337	7.389	4.565
df	3	3	3
Asymp. Sig.	.343	.060	.207

Test statistics show (Table 2) that there is no statistically significant difference between teachers with different educational profiles concerning the dominant classroom management style. However, considering Spearman's correlation coefficient (Table 1), there is a statistically significant correlation between the educational profile and the interactionist classroom management style ($r_s=0.137$, $p=0.017$) and the data on the average ranks of the Kruskal-Wallis test (Table 2), we could, with caution, conclude that teachers who graduated Faculty of Education are more inclined to an interactionist classroom management style compared to teachers who graduated science, who are inclined to intervening, and social sciences, who are more inclined to a non-interventionist classroom management style.

Results of Mann Whitney U test (tables 4 and 5) show that teachers who expressed the wish for their one's child to work as a teacher are more inclined to an interactionist classroom management style, while teachers who said that they

would not want their child to work as a teacher are more inclined to a non-interventionist classroom management style.

Table 4. *The dominance of the classroom management style according to the wish for one's own child to work as a teacher (Mann Whitney U test)*

Classroom Management Style	Your own child in as a teacher	N	Average value of ranks
Intervening	Yes	132	151.23
	No	168	149.93
	Total	300	
Interactionist	Yes	132	165.09
	No	168	139.04
	Total	300	
Non-intervening	Yes	132	136.45
	No	168	161.54
	Total	300	

Table 5. *Test statistics (Mann Whitney U test)*

	Yes, always	Interactionist	Non-intervening
Mann-Whitney U	Sometimes	9162.000	9234.000
Wilcoxon W	Total	23358.000	18012.000
Z	-.129	-2.600	-2.490
Asymp. Sig. (2-tailed)	.897	.009	.013

Results of the Mann-Whitney U test (tables 6 and 7) lead us to the conclusion that the interactionist style dominates among teachers who always attend professional training, while the non-interventionist style dominates among teachers who declared that they sometimes attend professional training.

Table 6. *Dominance of the classroom management style according to the frequency of attendance at professional trainings (Mann Whitney U test)*

Classroom Management Style	Attending professional training	N	Average value of ranks
Intervening	Yes, always	209	146.65
	Sometimes	91	159.35
	Total	300	
Interactionist	Yes, always	209	158.42
	Sometimes	91	132.31
	Total	300	
Non-intervening	Yes, always	209	139.47
	Sometimes	91	175.82
	Total	300	

Table 7. Test statistics (Mann Whitney U test)

	Intervening	Interactionist	Non-intervening
Mann-Whitney U	8704.000	7854.000	7205.000
Wilcoxon W	30649.000	12040.000	29150.000
Z	-1.168	-2.413	-3.343
Asymp. Sig. (2-tailed)	.243	.016	.001

Results of test statistics (Table 9), show there is no statistically significant difference between teachers who, for various reasons, choose their profession in relation to the dominant classroom management style.

Table 8. The dominance of the classroom management style according to the reason for choosing the profession of teacher (Kruskal-Wallis-ov test)

Classroom Management Style	Reason for choosing a profession	N	Average value of ranks
Intervening	I love the teaching profession.	238	149.30
	I wanted this faculty, but I had no intention of working in education.	28	157.07
	I wanted to study at another faculty, but I did not have the conditions to enter the desired faculty.	32	153.66
	Something else...	2	151.00
	Total	300	
Interactionist	I love the teaching profession.	238	156.64
	I wanted this faculty, but I had no intention of working in education.	28	125.39
	I wanted to study at another faculty, but I did not have the conditions to enter the desired faculty.	32	127.02
	Something else...	2	147.00
	Total	300	
Non-intervening	I love the teaching profession.	238	147.94
	I wanted this faculty, but I had no intention of working in education.	28	166.29
	I wanted to study at another faculty, but I did not have the conditions to enter the desired faculty.	32	152.47
	Something else...	2	203.00
	Total	300	

Table 9. Test statistics (*Kruskal-Wallis-ov test*)

	Intervening	Interactionist	Non-intervening
Kruskal-Wallis H	.250	5.968	1.891
df	3	3	3
Asymp. Sig.	.969	.113	.595

However, based on results of Spearman's correlation coefficient (Table 1), shows there is a statistically significant correlation between the reasons for choosing a profession of teacher and the interactionist classroom management style ($r_s = -0.138$, $p = 0.017$) and the results on the average ranks of Kruskal -Wallis test (Table 8), we could, with a certain caution, conclude that teachers who engage in this profession out of love for it have a greater tendency per the interactionist style, than the teachers who have stated some another reason why they engage in the teaching profession.

The results of this research showed that teachers who graduated from the Faculty of Education are more inclined to interactionist classroom management style. Similar results have been shown in Đigić's [1] research. She concluded, and we agree, that the preference for the interactionist classroom management style among the teachers who graduated Faculty of Education is an effect of the curriculum at the Faculty of Education in which the pedagogic-psychological-methodical group of subjects is significantly more represented.

The wish for their one's child to work as a teacher is observed as a certain degree of job satisfaction, whereas teachers who would like their child to pursue a similar profession would have a higher degree of job satisfaction. In her research, Šimić Šašić [7] concludes that dissatisfaction with the teaching job is one of the significant predictors of a negative attitude toward teaching. A negative attitude toward teaching could lead to a certain degree of indifference of teachers to the results they will achieve in their work, as well as an indifferent attitude toward students. So, we conclude that job dissatisfaction among teachers could explain the dominance of the non-intervening classroom management style. The results of the research that show the correlation between professional training attendance and classroom management style refer to the importance of lifelong learning in the teaching profession and its contribution to the dominance of the most effective, interactionist classroom management style. In addition to the direct benefit from educators, constant attendance at professional training includes meeting colleagues and sharing experiences, which can certainly contribute to greater efficiency at work for teachers.

CONCLUSIONS

Based on the results of the research, we conclude that the intervening style dominates among teachers who graduated from faculties in the field of natural sciences and teachers who declared that they did not want to work in education upon graduation. The interactionist style, as the most effective, is dominant

among teachers who have graduated from the teaching faculty, then among teachers who have expressed the desire for their child to work in education, who always attend training and who have declared that the reason why they are in the teaching profession is their love for the same. The non-interning style dominates among teachers who graduated in social sciences, who would not want their child to work in education and who declared that they sometimes attend education.

We conclude that teachers who graduated from non-teaching faculties would benefit from additional education in strengthening the abilities that affect effective classroom management. The influence of education on the dominance of classroom management style was observed, which leads to the conclusion that classroom management should not be left to chance and should rely on the characteristics of the teacher's personality. Instead, it is necessary, using the research results, to systematically influence the building of teacher competencies necessary for effective classroom management. Observing the desire for one's child to work in education as one of the indicators of job satisfaction, we opened the question for further research in the field of classroom management so that the analysis of the problem could be done from a multidimensional perspective.

REFERENCES

- [1] Đigić, G. (2017). Upravljanje razredom: savremeni pristup psihologiji nastavnika. Filozofski fakultet, Niš.
- [2] Đigić, G. (2018). The relationship between personal and professional characteristics of teachers. *Facta universitatis*, Vol. 17, No 1, 2018, pp. 1 – 18
- [3] Jones, S., Bailey, R., Jacob, R. (2014). Social-emotional learning is essential to classroom management. *Kappan magazine* Vol. 96, No. 2, 20-24.
- [4] Kayikci, K. (2009) The effect of classroom management skills of elementary school teachers on undesirable discipline behaviour of students. *Procedia Social and Behavioral Sciences* 1 , 1215–1225
- [5] Martin, N. & Baldwin, B. (1993): An Examination of the Construct Validity of the Inventory of Classroom Management Style, Paper presented at the Annual Conference of the Mid-South Educational Research Association, New Orleans, LA.
- [6] Marzano, R.J., Marzano, J.S. (2003). The key to classroom management. *Educational leadership*, Vol. 61, No. 1, 6-13.
- [7] Šimić-Šašić, S., Sorić, I. (2010). Pridonose li osobne karakteristike nastavnika vrsti interakcije koju ostvaruju sa svojim učenicima? *Društvena istraživanja* Zagreb br. 6 (110), 973-994.

RENEWABLE SOURCES AND ENERGY SAVING IN PRIMARY AND SECONDARY EDUCATION: THE RELATIONSHIP BETWEEN PUPILS' KNOWLEDGE AND THEIR BEHAVIOR IN IONIAN ISLANDS

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ABSTRACT

The purpose of this research is to explore the views of pupils of primary (6th grade) and secondary education (3rd grade of Gymnasium & 3rd grade of lyceum) of the Ionian Islands, about renewable sources and energy saving. In Greece, significant research has been carried out on renewable sources and energy saving. Their findings showed that the public as a whole has a positive attitude to energy saving and the utilization of renewable energy sources. At the same time, the contribution of RES to economic growth and society is recorded. In addition, it has been shown that the change of human behavior is considered a sufficient and necessary condition to solve the important environmental problems of our everyday life and makes students behavior; knowledge and perceptions on environment and it's problems, an act of major importance.

***Keywords:** Renewable sources, energy saving, primary and secondary education, knowledge, behavior*

INTRODUCTIONS

Renewable sources and energy saving

Renewable sources and energy saving is a huge issue for modern society. There is no doubt that the need to make countries out of conventional fuels is becoming increasingly urgent [2]. Renewable energy sources (RES) according to their origin density and energy carrier are divided into many categories. except for the tidal energy due on the one hand to the Rotation of the Earth and on the other hand to its attraction from other planets All other forms of energy are directly related and related to solar energy. In particular, RES are endless sources of energy and enhance the savings of the country's depleted energy resources by improving its energy autonomy, strengthening Imports – Exports, limiting their import, and creating reserves of local mineral resources for its prosperity and future [6]. However, RES have significant disadvantages. First, they have a small rate of return (= or < 30%) and high investment costs, so it is expensive compared to non-renewable energy sources. They are not able to meet demand since their

performance is affected by climatic conditions. Also, they cannot be installed everywhere, but only where conditions (nature, climate) allow it. In fact, wind machines are characterized negatively by many for their aesthetics, noise, and bird deaths. Finally, hydroelectric projects are implicated in the release of methane during plant decomposition and aggravate the greenhouse effect.

It is often noted, however, that the field in which today's man needs significant support is the basic training provided. Nowadays the phenomenon of climate change is discussed, mainly due to human errors out of ignorance or interest. It is therefore clear that it is important for students to know the true dimension of the environmental problem, the healthy ways of reacting to being tackled while saving energy and, above all, to lead to ecological attitudes of life or even to propose sustainable new practices to ensure the quality of their own and their planet's future [3]. The results of the study through the data processing of the views of primary (6th Grade Primary) and secondary school students (3rd Grade Gymnasium and 3rd Grade Lyceum) of the Ionian Islands on RES and energy saving, are expected to put the teaching work on RES and the environment on new bases. Information will be extracted and skills will be developed that will enable the student to become more cognitively adequate and more effective in his daily life and more generally in his life in the exploitation of RES, energy saving and environmental sustainability. On the basis of the results of this research, it will be possible to design effective educational interventions to improve the education provided for RES, the environment and sustainability, to create an atmosphere in which students, as future active citizens, will have a positive attitude and a similar culture for the exploitation of RES and energy saving while finding ways to address the environmental problem, in order to prevent the depletion of energy sources and dangerous ecological disasters such as those caused by climate change [2].

Energy and European Union

According to the statistics, the European Union, although it has increased in states, needs about 7% of global energy consumption since 2000. It is expected to increase energy consumption in China and India due to their huge populations with similar global consequences. Both the countries of the Union and all other countries consumers by making them responsible for managing their energy needs in such a way that climate change becomes controlled and even at the lowest possible cost to those involved. The target of using 12% of renewable energy in the European Union has found obstacles to the slow development of corresponding markets and highlighted the need for immediate actions in this area to make energy targets possible [9].

At the lowest possible cost to those involved, both households and tertiary sectors and transport rely exclusively on oil which is not only not inexhaustible but like coal has a huge cost of extracting processing distributors and exploiting a positive element is the fact that while a large amount of electricity is consumed

every day by residents at the same time the industry has managed to significantly control this overconsumption with modernizing systems while there is still huge potential for improvement. In the European Union the entry of new spaces on the one hand created the expectation of economic growth in Europe in the energy sector, but things are not so optimistic as the new countries in their efforts to develop will need more energy reserves either endogenous or exogenous [2].

Europe does not have rich indigenous natural resources, so it is an important customer of imports from other countries. It makes sense since its consumer needs are greater than it produces and it has not been able to reduce energy waste, the introduction of energy is a one-way street. Domestic oil, natural gas, the European loan and Community coal are neither inexhaustible nor the cost of their exploitation much higher than what we find at global level. According to experts, coal and uranium do not pose economic risks and are characterized by stability on the world market, which is not the case for oil and gas where there is a great deal of volatility both in prices and in the distribution of stocks, creating insecurity on the world market with similar effects on the European economy [8]. The development of RES helps to limit the negative effects of both unstable global fossil fuel prices and exchange rate risks. The EU's renewable energy targets by 2030 will reduce the EU's dependence on imports of energy resources and materials, unpredictable fossil fuel prices and uncertainty about the balance of the European economy [9].

The energy management system in Greece

The use of renewable energy sources has led to a new emerging sector of the economy which is widely known as the green economy. These are those economic activities which, on the one hand, try to reduce the use of fossil fuels and, on the other hand, promote the more efficient use of energy with recyclable materials and renewable energy sources (RES). The main reasons that lead to the green economy and the need to use RES are environmental protection, economic growth (new jobs, new specialties, new scientific disciplines), national security, the future of the planet, prosperity, sustainability and sustainability in all areas related to the environment and human life. The latter factor led to green entrepreneurship, i.e. all those economic activities related both to people's vital needs and to the quality of life in the environment where they live and grow. According to Greek researchers [5], the rich fertile natural environment, the favorable geographical location as well as the rich sustainable forms of energy (solar - wind) Zeus ensure a significant advantage now in both green economy and green entrepreneurship.

In particular researchers [3] mention that in recent years the management of energy in Greece has changed significantly. First of all, we have the dynamic entry of the use and exploitation of natural gas into the Greek reality, the integration of Greece into large European networks for the promotion and exploitation of renewable energy sources, the realization of a culture of energy

saving and the opening of the market to the exploitation of electricity outside the borders. All these changes have produced positive results in the safe energy supply of Greece, in the reduction of the uses of import oils at great cost, many economic benefits to the Greek funds ensuring the un renewed energy urgent achievement of more efficient processes in the production and consumption of energy corresponding protection of the environment and upgrading the related services addressed to Greek consumers [4]. In more detail, there is an increase in electricity demand as its price is more economical than other European countries. Another determining factor shaping the Greek energy balance is natural gas. Its import from Russia (before the war with Ukraine), Algeria and other producing countries has a significant impact on the country's wider economic and social situation as it enriches the list of energy sources. Over the last five years Greece has been dynamically integrated into these networks and is using natural gas in both major urban centres and the province. Fuel is also worth mentioning, even in private means of transport. The thematic core of this study is RES. There is no doubt that the focus is on the main Greek renewable energy sources. These according to Kyriakarakos, et al, [5] are solar radiation, wind energy, geothermal energy, biomass, the actions of the sea and finally hydraulic energy. In Greece RES do not participate dynamically in the energy balance. Wind potential varies marginally in exploitable prices while solar significantly outweighs the minimum utilization (relative to potential) of wind energy and biomass predisposes the establishment of production facilities for both of these types of RES [3].

Education and renewable energy sources

In the Greek education system, in addition to the Energy programmes implemented within the framework of Environmental Education, every school year in the schools of Primary and Secondary Education, Renewable Energy Sources are the subject of a study of students in the main educational process as basic modules of the Curriculum and Interdisciplinary Curriculum in the school textbooks, in order for students to understand the usefulness and necessity of RES. By studying the textbooks, in those of the Primary School the modules are introductory, while the large amount of information is found in those of the Gymnasium in simple form, while with greater depth in the textbooks of the General Lyceum. (Source: Institute of Educational Policy) [5]. Environmental Education appears in the early 1970s at international conferences and conferences of major international organisations (UN, UNESCO) to address environmental problems. Since the 1990s it has been linked to the concept of sustainable development and incorporated all three dimensions of sustainable development, namely society, the economy and the environment. At the same time, school education was established, environmental programmes were carried out in schools and the Environmental Education (Env. Ed.) was established. The Env Ed aims at the active participation of students in learning and society, critical thinking and action, intervention in values, attitudes and behaviours and the opening of the school to society, while adopting methods that a) promote participatory and

experiential learning, b) exploit pre-existing knowledge and experience and c) develop social interaction. The main method of the Env Ed is the project, while the field study is often used for the implementation of out-of-school programmes [5]. Since the 1990s it has been inextricably linked to the concept of sustainable development, which "aims to help people develop behaviours, skills and knowledge to make informed decisions for the benefit of themselves and others, now and for the future, and to act in accordance with these decisions" [2].

METHOD

Cohen & Manion [1] proposes the design of research as a strategic action for this approach, which will effectively satisfy the demands of research. They consider that by following such strategic planning in the research process, the data are linked to its objectives and objectives with similar results, whereas otherwise this is not possible. All three types of research project coexist, as descriptive and mainly concerns the identity of the sample, research (exploration) with the investigation of assumptions and causative (casual) with analyses, discussion and conclusions.

Participants

A sample of 12 Primaries (39 % of the sample), 11 Gymnasiums (35 % of the sample) and 8 Lyceums (26% of the sample) of the Ionian Islands Region. A total of 706 questionnaires were completed, of which 278 (39.4% of the sample) were from the PE and 428 (60.6% of the sample) from the SE. Of the total number of students surveyed, 278 (39.4% of the sample) attended 6th grade of Primary, 245 (34.7% of the sample) in 3rd grade High School and 183 (25.9% of the sample) in 3rd grade of Lyceum. In a sample survey, the number of individuals in the sample is crucial so that the results are reliable. Also, the validity of a survey increases if there is a larger sample, but mainly from the extent to which it can be classified as representative in terms of the survey requests, in which case the size is considered less decisive, as long as the degree of statistical error is at safe values, in our case not more than 5%. The dispersion of population observations [1] plays a primary role in determining the size of the sample.

Instruments

For the purposes of the survey was used (a) for primary and secondary schools questionnaire at <http://www.surveymogizmo.com> and for high schools the questionnaire at <https://docs.google.com/forms>, consisting of 4 parts, i.e. as many research issues (knowledge, perceptions, attitudes, suggestions) which are the subject of this research: A PART: Questions on renewable energy sources (q: 1-25), B PART: Energy saving questions (q: 26-35), C PART: General questions (q: 36 -42) and D PART : Summary – feedback (q: 43-45), In the pilot survey (30 questionnaires- 10 per school type) there was a multiple choice question about the financial situation of the parents, but the participants' comments were not positive

about its existence and 2 of the 30 who answered it were "not answering", so it was removed. Despite the advantages offered by online research (saving resources, efficiency, ensuring anonymity), it also presents some disadvantages such as possible errors in population coverage, difficulty in determining the sample and its representativeness. Technical problems due to lack of infrastructure were addressed by printing a satisfactory number of questionnaires from school principals and sending them to the researcher by post.

Procedure

The collection of the research material took place in public primary and secondary schools in the Ionian Islands. The survey was launched in October 2014 and completed in May 2015, i.e. during the same school year. The printed questionnaires (for practical reasons of lack of infrastructure) were distributed by the school principals, while the researcher was in online communication with them throughout the time of their completion. Participation in the survey was voluntary. All survey participants were informed that the data would be used purely for research/academic reasons with absolute anonymity. The percentage of pupils' responses was 37 % for their classmates from the participating schools, while for all pupils in the Ionian Sea (6th PS, 3rd GS, 3rd LS) the percentage was 13%. The final sample consists of 706 students. The fact that it gives a statistical error $e=3.76$ and a reliability rate of 95%, safely allows the results to be generalization even at national level.

Statistical analysis of the data was carried out using the statistical software S. P. S. S. 21.0. Differences in significance .05 were considered statistically significant. Before the results were extracted, an audit was carried out (a) of the structural validity of the questionnaires with the exploratory factor analysis and (b) an assessment of the internal coherence of the factors with the Cronbach factor α . The exploratory factorial analysis used the analysis of principal components with rectangular rotation of the maximum varimax to maximize loads. The final number of factors was based on being the values > 1 and the visual examination of the scree plot chart with Bartlett's sphericity test and Kaiser-Meyer-Olkin's rule [7].

RESULTS

Factor analysis and reliabilities

Specifically, for the whole questionnaire the coefficient α was .71. In each dimension studied the coefficient α ranged from .68 to .82 (Table 1): efficacy for information attitudes .68 and efficacy for energy saving attitudes .81. The values of the reliability factor α , if we delete a question (if item deleted), showed that none of the questions needed to be removed from the scale, since by subtracting a question there was no particular change in the values of α . (Table 2).

Table 1. Means for TSBS and its subscales

Means	a
Efficacy for information attitudes	.68
Efficacy for energy saving attitudes	.81

Table 2. Factor loading for the TSBS

Teachers' sense of behavior Scale (TSBS)	Factor	
	1	2
How or/and where did/do you learn about renewable energy sources and energy saving:		
School	.703	
Family	.639	
Books	.621	
Magazines	.609	
TV	.623	
Network	.662	
Friends	.653	
If you want to save energy, what are you willing to do:		
Do you turn off the light when you don't need it?		.781
Do you turn off computer game machines when you're not playing?		.776
Do you wash your clothes at the lowest possible temperature?		.788
Do you close doors and windows when the air-condition is working?		.782
Do you regularly maintain air-condition and heating system?		.807
Do you have a solar water heater or photovoltaics in your home?		.792
Are you on foot or with an MME and not with your car?		.784
Are you participating in the recycling program?		.790
Do you want to be more informed to contribute to the energy saving effort?		.812

Predicting levels of pupils behavior

In the international arena, one area that has been highly studied is the correlation of knowledge and attitudes. Zimmerman [6], after a 15-year research review, concluded that people with a higher level of knowledge about the environment exhibit more positive attitudes towards it than people with a lower

level of knowledge. Timely action, even when you do not possess the whole truth, is more important than possessing the whole truth and it is too late. In contrast, research by Yount and Horton [6] showed that by increasing people's knowledge of environmental issues, it does not change their attitudes towards them [6]. The two dimensions of the behavior are positively correlated (.12) and from the average values it follows that the attitudes in terms of information are 3.05 (43.57%) with a maximum of 7 and with respect to the ES behavior 8.40 (64.61%) with a maximum of 13 and therefore the students seem to seek to be informed by the available sources and more take care to save energy, so they are both satisfactory. Analysis of the correlations between the dimensions of students' knowledge and attitudes on renewables and energy saving found that all variables of the stops are also correlated with all the variables/dimensions of knowledge about renewables and energy saving. The greatest correlation was observed between the knowledge of RES and the attitudes of the ES (.74) and the smallest in the knowledge of the and the attitudes of information. The dimensions of the associated factors have a positive sign and therefore students who have basic knowledge about the ES have a similar energy-saving behavior, while the sources of their information affect more the quality of their knowledge and less their mentality for ES. Remarkable were the results from the multiple regression analysis, a) to examine the possibility of predicting the " ES behavior " (dependent variable) from the variables/dimensions of the "knowledge" of RES and Energy Saving (ES) (independent variables), where it emerged that in 54.3% of the variability of the "ES behavior" was explained by the variable / dimension of the ES knowledge (energy saving), which contributed significantly to the prediction of the "ES behavior", while the variable/dimension of renewable sources was not important in the forecast. It should be noted that the relationship of the variable "ES stops" with the variable "ES knowledge" (energy saving) was positive and b) to examine the possibility of predicting the "information stops" (dependent variable) from the dimensions of "knowledge" (independent variables), where it emerged that in 10.3% of the variability of "information stops" was explained by the variable / dimension RES knowledge (renewable sources), which contributed significantly to the prediction of " ES behavior ", while the variable/dimension of ES knowledge (energy saving) was not important in the forecast.

Differences in trait knowledge and behavior according to gender, and age/class of students

To investigate possible effects of gender, age/class and their interactions on Greek pupils' trait knowledge and behavior, two-way ANOVA were conducted. The dependent variables were the trait behavior and the knowledge, and the independent variables were (a) the gender with two levels and (b) age/class with three levels (6th Grade Pr, 3rd Grade Gym, 3rd Grade Lyc). The results showed a statistically significant gender effect, ($F(1, 700)=11,551$, $p=.001<.01$), no significant effect on age, ($F(2, 700)=.911$, $p=.403>.05$) and non-significant gender and age interaction, ($F(2, 700)=.922$, $p=.398>.05$). Examination of the averages showed that boys had a lower percentage of correct

responses than girls. To examine differences in students' behaviors in terms of gender and age/class, a two-sided (2X3) variance analysis (Two-way Anova) was again performed. $=.005 < .05$), while showing a non-significant effect on gender ($F(2, 700)=3.783, p=.052 > .05$). An examination of the averages showed that the boys had a lower percentage of correct answers than the girls apart from the boys of the 3rd Grade Lyc who preceded them with a difference in terms of postures.

CONCLUSION

This study seeks to capture the evolution over time as well as the current situation prevailing in the field of renewable energy sources in Greece and especially in the Ionian Islands. In particular, by placing particular emphasis on RES that are utilized, i.e. wind, solar, hydroelectric, geothermal, oceanic - wave energy, as well as energy from biomass / biogas, and through the processing of data of the views, perceptions, attitudes and proposals of students of primary (6th gr Elementary) and secondary education (3rd gr Gymnasium and 3rd gr Lyceum) of the Ionian Islands for RES and energy saving (ES), to come up with proposals for the future. The specific purpose of this work, apart from the interaction of the four main factors of RES and ES (the knowledge, perceptions, attitudes and proposals of the students who participated), is to investigate the influence of the level of education and their demographic characteristics (the gender and age / class of their parents' studies, the profession of their parents, the place of residence and the type of their residence) in the formation of these factors. From the correlations it emerged that a) the two dimensions of knowledge are related to each other (.17) and from the average values it follows that the knowledge about RES is relatively low for students since they have an average value of 7.37 (26.32%) when the maximum is 28 points and a satisfactory level of knowledge of ES 4.47 (63.85%) when the maximum is 7 points. This shows the preference of students to study that it has to do with the practice of the RES and not with the theoretical framework of RES. It should be noted that the relationship of the variable "information stops" with the variable "renewable sources" was positive. The highest percentage of volatility forecast occurred at the ES behavior (54.3) and the smallest at the information behavior (10.3). Having a marginally higher percentage of prediction, the factor is considered the most important predictor. Therefore, students who have knowledge of ES can predict the correct ES attitudes, while those who have knowledge only of the theoretical framework of RES can predict their attitude towards the sources that are informed about it. The ES attitudes cannot be predicted by a good knowledge of the theoretical framework and the information attitudes are not predicted by how many and what practices the students know.

REFERENCES

- [1] Cohen, L. D. & Manion, 1994. *Educational Research Methodology*. Athens: Metaichmio.
- [2] EEA, 2007. *How much bioenergy can Europe produce without harming the environment? European Environment Agency (EEA), EEA Report No 7/2006, Greenpeace, "Sustainable Cities"*, Athens: Ed. Nefeli.
- [3] Hatziargyriou, N. D., Asano, H. D., Iravani, R. D. & Chris, M., 2007. Microgrids. *IEEE Power and Energy Magazine*, Volume 5, pp. 78-94.
- [4] Koroneos, C., 2005. Cyprus energy system and the use of renewable energy sources.. *Energy*, Volume 30, p. 1889–1901.
- [5] Kyriakarakos G, Dounis AI, Arvanitis KG, Papadakis G., 2012. A fuzzy logic energy management system for polygenerationmicrogrids. *Renew Energy*, Volume 41, pp. 315-327.
- [6] Pimentel, D., 2002. Renewable energy: Current and potential issues. *BioScience*, Volume 52, p. 1111–1120.
- [7] Podlaski, S., 2007. *Future of Bioenergy in Poland*. Warsaw University of Life Sciences. Poland: s.n.
- [8] RISE, 2007. *Biofuels – Developments in Germany and in the EU*. Research Institute for Sustainable Energy (RISE), Australia, 2007. [Http://www.rise.org.au/pubs/Detlev_Biofuels](http://www.rise.org.au/pubs/Detlev_Biofuels), Australia: s.n.
- [9] Roos, I. D. & Soosaar, S., 2004. Status of Renewable Energy Development and Review of Existing Framework and Review of Existing Framework. *ALTENER*, May.

Appendix section

Questionnaire (list of questions)

Renewable sources and energy saving in Primary and Secondary education: knowledge, perceptions, attitudes, and proposals

PART A: Renewable energy sources

1. What forms of renewable energy are you aware of?
2. For which forms of renewable energy can you give not only a clear definition but also explain in detail?
3. What is the aim of the use of renewable energy sources?
4. Where have you heard' about renewable energy sources and energy saving?
a) school b) family c) books d) magazines e) TV f) internet
g) friends
5. Why have renewable energy sources not yet been sufficiently developed in Greece?
6. Do you consider that the State has taken the necessary measures for the wider dissemination of renewable energy sources
7. Why is it considered imperative to choose the development and use of renewable energy sources?
8. What do you know about bioenergy and biofuels?
9. The use of renewable energy sources essentially helps to solve some environmental problems
10. In solving what environmental problems does the use of renewable energy sources help?
11. What do you know about hydropower or hydropower?
12. What do you know about solar energy?
13. What do you know about wind energy?
14. What you know about geothermal energy (in Greece)

15. What do you know about tidal energy?
16. What do you know about the energy of waves?
17. What do you know about bioenergy and biofuels produced from biomass?
18. What do you know about bioenergy and biofuels produced. from forest biomass?
19. What do you know about bioenergy and biofuels produced from agricultural plants?
20. What do you know about bioenergy and biofuels produced from livestock manure
21. What do you know about bioenergy and biofuels produced from the bio-based part of municipal waste?
22. What do you know about bioenergy and biofuels produced from urban sewage?
23. Bioenergy has served in the past and in the present the energy needs of the Greek people
24. How do you see the prospects of bioenergy in Greece?
25. How do you see the future of biofuels in Greece?
a) bioethanol b) biodiesel c) biogas

PART B: Energy Saving Questions

It is completed by the student

26. You are trying to save energy
27. Do you use economy lamps (noble gases, electronics)?
28. Why do you not use economy lamps in all areas of the house?
29. Do you use high-performance household appliances that save energy, ie. have a relatively low electricity consumption?

30. At what temperatures does your mother sets the washing machine?
a) 90°C b) 80°C c) 70°C d) 60°C e) 50°C f) 40°C g) 30°C h) 20°C
31. Have you heard of the energy savings achieved when the washing machine is set to a certain temperature?
32. Did you know that good thermal insulation contributes to energy saving?
33. Are the external walls of the house double where there is a fiberglass layer in between them, serving thermal insulation?
34. Is there thermal insulation on the floor and ceiling of your home?
35. Do you make sure to close the air vents in the external doors and windows of your home?

PART C: General questions

36. You reside in
37. What is your father's profession?
38. What is your mother's profession?
39. What is your father's educational level?
40. What is your mother's educational level?
41. Gender

PART D: Recap - feedback

It is completed by the student

42. What obstacles do you find there are to implement energy saving and renewable energy? (SCORE FROM 0 TO 5)

Technical 1 2 3 4 5

ignorance of those responsible 1 2 3 4 5

ignorance of the public 1 2 3 4 5

indifference of the public 1 2 3 4 5

non-acceptance of the public 1 2 3 4 5

lack of skilled professionals 1 2 3 4 5

institutional-procedural obstacles 1 2 3 4 5

costs - insufficient funding 1 2 3 4 5

Other (please specify) 1 2 3 4 5

43. Did you know that with small daily interventions you contribute to energy saving?

Do you turn off the light when it is not needed?

Do you turn off gaming machines when you're not playing?

Do you wash your clothes at the lowest possible temperature?

Do you close doors and windows when the air-condition is working?

Do you regularly maintain air-conditioning and heating system?

Do you have a solar water heater or photovoltaics in your home?

Do you move on foot or by MMK and not by car?

Other (please specify)

44. If so, what are you willing to do?

Did you know that with small daily interventions you contribute to energy saving?

Do you turn off the light when it is not needed?

Do you turn off gaming machines when you're not playing?

Do you wash your clothes at the lowest possible temperature?

Do you close doors and windows when the air-condition is working?

Do you regularly maintain air-conditioning and heating system?

Do you have a solar water heater or photovoltaics in your home?

Do you move on foot or by public transport and not by car?

Are you participating in the recycling program?

Other (please specify)

45. You want to be more informed to contribute to the effort to save energy?

WORK RELATED BURNOUT AND CLASSROOM MANAGEMENT STYLE OF PRIMARY SCHOOL TEACHERS

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ABSTRACT

The mental health of teachers is extremely important for the quality of the teaching and learning process. The literature points out that only a mentally healthy teacher can fully dedicate himself to work, participate in student activities and make the maximum effort to contribute to the student's mental health, both by his activity and by example. The unpredictability of the teacher's work is reflected in the fact that each school year represents a new, unique experience. With the progress of science and technology, as well as with social changes, these challenges are multiplying. Excessive and long-term stress at work leads to burnout syndrome, which negatively affects the mental and physical health of teachers and leaves harmful consequences for the teaching process itself. We can evaluate the teaching process through the behaviour of teachers whose responsibility is establishing order in the classroom, engaging students in the learning and teaching process, and establishing cooperation with them. The term that summarizes all these activities is called classroom management. The creation of a positive and stimulating atmosphere for learning and teaching is one of the basic indicators of good classroom management. If a teacher is exposed to excessive stress, it reduces the quality of his teaching in two ways. First, it reduces job satisfaction, affecting the time and effort invested in teaching. Second, the communication with students is not satisfactory. The purpose of the research was to establish burnout level of elementary school teachers and to investigate a relationship between the degree of burnout and the dominant style of classroom management. The professional burnout scale (MBI-NL-ES, Schaufeli, Daamen and Van Mierlo, 1994, developed according to the MBI-ES, Maslach and Jackson, 1986) was used to assess the burnout syndrome in a sample of 300 teachers. The professional burnout scale consists of three subscales, which measure three dimensions of burnout – emotional exhaustion, depersonalization, and personal achievement. To assess the classroom management style, the Inventory for Self-Assessment of the Classroom Management Style of Teachers (Đigić, Stojiljković, Janjić, 2011) was used, including interactionist, intervening and non-intervening management styles. The results show that the burnout level is related to the dominant classroom management style. Considering the results, the highlighted topics are the sources of stress in the teaching profession, as well as the variety of strategies teachers are using to overcome stressful situations. The concern of the entire educational system for the mental health of teachers is highlighted as an important topic for future research.

Keywords: *teachers, burnout at work, classroom management style*

INTRODUCTION

A mismatch between job requirements and individual abilities can cause a feeling of unused potential or insufficient competency for a job. The consequence is the same in both cases - stress. If an individual is exposed to that negative feeling for too long, it leads to mental and physical exhaustion, resulting in a syndrome known as burnout syndrome, characterized by poor work efficiency and productivity. Kristina Maslach [8] defines burnout as a multidimensional stress syndrome consisting of mental fatigue (emotional exhaustion), negative perceptions and feelings towards co-workers and a sense of minimized personal achievement.

Teacher stress is defined as an unpleasant emotional state because of the long-term, increasing, or new pressures that an individual (teacher) perceives as greater than their coping capabilities [10].

Authors [1] list various sources of stress teachers face in work conditions, functional promotion, the pressure of deadlines, conflicts with work colleagues, and the feeling that society underestimates the importance of the profession. Moreover, he states that stress in the teaching profession is also caused by students who have a bad attitude towards school, who lack motivation for work and progress, class disruptiveness, frequent reforms in education, lack of professional support, etc.

If a teacher is exposed to excessive stress, it reduces the quality of his teaching in two ways. Firstly, it reduces job satisfaction, affecting the time and effort invested in teaching. Secondly, it reduces the quality of communication with students. An effective teacher takes care of a positive atmosphere in the classroom, encourages students, and ensures the quality of teaching. Under the influence of stress, the quality of communication decreases or even completely disappears, especially if the teacher does not know how to deal with stress [10].

While studying the teacher as one of the important factors of successful education, the focus was on the personal qualities of the teacher, followed by the teacher's roles and competencies to successfully perform a complex job.

A concept that unified the role of a teacher appeared towards the end of the last century, called classroom management. According to Brophy [2], effective classroom management involves creating a positive classroom atmosphere based on the principles of a learning community. Đigić [4] defines it as creating a stimulating and safe environment.

Previous research on the topic confirmed its positive contribution to education, which is reflected in the reduction of undesirable student behaviour as

well as enabling the smooth teaching process [4]. If we look at the teacher as the organizer of the teaching process, we notice two dimensions of his behaviour: a) integrative behaviour - encouraging group members to strive for common goals, respecting each member of the group, and b) directive behaviour – pointed towards the task, including the application of specific means to achieve all learning goals and coordinate teaching activities [13]. Đigić [4] believes that good classroom management in only one aspect or one dimension is not enough to achieve high learning achievements.

This research is based on the concept of classroom management by Martin and Baldwin [6], where three key dimensions are distinguished: teaching, personality and discipline. The personality dimension characterizes the teacher's approach to the student's personality, the contribution to the development of that personality, as well as the ability to motivate the student. Moreover, this dimension refers to building a positive psychological atmosphere in the classroom. The teaching dimension refers to the teacher's capacity to create an effective learning environment. It includes components such as working materials, equipment, time and space in which learning takes place, as well as the work methods, the methods of giving instructions, and the organization of the learning content. The dimension of discipline includes the actions of teachers to maintain the discipline in the class contributing to the creation of a positive learning atmosphere. Based on how much teachers share power and control with their students in the classroom led to the differentiation of three different classroom management styles. The intervening management style, with its foundations in behaviourist theory, is based on the understanding that human is a product of external factors, and it is specific for teachers who strive to establish power and control within the classroom. The non-intervening management style is the complete opposite of the previous one. The main characteristic of this style is to leave control over the classroom to the students, trusting that students are self-determining beings and should be allowed to be guided by their inner drivers. We recognize this style in Summerhill school principles. Considering the organization of the education system, as well as the cultural characteristics of the people living in Bosnia and Herzegovina, there is not much room left for the non-intervening style of classroom management to dominate, and it has proven to be the least effective. The interactionist classroom management style is in the middle of these two extremes, where the control over the classroom is distributed between students and teachers. Teachers who apply this style show a high degree of respect for students' personalities, initiatives, and ideas, provide freedom of choice, and include students in the decision-making process, but they also guide them and set necessary boundaries. This style has its foundation in humanistic psychology. In previous research, this style has proven to be the most successful.

RESEARCH METHODOLOGY

The goal of this research was to determine if there is a connection between the burnout level and the dominant classroom management style. The sample

included teachers working in primary schools in Bosnia and Herzegovina. The research was conducted on a random sample of 300 teachers in 2019.

Instruments

The professional burnout scale (MBI-NL-ES, Schaufeli, Daamen and Van Mierlo, 1994, developed according to the MBI-ES, Maslach and Jackson, 1986) was used to assess burnout syndrome. The scale consists of three subscales, which measure three dimensions of burnout at work – emotional exhaustion, depersonalization and personal achievement.

Emotional exhaustion refers to the reduction of emotional reserves. It is manifested by a strong feeling of fatigue and loss of emotional energy. When such a condition becomes chronic, teachers are no longer able to perform their duties, to be precise, they are not able to dedicate themselves to students. *Depersonalization* indicates the development of negative attitudes (or cynicism) towards people with whom one cooperates. It represents the internal, interpersonal context of the burnout syndrome and manifests itself through negative behaviour towards students, colleagues, parents and superiors. *Personal achievement* refers to an individual's sense of professional competence. Low perception of personal achievement indicates a decrease in the feeling of professional competence, and it is reflected through a negative expression of self-evaluation, which can lead to a loss of self-esteem and depression, possibly causing a complete decline in the quality of teaching. The reliability of the subscales examining the burnout syndrome at work was checked. The emotional exhaustion and personal achievement subscales have an internal consistency coefficient above 0.70, while the depersonalization scale showed low reliability of 0.53.

The Classroom Management Inventory, written by Gordana Đigić and Snežana Stojiljković (2009), was used to examine classroom management styles. The theoretical basis of the developed Self-Assessment Inventory is the model of Martin & Boldvin, 1993, which distinguishes three styles of classroom management: intervening, interactional, and non-intervening. Within non-interventionist classroom management style, the teacher has minimal control because approach is based on the belief that person has their own needs that tend to express and accomplish them. Intervening classroom management style is based on the belief that the external environment (people and facilities) affects human development in a certain way, therefore that the teacher tends to achieve complete control. interactionist classroom management style is focused on what an individual does in order to change the environment, as well as how the environment affects the individual. In this case, control over the situation in the classroom is shared between teacher and students. The questionnaire formulates 30 description items for each of the three styles of classroom management. The descriptions of teachers' professional behavior are related to 10 different teaching situations and three descriptions are formulated for each of these situations - one

for each style. Reliability was determined by Cronbach alpha coefficient. The Cronbach coefficient for the intervening style is $\alpha = .722$, for the interactionist $\alpha = .861$, and for the nonintervening $\alpha = .787$

RESULTS AND DISCUSSION

First, we examined the correlation of the burnout level with measures of expressiveness of classroom management styles and afterwards with measures of expressiveness of teachers' styles within each dimension separately. Given that the depersonalization subscale did not show sufficiently high reliability, we did not consider the results obtained on this subscale. Instead, we used the degree of emotional exhaustion and the degree of personal achievement as indicators of the burnout level.

Table 1. Correlations of classroom management styles (total scores) with the burnout level in teachers

Classroom Style Management	Emotional exhaustion	Personal achievement	Depersonalization
<i>Intervening management style</i>	-.041 (.241)	.088 (.063)	.160 (.003)
<i>Interactionist management style</i>	-.435** (.000)	.582** (.000)	-.141 (.007)
<i>Non-intervening management style</i>	.305** (.000)	-.271** (.000)	.379 (.000)

Based on the results (Table 1), the degree of emotional exhaustion shows a significant correlation with the interactionist style ($r=0.000$) and the non-intervening classroom management style ($r=0.000$). The correlation with the interactionist style is negative, while with the non-intervening classroom management style, the correlation flows in a positive direction.

The sense of personal achievement also shows a significant correlation at the 0.01 significance level with the interactionist ($r=0.000$) and non-interventionist classroom management style ($r=0.000$) at the 0.01 significance level. The correlation is positive with the interactionist management style, while it is negative with the non-interventionist management style.

Table 2. Correlations of classroom management styles (teaching dimension) with the burnout level in teachers

Classroom Style Management	Emotional exhaustion	Personal achievement	Depersonalization
<i>Intervening management style</i>	-.010 (.432)	.078 (.088)	.231 (.000)
<i>Interactionist management style</i>	-.314** (.000)	.502** (.000)	-.055 (.169)
<i>Non-intervening management style</i>	.209** (.000)	-.135** (.010)	.386 (.000)

Table 3. Correlations of classroom management styles (personality dimension) with the burnout level in teachers

Classroom Style Management	Emotional exhaustion	Personal achievement	Depersonalization
<i>Intervening management style</i>	-.0.03 (.476)	.045 (.217)	.150 (.005)
<i>Interactionist management style</i>	-.432** (.000)	.371** (.000)	-.250 (.000)
<i>Non-intervening management style</i>	.388** (.000)	-.273** (.010)	.347 (.000)

Table 4. Correlations of classroom management styles (discipline dimension) with the burnout level in teachers

Classroom Style Management	Emotional exhaustion	Personal achievement	Depersonalization
<i>Intervening management style</i>	-.0.083 (.077)	.128* (.013)	-.077 (.091)
<i>Interactionist management style</i>	-.417** (.000)	.517** (.000)	-.171 (.001)
<i>Non-intervening management style</i>	.257** (.000)	-.260** (.010)	.284 (.000)

When observing the correlations within the individual dimensions of class management (teaching, discipline, personality), the situation is very similar.

The degree of emotional exhaustion shows a slight deviation in the teaching dimension (Table 2) within the interactionist style. Namely, the level of significance is the same ($r=0.000$), but the correlation coefficient is lower and shows a low correlation, while the dimensions of personality (Table 3) and discipline (Table 4) show a correlation of medium intensity. The direction of the correlation is negative.

When looking at the sense of personal achievement according to the dimensions within each style, there is a statistical significance ($r=0.013$) with the discipline dimension (Table 4) within the intervening classroom management style. The correlation coefficient is positive. Within the interactionist style, the feeling of personal achievement shows a low connection with the dimension of personality (Table 3), while with the dimension of teaching (Table 2) and discipline (Table 4), it shows a connection of medium intensity. Statistical significance is the same in all three dimensions ($r=0.000$).

The correlation with the non-intervening classroom management style and the sense of personal achievement shows slight deviations when it comes to the teaching dimension (Table 2). The statistical significance is slightly lower ($r=0.010$) compared to the other two dimensions (0.000), and it has a lower intensity, compared to the dimensions of personality (Table 3) and discipline (Table 4). The direction of the correlation is negative.

Explaining the non-intervening style according to the dimensions, we can say that within the *teaching dimension* of teachers, dominated by this style, it is characterized by a frontal form of work without paying attention to the students reactions. Within the *personality dimension*, teachers are characterized by disinterest and a formal attitude reduced exclusively to working on the teaching material, without any introductory, relaxing conversation and interest in the needs of the students. Moreover, when faced with a lack of discipline in the class, teachers do not react but continue with the lesson, shifting the responsibility to the students if the required material is not well mastered [5].

Research has shown that teacher work engagement is negatively related to burnout syndrome, which means that a teacher who is less engaged at work shows a greater burnout syndrome [9]. Therefore, the lack of motivation, energy and persistence and the reduction of work capacity to a minimum, where the teacher only formally performs his work without taking into account the needs, interests and capacities of the students, leads to a greater degree of emotional exhaustion and a low sense of personal achievement. In summary, the results of this research showed that teachers dominated by a non-intervention style of classroom management have a higher risk of burnout at work.

Teachers dominated by the interactionist style of classroom management respect the student's personality, are polite in their communication and consider the needs of the students. They try to use different methods and activities in their work to engage and motivate all students during classes. Moreover, when faced with indiscipline in class, they use their own and the students' capacities to solve the problem and return the students to the working atmosphere as soon as possible [5].

Studies exploring the teacher's self-efficiency show that teachers who involve students in teaching activities and solve the difficulties they encounter

during the teaching process have a higher degree of self-efficacy [11]. This type of teacher is similar to the teacher with a dominant interactionist classroom management style. The efficiency of the interactions style compared to others confirms the research of Đigić [4], concluding that, by checking the effectiveness of classroom management styles according to this division, the interactionist style is singled out as the most effective. In this classroom management style, in addition to the students, the teachers are also satisfied with the class atmosphere. Moreover, it proved to be stimulating because the students achieved better learning results. Other research has shown that teachers with a high degree of self-efficacy show a lower degree of burnout at work [3].

CONCLUSIONS

Considering that the burnout level determines the available capacities of teachers and that teachers with a high degree of burnout have greater difficulties in maintaining control in the classroom and establishing quality interpersonal relationships with students, this research started from the hypothesis that there is a connection between the burnout variable and class management variables.

Based on the results, we can conclude that there is a relationship between burnout level and the teacher's classroom management style. Teachers with a high burnout level (high emotional exhaustion and low sense of personal accomplishment) show a tendency towards a non-interventionist management style, while teachers with a lower burnout level (low emotional exhaustion and a high sense of personal achievement) show a tendency towards an interactionist management style. The correlation between the intervening style and the burnout level was not statistically significant.

We conclude that teachers who are dominated by an interactionist management style have a lower risk of burnout.

In many previous studies, classroom management is one of the key factors responsible for effective teaching [7], as well as very important for the achievement of desired academic achievements of students [12]. This research has shown that it is one of the factors that affect the mental health of teachers, which is extremely important for the quality of the learning and teaching process.

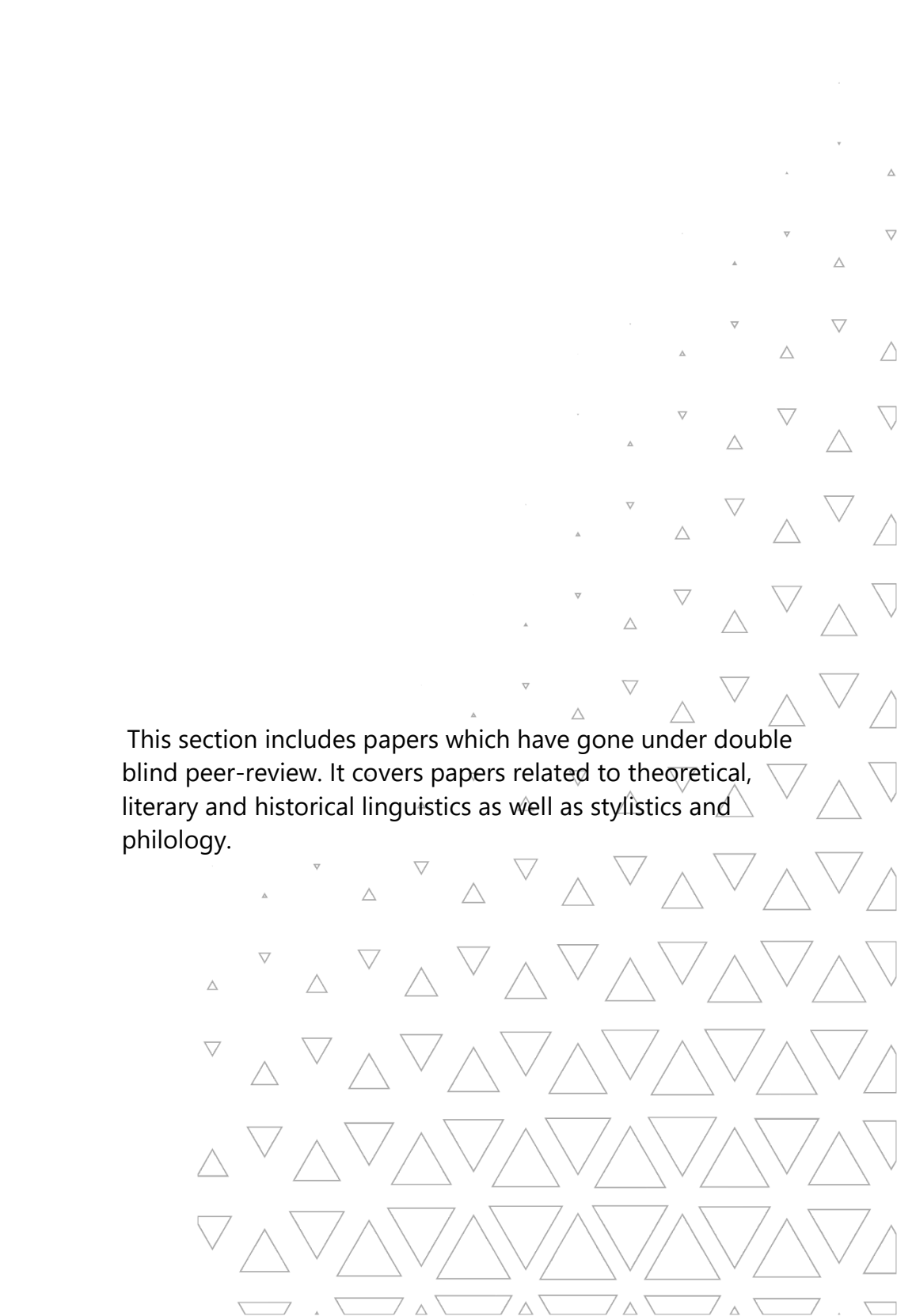
The implication of this research is the education of teachers in the field of classroom management and emphasis on the application of the interactionist style both for the mental health of teachers and for the improvement of the educational process in general.

REFERENCES

- [1] Brkić, I., Rijavec, M. (2011). Izvori stresa, suočavanje sa stresom i životno zadovoljstvo učitelja razredne i predmetne nastave. *Napredak 152 (2)*, pp 211 – 225.
- [2] Brophy, J. (2011). *Teaching*. International Bureau of Education, Geneva.
- [3] Brouwers, A. & Tomic, W. (2000). A longitudinal study of teacher burnout and perceived self-efficacy in classroom management. *Teaching and Teacher Education*, Vol 16, No 2, pp 239-253.
- [4] Đigić, G. (2017). Upravljanje razredom: savremeni pristup psihologiji nastavnika. Filozofski fakultet, Niš.
- [5] Đigić, G. & Stojiljković, S. (2011). Classroom management styles, classroom climate and school achievement. *Procedia - Social and Behavioral Sciences No 29*, pp 819 – 828.
- [6] Martin, N. & Baldwin, B. (1993): An Examination of the Construct Validity of the Inventory of Classroom Management Style, Paper presented at the Annual Conference of the Mid-South Educational Research Association, New Orleans, LA.
- [7] Marzano, R.J. & Marzano, J.S. (2003): The key to classroom management. *Educational leadership*, No. 9, pp 6-13.
- [8] Maslach, C., Schaufeli, W. B., Leiter, M. P. (2001), Job burnout. *Annual Review of Psychology*, vol.52, 397-422.
- [9] Hakanen, J. J., Bakker, A. B., i Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43(6), pp 495–513.
- [10] Smailović, S., Murić, N., Talović, B. (2014). Osobine ličnosti i stres na poslu kod nastavnika. *Univerzitetska misao-časopis za nauku, kulturu i umjetnost Vol 13*, pp 132-155.
- [11] Usher, E. L., & Pajares, F. (2006). Inviting confidence in school: Invitations as a critical source of the academic self-efficacy beliefs of entering middle school students. *Journal of Invitational Theory and Practice*, Vol 12, pp 7–16.
- [12] Wang, M.C., Heartel, G.D. i Walberg, H.J. (1993). Toward a knowledge base for school learning. *Review of Educational Research*, vol. 63, No.3, pp 249-294.
- [13] Watkins, C. & Wagner, P. (2000): *Improving school behaviour*. London: Paul Chapman Publishing.

Section

LANGUAGE AND LINGUISTICS



This section includes papers which have gone under double blind peer-review. It covers papers related to theoretical, literary and historical linguistics as well as stylistics and philology.

LITERARINESS IN PIERO BIGONGIARI'S CONCEPTUALIZATION OF VISUAL ARTS

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ABSTRACT

The present paper determines textual and visual representational correspondences between the artistic domains of literature and visuality in the ekphrastic interpretation of writer Piero Bigongiari, through which are defined and illuminated various aspects of figurality in the resonance with his own poetics, in addition to outlining the philosophical vein permeating the discourse in its arborescent structuring. Since in the physiognomy of Bigongiari's writings is inscribed interartistic transposition forming its constant matrix, in this paper the focus is established on fruitful comparisons due to equivalences between two fields of art, together with exemplifying the resulting interdisciplinary convergences, which then become usable in various social contexts, bringing to innovative theoretical philological and cultural insights. In analyzing the modalities according to which takes place literalization as the transformation of pictorial fact into poetical stance, highlighted are the author's volumes in which the guiding threads are constituted by art criticism in relation to literature. Within the corpus of Bigongiari's texts, the double essayistic and journalistic register will therefore be explored, maintaining an elaborate literary expression, and having cultural allure. At the same time, derivational forms such as diaristic notes will be underscored, deducible from intrinsic discursive traits. Literary cognitions therein are characterized by going beyond interart suggestiveness and giving immediately a metaphoric reading of the paintings. In such light will be observed Bigongiari's illustration of salient iconographic trends, by taking into consideration also his observations on pictorial tendencies and aesthetic concepts imbued with personal reminiscences and remarks belonging to the sphere of science. Artworks as written paintings of the real will thus be elaborated, pointing to the character of art in its pluridisciplinary nature in Bigongiari's literary vision. Likewise, Bigongiari's interest in the symbology of the paintings will be traced to his poetry and correlated to his translational activities. From that perspective, the poeticity of Bigongiari's study of visual arts will be explicated. Concomitantly, the ways in which lyrical imagery and self-reflexivity get reconceptualized within his literary prosastic production will be discerned, inducing further literary typification, contributing modern art historical examples such as symbolist lyricism evocative of cubism or impressionism with artistic relays regarding abstract art and art informel.

***Keywords:** Piero Bigongiari, literary thematization, expressiveness, pictorial aspects, interartistic perspective*

INTRODUCTION

The present paper aims to shed light on the modalities according to which the writer Piero Bigongiari conceptualizes inventive research in the figurative sphere, by delineating at the same time its interweaving with literary aspects. In Bigongiari's prosastic discourse and poetry there are numerous references to the realm of literature at the intersection with visual arts. In that sense, the urge to write is also literary, since the author searches for such composite analogies in analyzing the artworks. Furthermore, at the level of structural features there is a mixture with the essayistic genre, as well as the treatise component for what pertains to the history of art. His writing is also impregnated with personal reminiscences and divagations, inviting to consider certain discursive elements apt to develop a vision idoneous to that of the artists, as regards the nature of writing conceptually correlated with the description of the pictorial contents. In particular, concerning the style of diaristic nature, as will be deduced subsequently from Bigongiari's literary works.

RESULT

As author of numerous critical essays he creates the editions dedicated to art matters, *Il Seicento fiorentino* (1975; *Florentine Seventeenth Century*) [2] [14], and *Dal Barocco all'Informale* (1980; *From Baroque to the Informal*) [3], in which he tackles productively the intricacy of verbal and visual, exploring its expressive modalities both in the literary and figurative sense.

The volume of literary criticism *La poesia pensa. Poesie e pensieri inediti. Leopardi e la lezione del testo* (1999; *Poetry Reflects. Unpublished Thoughts and Poems. Leopardi and the Lesson of the Text*) [5], partially also belongs to the intersected domains of visuality and literature since, among its prominent traits, it thematizes the equivalences between these two artistic fields, regarding the transformation of the pictorial fact into poetical stance.

It is also characteristic of these writings an ekphrastic reflection on the semantic value of the figuration that determines the narrative structure, as will be further highlighted. He furthers these ideas in his salient 1994 work *Taccuino pittorico* (*Pictorial Notebook*) [4], having visuality as the thread of the volume and structurally containing essays of figurative criticism. As will be explicated in the examples of the essays that will be analyzed in this paper, the author as the narrator gives an immediately ekphrastic interpretation of the paintings, as a meditation on the viewing and reception of art [7]. It sometimes creates the sensation as if the painter were writing the image.

Likewise, it is a volume whose reflective style represents an emblematic case in so far as Bigongiari's criticism on works of art herein possesses the diaristic character, as an ulterior complementary category which could be constituted from the writers' diary notes, set up as an exercise of literary type. Exemplarily, this

book bears resemblance to Elio Vittorini's *Diario in pubblico* (1957; *Public Diary*) [9] [13] [15], since it is structured in such a way as to include in the expository plan the episodes centered on figurative syntax. Bigongiari's inclination to the diaristic thought can furthermore be characterized as having herein the nature of a notebook, also of a travel notebook, once published in volume, as defined by the author [4], and containing intersubjectively: "reflections, emotions, discoveries or confirmations of historical thought" in the "great fresco of the human operating" [4]. It refers to the intent of his study to draw up a notebook with a continuous, unitary character, although composed of essays conceived on various occasions which in some cases contain an indication of the month and year, and in which he also addresses the reader directly, for instance in a passage as "friend reader" [4], or exemplarily, by inviting the reader, to visit an art exhibition: "may our reader not miss such unrepeatable opportunity" [4].

There are indeed numerous references to the exhibitions whose background and subject are described in detail. That goes to show how pertinent the diary aspect is. Furthermore, it can be deduced from an intrinsic characteristics of the text, regarding diaristic references in the paintings described, as when dealing with the High Renaissance artistic production of Lorenzo Lotto, he introduces an intertextual parallel, by becoming reminiscent of his account book and diary *Libro di spese diverse* (1538-1556; the first edition of the book dates back to 1895 when Adolfo Venturi, an Italian art critic, published the manuscript under the title *Il libro dei conti* or in English *The Book of Accounts*, subsequently the other editions bearing the first mentioned title were made) [11].

In such regard, the component of autoreferentiality should be mentioned as being part of Bigongiari's critical discourse. For example, in an essay dedicated to the visual imagery of the contemporary painter Ennio Morlotti, bearing the title *Le rose di Morlotti (Morlotti's Roses)*, the author briefly self-reflexively connects this pictorial motif to his own book of verses *La figlia di Babilonia (The Daughter of Babylon)*, the first he wrote, published in 1942. In this poetic title it ought to be noted the echo of Psalm 137, and the same idea reappears in a poem by the mystical poet St. John of the Cross. At the same time, Bigongiari draws inspiration from a quote by William Shakespeare accompanying one of his own translations of Pierre de Ronsard, as a literary correlative of a figurative nucleus by Morlotti. Showing interest in the pictorial atmosphere of his paintings also in another essay dedicated to the artist Ennio Morlotti, Bigongiari goes to the thematics of the informal art, of which he recounts in the following way: "[...] the form drew from the original chaos, that is from its origins in which it was something still united with all other things, all the other possible occurrences, its own impulse towards its own unknown meanings" [4].

Before analyzing more specifically Bigongiari's critical concepts dedicated to the topic of the informal, ought to be discerned central aspects which constitute its core in the figurative and also literary domain. It is a term whose provenance

is from figurative arts (painting, sculpture), and also architecture, and this matter subsequently enters the poetic field. Informal art movement is another example in the modern Italian cultural panorama, after metaphysical painting and the current of magical realism, to which can be attributed the importance also in the literary sense, or put otherwise, of a direct influence of visual arts absorbed on the literary ground, and resulting inextricably with a new phenomenon.

The informalist practice is a movement of abstract art from which is omitted an explicit logical content (or these logical associations are posterior and depend on individual sensitivity), while the imaginative and affective side of the artwork remains present. A non-formal, or not yet formalized, art is in question, remained implicit, in which the sense of form, central in every work of art, does not arise disjunct from reality. Differently than much of artistic production (and that concerns particularly the figurativism, or said otherwise, the figurative tendency within the visual arts) in which the form is created based on a specific pre-existent idea, and consequently the final result is a representation of the reality, in this case, the artist creates the sign set in motion and art becomes an action field. That is to say, the form is generated from the gesture and action during the painting, and this gesture can also be liberatory. In that regard, it ought to be observed that the attention to the matter (which is informous, deprived of the precise form) in the creation of a painting is also typical. Besides the spots of color, in some cases the material becomes the true protagonist of a work of art.

In the wording of Bigongiari, referring here in particular to the critical essay dedicated to the visual arts, *Ut poesis pictura*, in the volume *La poesia pensa (Poetry Reflects)*, which implies a reversal of the Horatian saying 'ut pictura poesis', indicating the pictorial expression as a counterpart of poetry, the semantic range of the term informal suggests it is a painting "of sign, that is, no longer arising from the drawing but from the transfused impulse of the hand, thus overturning the compositional priorities" in which is privileged "conceptually meaningful over the meaning" [5]. The text continues with the hint to the materiality of this figurative approach. Whereas in the work of art was traditionally always the tendency "to hide its elaboration [...] in the *ne variatur* of the meaning reached, in the current conceptuality of art it is indeed the material variation that prevails over its absence of meaning, once the 'reason' of the form was refused in the performance" [5].

Bigongiari connotes the informal art in his diary notes contained in *Pictorial Notebook*, regarding the energy moving the informal, by defining the formless matter as what comes before the form, or put in other words, as a necessary and primordial aspect of the form, as what precedes it. This pictorial idiom is close to the American current of abstract art called *Action Painting*. Bigongiari comments on an exhibit by Jackson Pollock, as its representative, in an essay centered on his figurative oeuvre, whose role he considers to be of primary importance, expressing the idea of an organic space which at the same time reflects the archetypes. In the poetic sense, in the realm of literature, the informal

would mean that the accent is not put so much on the meaning as on the use of the word; while in his diaristic notations Bigongiari also analyzes conceptual art, and mention is made of abstractionism of Wassily Kandinsky.

Concomitantly, lyricism is exemplified in the passages of this book in which, elaborating on the details of the iconographic compositions, which represent a specificity of his critical approach to figurality, and thus seeking to define certain poetic-aesthetic aspects that he considers important in regard to the pictorial representation, in the interest he has for the symbology of the paintings, Bigongiari brings as illustration those artworks directly correlatable to lyric register. For example, when Bigongiari elaborates on the impressionism of Claude Monet, he introduces the category of poetic symbolism, making recourse, among other, to lyrical symbolicity of Stéphane Mallarmé, or to Guillaume Apollinaire whose art in the domain of the poetical word is permeated with elements of cubism. Moreover, he considers that Monet's painting could have at least partially influenced Kandinsky's abstraction and the art informel. This is due to the fact that Monet's sign is perceived as an "autonomous creative substrate of vision" [4].

The impressionism that the author considers in some way in syntony with the discoveries of quantum physics (in such regard, thoughts from the sphere of the sciences are treated), on the grounds that he considers it is a search for the sign itself as an atom in motion, or put otherwise, it seeks to capture the luminous essence, as a perceptual lightning: "It is that the vision moves, the vision 'occurs', revealing the interaction of space-time" [4]. So, in physics time begins to be considered as the fourth dimension of space. It is an invention then applied to the pictorial vision of the cubists, such as the simultaneous perception of the objects in its various parts.

Similarly, such pictorial search is contradistinctive of the palette of Paul Cézanne, like in his figurative representations of Mont Sainte-Victoire, in depicting chromatically the spots and the luminous component, that is, the pictorial expression of light. So remarks Bigongiari with reference to Cézanne: "And it is that Cézanne passes, from reality as a metaphor to be realized, to a metaphor to be realized as a reality" [4].

Furthermore, Bigongiari conceptually refers to the category of realism (persistent in both the figurative and literary fields), which again represents a direct literary graft through which an aspect of figurativism is defined. He also portrays the modern figurative oeuvre of Giorgio Morandi.

Franco Francese, a contemporary painter whose work can also be reframed from a literary perspective due to his *Diario intimo* (2002; *Intimate Diary*) [10], shows thematic proximity to the topics treated essayistically by Bigongiari. In his diaristic notations, F. Francese thematizes the informal painting which interests him because it represents the historical connections between situations, events and consciences, and there is inherent, as he suggests, the emotional-subjective side

together with the idea of the art as a testimony of truth. Within his pictorial poetics, the artist also absorbs some expressive impulses coming from the area of informalism (also defined as the "autonomy of the form"), as well as from American abstract expressionism, by giving, for instance, an interpretation of Pollock's pictorial approach. Likewise, he reflects on abstract painting as the development of plastic fantasy, making reference in another context to Kandinsky. He also introduces a reference to Cézanne and his figural construction through geometricity, and many other artists whose names were evoked (Morlotti, Morandi). As afore-explained, in the poetics of the informal the pictorial expression begins to be perceived as a sign, now having all of its autonomy of signification, as stated also by F. Francese, which also means that it involves a value which is its own making, constructing itself. It is significant in such sense the attention that Monet brings towards the registration of the slightest infractions, changes of light, phenomenal attitudes, and how they modify the impression given by the painted object or depicted figure.

In his critical essay on the pictorial approach of Man Ray, Bigongiari analyzes, also in this case, an expressive device concerning figurative disposition which concomitantly represents the application of a literary procedure deriving from modern poetry, or otherwise put, that of unusual combinations through which the poeticity is obtained. More specifically, Man Ray takes as the initial point in his artistic construction the idea of Lautréamont's metaphoric randomness (contained in his humorous remark on casual bringing closer of the raincover and the sewing machine potentially creating the poetic effect), which means that the figurative conception is lyricized. Analogous ideas are deducible from the interpretation of Renato Birolli, painter of figurative artistic expression, whose pictorial opus is in part also constituted by the paintings of an abstract signification. In his volume *Taccuini* (1960; *Notebooks*), Birolli thematizes Lucio Fontana and Kandinsky, considering the latter as immersed in a moral reality, "that which suggests the invisible to appear" [1] [6] [8].

As noted above, within Bigongiari's lyric production there are aspects evocative of the so-called informal in poetic sense, which are conveyed through his verses, envisioned with a tendency towards expressive experimentation. It will have compositional resonances in the tangled, complex way of conceptualizing the content in Bigongiari's verses, as well as in the focus placed on the relationship meaning-signifier, also on the basis of the structuralistic and semiological contributions of the period.

In those same years, literary procedures show linkage to the notions acquired with semiology, anthropology, sociology or structuralism. Observing closely, as for poetry, reaching back to 1939 the well-known critic Oreste Macrí wrote about the "non-formal reasons for poetry" anticipating future developments [12]. No differently than painting, here the informal refers to the conviction of the insufficiency of a solely one well-defined form. Here too the figuration is elusive and this translates into the problematization of the relationship, or into the

tendency to probe the chaos (what is tangled, complex). In the case of Bigongiari's poetics of the informal, he puts "into action" many signs. On the other hand, this term in Italy is also used by neo-avant-garde poets. In this context the exemplary text is *Laborintus* by Edoardo Sanguineti (1956), which represents a certain type of informal writing. However, unlike the authors of the informal such as Bigongiari who try to overcome chaos, the attitude of the exponents of the neo-avant-garde is different. Desamantization is typical, that is, the sign doesn't allude to any referent. The poet thus renounces the referential relationship, and from this arises a labyrinthine sensation. It is not a question of nihilism though, but rather of a search for plurisemantic value.

CONCLUSION

Bigongiari comments on the figurative aspects such as pictorial tendencies and aesthetic concepts, as well as the central ideas within the iconographic production of the painters he writes about. On the ground of figurative-literary correspondences in Bigongiari's discursive style, regarding iconographical details in his ekphrastic characterizations, the sensation is created as if the visual artists were writing, explicating themselves with the depicted words or the written paintings of the real. It points to the character of art as the 'scriptura picta', where the text of reality becomes the pretext for painting. The reference to the literary component is thus constant, and in the analogous context should be evoked the philosophical vein permeating the discourse.

Besides creating prose literature, Bigongiari is also a prolific poet. Together with the unfolding of the narrative in the interdisciplinary intertextual sense, due to the transformational character of Bigongiari's understandings of polyvalent nature, is therefore comprised in the present research paper particularly the informal dimension of his poetry.

REFERENCES

- [1] Baratta G., Taccuini di Birolli, Corraini, Mantua, Italy, 1996.
- [2] Bigongiari P., *Il Seicento fiorentino*, Rizzoli, Milan, Italy, 1975.
- [3] Bigongiari P., *Dal Barocco all'Informale*, Cappelli, Bologna, Italy, 1980.
- [4] Bigongiari P., *Taccuino pittorico*, Moretti & Vitali, Bergamo, Italy, 1994, pp. 13, 76, 93, 101-103, 148, 184, 193.
- [5] Bigongiari P., *La poesia pensa. Poesie e pensieri inediti. Leopardi e la lezione del testo*, edited by E. Biagini, P.F. Iacuzzi and A. Noferi, Olschki, Florence, Italy, 1999.
- [6] Birolli R., *Taccuini 1936-1959*, edited by E. Emanuelli, Einaudi, Turin, Italy, 1960.

[7] Elsner J., Introduction. *The Genres of Ekphrasis*, Ramus, Cambridge University Press, United Kingdom, vol. 31/issue 1-2, 2002, pp. 1-18.

[8] Fagone V., *L'arte all'ordine del giorno. Figure e idee in Italia da Carrà a Birolli*, Feltrinelli, Milan, Italy, 2001.

[9] Falaschi G., *Diari, zibaldoni e taccuini, Manuale di letteratura italiana. Storia per generi e problemi*, edited by F. Brioschi and C. Di Girolamo, Bollati Boringhieri, Turin, Italy, vol. 4, 1996.

[10] Francese F., *Diario intimo 1935-1995*, edited by F. Porzio, Skira, Milan, Italy, 2002.

[11] Lotto L., *Il "Libro di spese diverse" (1538-1556) con aggiunta di lettere e d'altri documenti*, edited by P. Zampetti, Istituto per la Collaborazione Culturale, Venice, Italy, 1969.

[12] Macrí O., *Esemplari del sentimento poetico contemporaneo*, Vallecchi, Florence, Italy, 1941, pp. 11-39.

[13] Piccone Stella S., *In prima persona. Scrivere un diario*, Il Mulino, Bologna, Italy, 2008.

[14] Raimondi E., *Il colore eloquente. Letteratura e arte barocca*, Il Mulino, Bologna, Italy, 1995.

[15] Vittorini E., *Diario in pubblico*, Bompiani, Milan, Italy, 1957.

SLOVAK READERS AND THEIR PREFERENCES REGARDING PREMIUM ONLINE NEWS

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ABSTRACT

The issue of charging for online news content and digital subscriptions is currently an important topic, as it represents one of the sources of financial income of media outlets. Despite the fact that web news represents an important information source, which was also confirmed during the pandemic, not all recipients are willing to pay for the content. The study deals with the issue of charging for news content on the Internet. It presents the initial results of the quantitative research of the recipients, their preferences, payment options and also it explains the reasons for which readers are willing to purchase a subscription. The aim of the research is to refer to the issue of paywalls from the audience's perspective, and also to define the basic traits that unite readers, who are willing to pay for online news content. The questions in the questionnaire focused on the level of willingness to pay for online news, the motivation to pay, but also the reasons for refusing a subscription.

Keywords: *charging for online news, paywall, premium online news, reader*

INTRODUCTION

In previous years, publishing houses received direct remuneration for the journalistic content they produced. Anyone who wanted to be informed bought a newspaper for a set price, which, in addition to advertising, formed an essential part of the stable income. However, the advent of the internet and its ubiquity changed everything [1]. Recipients suddenly only had to open a website, click on the desired journalistic article and read it for free. Naturally, this led to an exodus of print newspaper readers to news websites, which, especially from the mid-1990s onwards, began to increase rapidly. However, the outflow of readers also meant an outflow of sales finance, and so publishers began to face a significant problem - how and from what to finance editorial offices if advertising was not a sufficient source of revenue [2]. To keep media companies running, publishers have come up with more or less successful models of charging for their content, some of which have established themselves and spread around the world [3]. This paper discusses payment gateways, the willingness of recipients to pay for online content, but also the positives and negatives that payment gateways bring with them (from the recipients' point of view). The main objective is to present the

functioning of payment gateways in the Slovak online journalistic environment on the basis of a questionnaire survey of the audience.

PAYMENT GATEWAYS AND THEIR USE IN CONTEMPORARY ONLINE JOURNALISM

A paywall is a revenue strategy in which several sections of a site, or an entire site, are locked behind a payment obligation. In practice, it is a blocking of content that can be deactivated by paying a set financial fee or by registering for the website in question. A paywall is content blocking software, usually tied to the obligation to activate a digital subscription. The website will then provide recipients with access to all or a certain set of previously locked content, which may include exclusive content for paying customers or access to the publisher's mobile app. Some subscription types also provide an advertisement deactivation feature [4]. Meanwhile, each portal uses a different monetization method, and the different types of payment gateways can be summarized into basic models due to the similarity of certain features. The three most commonly perceived models of content monetization are the measurement model, the freemium model and the hard payment model. In the measurement model, online media may or may not require users to register. They then record the number of posts that a recipient opens, which can be read in full by that user. If he or she exceeds the limit of free content, he or she must pay a subscription fee. The limit on the number of open sessions is usually set on a daily or monthly basis. The "freemium" or premium model - in this case, some of the texts are free, which is mainly agency news, short reports, news, etc., which are usually fully accessible to all users. Revised reports, extended reports, commentaries and more are already part of the subscription. Recipients are required to set up an account and then pay a monthly, semi-annual, annual, or biennial subscription fee [5]. The full-payment model, or hard payment gateway, means that a user must have an active subscription in order to read most of the site's content. Only a few introductory lines are usually freely available in the posts. At the same time, the online portal often features exclusive content, extensive reports that the reader will not find on other portals [6]. Of course, some portals also use specific forms of monetization. According to research by the Reuters Institute, 14% of recipients pay a subscription to a news site in 2022 [7].

GOALS AND METHODOLOGY

The research was conducted via an online questionnaire survey, implemented from December 1, 2021 to August 31, 2022. We hosted the questionnaire on the Google Forms platform and distributed it via the Internet. The intention of this research was to find out how recipients perceive the issue of payment gateways / paywalls, whether they are or have been active subscribers of online news, what is their biggest motivation in paying for news, or what discourages them from subscribing. However, within the questionnaire, we also investigated where respondents most often receive news from, whether they use the Internet or social

networks for this purpose, and we were interested in whether they use a computer or a mobile phone to read news.

The initial part of the distributed questionnaire included identification questions about the respondent's age, level of education, employment status, i.e. whether he/she is a student, employed, unemployed, a parent on maternity or parental leave, self-employed, or retired.

The main part of the questionnaire was designed in several sections. These were opened to the respondent after marking the selected answer. Thus, a different thread was displayed for a respondent who had an active and paid subscription, another for a respondent who once had an active subscription but no longer had one at the time the questionnaire was distributed. Another was displayed for a respondent who had never had an active subscription but planned to purchase one, and a separate thread was available for a respondent who did not plan to purchase a subscription. With this branching structure, we purposely wanted to include all types of recipients, to get valuable answers about the audience's behaviour and their relationship to monetized content.

As of August 31, 2022, 275 respondents had completed the survey. Of these, 64.4% (177) were female and 33.8% (93) were male. Five respondents declined to state their gender. The largest number of responses, 184, came from respondents aged 18-24 years, representing 67% of the participants. Forty-one respondents were aged 25-34, 19 were aged 35-44, 15 were aged 45-54, 10 were aged 55-64, and we recorded three participants each aged over 65 and under 18. Our questionnaire was predominantly completed by respondents with secondary education with a high school diploma (180), the second most represented group was those with a first degree (43), and those with a university degree with a completed second degree were 33. 184 respondents were students, 59 were employed people, and 19 were tradesmen or entrepreneurs. Among the respondents there were also pensioners or parents on parental leave.

RESULTS

Sources of information

As many as 87.3% of respondents (240) indicated that they most often get information about current events from the Internet, 13 respondents indicated that they most often watch television for this reason, and ten respondents indicated that they do not pay attention to current events. Of these, six indicated that they were not interested in current affairs, three expressed a lack of trust in the media and one indicated that current affairs had a bad effect on his/her mental health. However, of the 265 respondents who pay attention to current affairs, as many as 258 indicated that they follow news on the internet. It did not matter whether the internet was their primary source or not. Seven do not read news on the Internet at all, mainly because of distrust.

Of the remaining 258 respondents who do read news on the Internet, as many as 209 of them identified the fact that they can determine for themselves which news they read as a motivation. Respondents were given the opportunity to indicate a number of motivations that they identify with as recipients. The second most frequent motivation (144 responses) was that the news on the Internet is always the most up-to-date. The third most reported option (113) was that news content is always available. A relatively large proportion of respondents (75 - 29.2%) indicated that they do not keep up with other media's news coverage, and also 71 people indicated that news coverage on the Internet has the advantage of including discussion and commentary. One-fifth of the respondents are simply interested in news on the Internet.

Interestingly, as many as 32 respondents, or 12.5%, said that they just read the headline quickly on the Internet and that is enough for them. Only fourteen (5.4%) trust the news on the Internet.

Two findings are very significant in our study, namely, 10.9% (27) of the respondents are not willing to pay for newspapers and 8.9% (23) do not like to read newspapers.

The level of interaction could be indicated by the respondents by marking multiple choices. More than half of the respondents said they do not engage in discussion, and a third do not even express their opinion using emoticons. However, 70 respondents (27.2%) use emoticons. Only 10% of the respondents rarely express themselves in a discussion under a shared message on a social network, and just under 7% share messages through their user account.

Among Slovak news websites, the most frequent news sources for respondents are *www.aktuality.sk* (65.1%), *www.dennikn.sk* (52.3%), *www.refresher.sk* (48.8%) and *www.sme.sk* (45.3%). Here we can state that all of the above provide some package of paid content, i.e. they have an active payment gateway / paywall. The most trustworthy portal for our respondents was *www.dennikn.sk* - it was marked by 117 respondents. This medium uses a hard payment model.

Access to information

Looking at the most common way that news reaches recipients, respondents mostly use their mobile phone/smartphone to receive news content - nearly 85% of respondents. Just over 8% read the news from a laptop. As for the direct source, only one-fifth of respondents get news purposely via a web browser; on the contrary, more than 67% of respondents access news via social networks. In terms of the time recipients spend receiving news, up to a third of respondents say they read less than half an hour a day. More than a quarter devote from half an hour to one hour a day to news, and just under a quarter watch it for an hour a

day. As many as nineteen respondents, however, said they receive news for up to two hours a day.

Respondents' attitudes towards subscriptions

Despite the majority of respondents indicating that they most frequently receive content from news sites, nearly 64% of respondents indicated that they do not have an active subscription to any portal and would not consider purchasing one. The main reasons given are that they find out everything they need to know without paying (64.8% of them), they don't want to pay for this type of content (43%) and they don't read the news often enough that they want to pay for it (26%). More than half of those who have never had a subscription and are not even considering buying one would not get a subscription even if it were cheaper. They would be motivated by better quality content (40.5%). Interestingly, of this group of respondents, up to 42.1% of respondents have an active subscription to Spotify and 45.1% to the streaming service Netflix. Almost a third do not subscribe to any similar entertainment services either.

A significantly lower number of respondents said that, although they have never had an active subscription to any news portal, they are considering buying one (12.1%). Like the previous group of respondents, they were most likely to cite the reason for not having an active subscription as being that they learned everything they needed to know without paying and that they didn't want to pay. They mainly consider buying because they became interested in current affairs (almost 55%) and would like to support their favourite portal (35.5%). Almost a third perceive an improvement in the quality of the content, 16% say they see news as a commodity to pay for, just under 10% feel they are in better financial shape, and less than 10% don't want adverts popping up when they read the news.

If they had to choose, they would pay a subscription to *www.dennikn.sk* (74.2%), but would prefer to invest 3-4.99 euros (35.5% of respondents). This group is again dominated by respondents who have purchased a subscription to an entertainment service (*Spotify* - 64.5%, *Netflix* - 58.1%, *HBO Go* - 29%).

Among the respondents, 10.5% of respondents indicated that they had purchased a subscription in the past but no longer have one. Of these, up to 89% revealed that they had purchased a subscription on one portal. Again, *www.dennikn.sk* was the predominant portal, with 48% of respondents having a paid subscription, and 40% had a subscription to *www.sme.sk*. The most common reasons given for having subscribed to a portal in the past were that all the interesting journalism was locked (44.4%), also that they were interested in the content of the medium (37%), they trusted the medium (22.2%), they wanted to support the chosen portal (22.2%), they wanted to see what fully accessible content looked like (22.2%), and they also found the subscription convenient (18.5%). Almost 15% of the respondents purchased a subscription just because they wanted to finish reading one particular article.

These respondents cancelled their subscriptions mostly because they realized that they could learn everything important without paying (44.4%), and they also simply did not want to pay for the content anymore (37%). Interestingly, more than 7% don't actually know why they renewed their subscription. However, almost half of the respondents would consider buying again if the subscription were cheaper. In addition to a more affordable price, however, respondents also cited better quality content, extras such as contests or giveaways, or more content as motivation to buy again. Interestingly, 18.5% of respondents would also be motivated by a better interface of the media outlet's website or mobile app.

Our survey shows that 13.6% of respondents currently have an active subscription to one (57.1% of this group of respondents) or more news portals - 31.4% of people subscribe to two portals and 11.4% subscribe to three portals. Among the portals, www.dennikn.sk and www.sme.sk again predominate. As reasons for having an active subscription, respondents most often cite that they trust the media outlet (71.4%), want to support their chosen portal (62.9%), want to be better informed (60%), all interesting articles have been locked (60%), and overall they are intrigued by the content of the outlet (51.4%). Interestingly, 25.7% reported that they purchased a subscription because they wanted to finish reading one particular article.

Meanwhile, three-fifths of the respondents indicate that they find the subscription price reasonable. A third state that although it is reasonable, they would accept a lower amount. Five per cent of respondents state that they find the price low. Almost 70% of respondents have not considered cancelling their subscription at all. Just under 29% would accept more interesting content, 25.7% of respondents would prefer more content to be available, and just under 23% would accept a better interface for the media outlet's website or mobile app.

CONCLUSION

From the above data, we can conclude that a part of the population will continue to refuse to pay for news content, even if the content is changed or its price is reduced. But better quality content is something that would motivate more people to become subscribers to news channels. However, this is precisely the option that carries a great deal of subjectivity. For what may appear to be quality to one may not reflect the quality measure of another. The data confirms that the proportion of subscribers paying for content is around 13%, so the results of our investigation are consistent with Reuters Institute research [8]. Our research concludes that the most common reason why recipients choose to purchase a subscription is because of trust in the chosen medium, as well as targeted support for that medium. Almost two-thirds of the respondents want to be better informed, which suggests that they consider the content of the selected media outlet to be a better source of information than that of other media outlets not publishing behind a payment gateway. We can see the potential in the group of people who report that they only bought a subscription because they wanted to read one particular

article. However, this is 15% of respondents falling into the group who have purchased a subscription in the past and no longer have an active subscription. But even up to a quarter of people who still have an active subscription came to it in a similar way - i.e. they just wanted to read one particular text. It is precisely these recipients who, once they have subscribed, it is important to persuade them to persist with their subscription [9]. In addition to the aforementioned "quality" content, competitions or other specific bonuses can also be used as motivation. As a result, you can gain more stability in financing the running of the editorial office.

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REFERENCES

- [1] Gálik, S., Gáliková Tolnaiová, S.: Influence of the Internet on the Cognitive Abilities of Man. Phenomenological and Hermeneutical Approach, Communication Today, Vol. 6/issue 1, Slovak Republic, 2015, pp 5-15.
- [2] Pravdová, H., Ungerová, M.: Periodical Press and Media in the Online Environment, Slovak Republic, 2018, pp 181-182.
- [3] Švecová, M. Webová žurnalistika, Slovak Republic, 2017, pp. 72-73.
- [4] Yeon, M.: What Are the Different Kinds of Paywalls (and Do They Work?), Available at: <https://www.admonsters.com/everything-you-always-wanted-to-know-about-paywalls/>
- [5] Krajčovič, P.: Strategies in Media Planning, Communication Today, Vol 6/issue 2, Slovak Republic, 2016, pp 21-30.
- [6] Whitehead, R. et al.: The Media Subscriptions Blueprint, Available at: http://dagensmedier.no/globalassets/rappporter/inma_2018digitalsubscriptions.pdf
- [7] Newman, N. et al.: Reuters Institute Digital News Report 2022, Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-06/Digital_News-Report_2022.pdf
- [8] Newman, N. et al.: Reuters Institute Digital News Report 2022, Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-06/Digital_News-Report_2022.pdf

[9] Mathiasová, A., Solík, M., Mináriková, J.: Paid Subscriptions and Premium Content: Online News Publishers' Monetisation Strategies, *Communication Today*, Vol. 13/issue 1, Slovak Republic, 2022, pp 18-27.

THE ROLE OF CONTINGENCY IN L2 ACQUISITION OF THE USE OF COMPOUND DENOMINAL VERBS

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ABSTRACT

This study investigates the influence of contingency on L2 learners' acceptability of compound denominal verbs. The study recruits six advanced L2 learners of English whose native language is Chinese and one English native speaker. A timed Acceptability Judgement Task (AJT) and a verbal production task are used to collect data to investigate participants' implicit knowledge of the use of compound denominal verbs. Using the Corpus of Contemporary American English (COCA), the target words in the AJT and the verbal production task are categorized into high-frequency words group and low-frequency words group. Furthermore, all the words including the novel use of words are divided into low contingency and high contingency according to their forms. The target words are incorporated into 36 sentences as the stimuli for the AJT and the verbal production task. The results of these two tasks have shown that, firstly, contingency is associated with L2 learners' acceptability of denominal verbs or deverbal nouns. Participants tend to accept the usage of denominal verbs or deverbal nouns when the contingency of word form is high. Secondly, L2 learners' acceptability of denominal verbs and deverbal nouns is also related to the frequency of compound words. In high-frequency compound words, participants are more likely to accept the novel use of high contingency compound words. But in low-frequency compound words, there is no strong connection between participants' acceptability of novel word usage and the contingency of the word form. Moreover, compared to high-frequency compound words, the novel usage of low-frequency compound words is more likely to be accepted by L2 learners.

Keywords: English Denominal Verbs, Second Language Acquisition, Chinese L2 learners of English

INTRODUCTION

The innovative use of words for fulfilling various communication needs is a remarkable aspect of human language. Deriving verbs from nouns and nouns from verbs is a very common way to form new words in many languages [1]. For example, in the sentence "I will google it to find the correct answer", the word "google" is primarily a noun but it has been commonly used as a verb by English speakers in recent years. Verbs that are derived from nouns are called denominal verbs. In this study, compound denominal verbs are the focused construction. Under the framework of usage-based studies, this study examines whether L2 learners are capable of using novel constructions creatively such as compound

denominal verbs. The aim of this study is to investigate whether contingency influences L2 learners' acceptability of compound denominal verbs. It is meaningful to study the second language learners' sensitivity to contingency and acceptability of novel word usage because the study might be beneficial for language learning of L2 learners. So far, few studies have focused on advanced Chinese ESL learners and applied contingency effects to investigate learners' use of denominal verbs and deverbal nouns. Therefore, the study is motivated by this research gap and aims to delve into whether the contingency of associative relationships influences the usage of compound words.

THE PRESENT STUDY

Considering the paucity of research on the impact of contingency on English compound words, the current study focuses on whether contingency influences Chinese ESL learners' use of compound words. Research questions are as follows:

1. Does contingency influence L2 learners' acceptability of verbs derived from nouns or nouns derived from verbs?
2. How does contingency (form-form mapping and form-function mapping) influence L2 learners' acquisition of words being used as denominal verbs or deverbal nouns?

METHODS

Participants

The study recruits six highly proficient L2 learners of English and one English native speaker. All ESL (six females) learners' ages range between 22 and 25 years old, whose first language is Chinese mandarin. Their overall score of IELTS (International English Language Testing System) varies from 7 to 7.5, equivalent to the C1 level of the CEFR (Common European Framework of Reference for Languages) scale. One native speaker who was born and raised in the United States at the age of 21 participates in the study to establish a baseline of the native-speaker norm.

Instruments

This study uses a timed Acceptability Judgement Task (AJT) and a verbal production task to collect data to investigate participants' implicit knowledge. Eighteen compound words are categorized into two groups, namely high frequency and low frequency, and each group has nine words to achieve a counterbalance with 18 words and 36 sentences. The figure of raw frequency is obtained from the Corpus of Contemporary American English (COCA). The frequency of word counts higher than 5000 is classed as a high-frequency word, whereas those above 5000 are considered to be low-frequency words.

Furthermore, all the words are divided into low contingency and high contingency according to their forms. For instance, when searching the word 'photographed' in COCA, the result shows that the token frequency of photographed is up to 6056, however, the relative frequency of 'a photograph' is lower (4548). Therefore, it is concluded that the photograph has a high contingency when used in a verb rather than in a noun.

The AJT task includes 36 sentences that are adapted from the COCA; for example, two police officers put handcuffs on him, participants are required to rate the sentence as acceptable or unacceptable. All the sentences in the task are grammatically correct. AJT aims to investigate participants' implicit knowledge of compound word usage. The second task is to ask participants to record a simple sentence verbally using the word within twenty seconds, i.e., please make a simple sentence with the word "nickname," and participants should be provided with two sample sentences, for example, books have soft covers. The samples and instructions are adapted from White's preference task [2], and the study of Zhang and Mai [3]. The purpose of the production task is to test participants' implicit knowledge of compound word usage.

Procedure

Participants complete a survey about their language background and personal information before starting. Two Qualtrics links are allocated to participants, and they need to complete the AJT before the production task. AJT aims to test their acceptability of eighteen compound words used as verbs and nouns. The participants need to respond with 'it is acceptable' or 'it is unacceptable'. Two practice sentences are given before the test. For the second task, participants record 18 sentences by using selected compound words. Before recording, participants are allowed to do two practices.

Scoring

Overall, 378 responses are collected by applying two tasks (252 answers of the AJT and 126 answers of the production task). For the AJT, the results are downloaded from 'Qualtrics' platform and coded on a spreadsheet with a T given to an acceptable answer and F given to an unacceptable answer. Mean and average acceptance is calculated according to test item categories in a table (see Figure 1). Classified by low frequency and high frequency, the acceptance of an individual compound word is plotted in bar charts.

For the production task, the recorded data from the verbal production task are transcribed into a broad orthographic transcription. The speech data are coded by one of the researchers according to three parameters (grammatical accuracy, part of speech, and sentence length). The raw data are coded in the number of participants. Some representative words which show significant preference (the

difference is more than 50 percent) of participants' word usage are chosen and plotted in bar charts. In order to quantify, all the data are presented as percentages.

THEORY

Denominal verbs and Deverbal Nouns

Denominal verbs can be defined as “nouns that have come to be used as verbs” [4, p.76]. According to Lippeveld and Oshima-Takane, deverbal nouns are nouns that are derived from verbs while verbs that are derived from nouns are called denominal verbs; and the original nouns that are derived are called parent nouns. There are few studies about this target construction [1].

Cheng and Lasnik explain three major asymmetries between Mandarin and English denominal verbs, which are typological, aspectual, and quantitative in their study [5]. They find that “the different derivational mechanisms for Mandarin and English denominal verbs correlate with the different functions of zero morphemes in the two languages” [5, p.45]. Lippeveld and Oshima-Takane use an intermodal preferential looking paradigm to investigate when children acquire rules for denominal verbs as well as deverbal nouns [1]. They choose 2.5-year-old and 3-year-old French-speaking children as their participants. Their study shows that as long as French-speaking children understand their parents' words that are derived, there is no age difference for them to be able to understand novel denominal verbs and deverbal nouns. Clark and Clark assert that the speaker's use of denominal verbs is regulated by a convention that he or she means to denote the kind of state, event, or process that he or she assumes the listener can readily and uniquely compute [4]. They believe that “this convention accounts for the meaning and acceptability of innovative verbs in various contexts” [4, p.767]. They also argue that denominal verbs do not allow a unified semantic description despite the fact that they belong to a unified morphological family. Gerds and Marlett introduce denominal verbs and ally constructions by outlining their morphological, syntactic, and semantic properties [6]. They mention that denominal verbs are different from noun incorporation and noun stripping although they have some shared syntactic characteristics. There are studies about influential factors of learners' use of denominal verbs. In the study by Zhang and Mai, the effects of entrenchment and preemption in second language learners' acceptance of English denominal verbs are tested by adopting corpus and learners' introspective frequency [3]. They conclude that entrenchment constrains fourth-year learners of English from generalizing nouns into novel use while only the effect of preemption is salient for the teachers.

Contingency

Psychological research has recognized the importance of contingency learning. Contingency learning is defined as a probability-driven mechanism for learning whether associations between events are casual or noncausal [7; 8].

According to Gluck and Bower, noncausal events refer to the high probability of events that co-occurred together [9]. For example, words thunder and lightning, thunder is an outcome, and lightning is a cue. The associative relationship $P(O|C)$ between thunder and lightning is high, participants tend to label it as high contingency. High contingency is reliable and readily processed for learners. The more reliable the relations between form-form mapping or form-function mapping, the easier it is to learn, which indicates that learners acquire the use of the language from its associative manner [10]. Previous studies have investigated the influence of contingency on lexeme construction. For example, Stefano focuses on the effects of contingency on L2 Italian speakers' acquisition of perfective morpheme [11]. Some studies analyze whether contingency can facilitate L2 speakers' learning, for example, Zhao and MacWhinney find that the strategy of cue focusing helps L2 learners acquire the use of the English article system [12]. The most related article is written by Baars [13; 14]. He takes the word focus as an example, learners may not be aware of whether the word is a noun, an adjective, or a verb. However, learners tend to interpret the word as a noun unconsciously in the context of reader focus, which can be best explained by consciousness.

RESULTS

The task results indicate that contingency is associated with L2 learners' acceptability of denominal verbs or deverbal nouns. Figure 1 illustrates participants' acceptability of compound words. According to figure one, five out of seven participants rate the words with high contingency as acceptable (the mean is 77%), including the native speaker (72%). The sixth participant is more pleased to use words both in verbs and nouns than the others (94%). Surprisingly, it is found that most people also accept the novel usage of words with low contingency. The average population acceptability of low contingency compound words is 73%, which is relatively lower than the high contingency words.

Figures 2 and 3 provide information on the percentage of participants' acceptability of each word, including the high and low contingency groups. In the first bar chart, there are five of the word forms in the low contingency group rated 100% acceptable by participants (the noun of highlight, showcase photograph, handcuff and headquarter). In contrast, the newspaper usage used in a verb is considered chiefly unacceptable (29%). It is evident from the second bar chart that (figure 3) 13 words in the high contingency group are judged over 80 % of acceptability, compared to 6 out of 18 words belonging to the low contingency group.

L2 learners' preferences of word usage are further confirmed in the production task because they implicitly create sentences with high contingency forms of words. Figures 4 and 5 show that these words include blackmail, watchdog, footnote, newspaper, and warehouse. It is in accordance with the contingency learning theory. However, there are some controversial findings as

well. For the AJT, participants' acceptability of using compound words both as verbs and nouns is high (more than 80%), i.e., counterbalance and headquarter. Still, the production task demonstrates that half of them use the word in low contingency form (57% and 57%, respectively).

Participants	Percentage of Acceptability with High Contingency	Percentage of Acceptability with Low Contingency
Native Speaker	72%	89%
1	89%	61%
2	61%	83%
3	89%	61%
4	72%	72%
5	61%	89%
6	94%	61%
Mean	77%	74%

Fig. 1. Acceptability Judgements: Compound Words

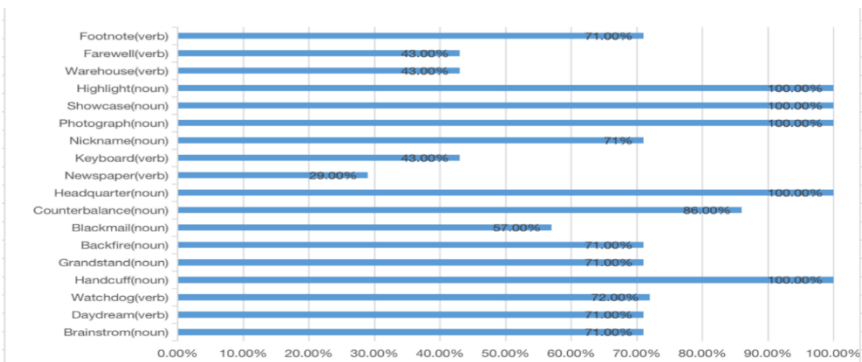


Fig. 2. Acceptability Judgements of Low Contingency Words

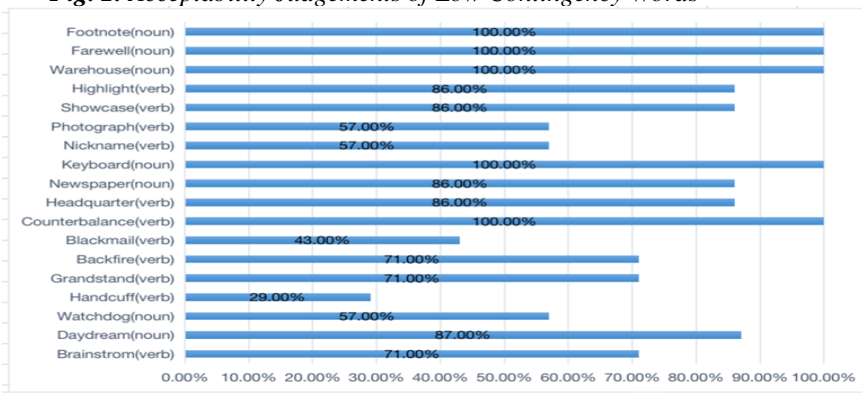
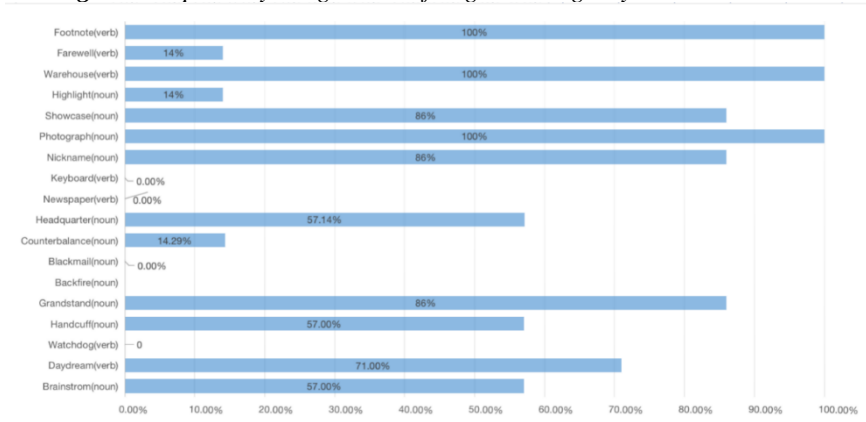
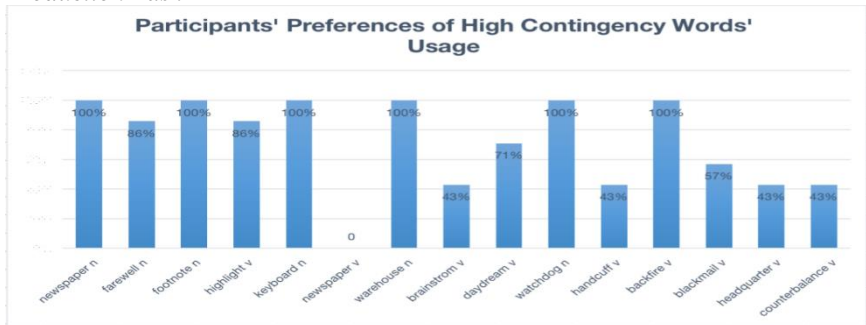


Fig. 3. Acceptability Judgements of High Contingency Words**Fig. 4.** Participants' Preferences of Low Contingency Words' Usage in Production Task**Fig. 5.** Participants' Preferences of High Contingency Words' Usage in Production Task

DISCUSSION

The findings of this study are in accordance with previous studies. Zhang and Mai support the notion that the stereotypes of rigid English usage constrain learners from generalizing nouns into novel use [3]. L2 learners prefer to use linguistic forms with high contingency from their implicit knowledge, and then generalize it into novel language usage. Contingency learning is defined as a probability-driven mechanism for learning whether associations between events are casual or noncausal [7; 8]. Based on the results of the study, it can be assumed that contingency learning is noncausal. It relates to the frequency of the target content, and learners' implicit knowledge. Baars states that learners may not be aware of whether a word is a noun, an adjective, or a verb [13]; [14]. However,

they unconsciously interpret the word based on consciousness, which can be explained by implicit knowledge in this study.

The task results show that the contingency of high-frequency words has an imperceptible impact on learners' preferences in language usage. Participants tend to accept the usage of denominal verbs or deverbal nouns when the contingency of word form is high. However, they consider the usage to be unacceptable when the contingency of word form is low. So, in high-frequency compound words, participants are more likely to accept the novel use of high contingency compound words.

Nevertheless, as for low-frequency compound words, there is no strong connection between participants' acceptability of novel word usage and the contingency of the word form. But the acceptability of novel word usage of low frequency is higher than high-frequency compound words. Two novel use of compound words is marked as unacceptable even if the contingency of word form is high. It is maybe because participants are not familiar with the word, they tend to consider it acceptable. Maybe the frequency of words also has an impact on participants' acceptability of denominal verbs and deverbal nouns. Whether the frequency of words influences contingency learning is going to be investigated in future studies.

CONCLUSION

In conclusion, this study investigates whether contingency influences L2 learners' acceptability of compound denominal verbs. The results have shown that contingency is associated with L2 learners' acceptability of denominal verbs or deverbal nouns. Participants tend to accept the usage of denominal verbs or deverbal nouns when the contingency of word form is high. In high-frequency compound words, participants are more likely to accept the novel use of high contingency compound words. In low-frequency compound words, there is no strong connection between participants' acceptability of novel word usage and the contingency of the word form. In addition, learners are more likely to accept novel word usage of low-frequency compound words than high-frequency compound words.

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REFERENCES

[1] Lippeveld, M., & Oshima-Takane, Y. (2015). Nouns to verbs and verbs to nouns: when do children acquire class extension rules for deverbal nouns and

denominal verbs? *Applied Psycholinguistics*, 36(3), 559–588. <https://doi.org/10.1017/S0142716413000349>.

[2] White, L. (1991). Adverb placement in second language acquisition: Some effects of positive and negative evidence in the classroom. *Interlanguage Studies Bulletin*, 7, 133–161.

[3] Zhang, X., & Mai, C. (2017). Effects of entrenchment and preemption in second language learners' acceptance of English denominal verbs. *Applied Psycholinguistics*, 39(2), 413–436. <https://doi.org/10.1017/s0142716417000406>.

[4] Clark, E. V., & Clark, H. H. (1979). When Nouns Surface as Verbs. *Language*, 55(4), 767–811. <https://doi.org/10.2307/412745>.

[5] Cheng, J., & Lasnik, H. (2016). Parametric variations in Mandarin and English denominal verb derivation. *Lingua*, 180, 25–48. <https://doi.org/10.1016/j.lingua.2016.03.006>.

[6] Gerdts, D. B., & Marlett, S. A. (2008). Introduction: The form and function of denominal verb constructions. *International Journal of American Linguistics*, 74(4), 409–422. <https://doi.org/10.1086/595571>.

[7] Beckers, T., De Houwer, J., & Matute, H. (2007). Editorial: Human contingency learning. *Quarterly Journal of Experimental Psychology*, 60(3), 289–290. <https://doi.org/10.1080/17470210601000532>.

[8] Shanks, D. R. (1995). *The psychology of associative learning*. Cambridge University Press.

[9] Gluck, M., & Bower, G. (1988). From conditioning to category learning: An adaptive network model. *Journal of Experimental Psychology: General*, 117(3), 227–247. <https://doi.org/10.1037/0096-3445.117.3.227>.

[10] Ellis, N. & Wulff, S. (2015). 19. Second language acquisition. In E. Dabrowska & D. Divjak (Ed.), *Handbook of Cognitive Linguistics* (pp. 409–716). Berlin, München, Boston: De Gruyter Mouton. <https://doi.org/10.1515/9783110292022-020>

[11] Stefano, R. (2020). Contingency learning and perfective morpheme productivity in L2 Italian: A study on lexeme–morpheme associations with ΔP . *Corpus Linguistics and Linguistic Theory*, 16(3), 459–486. <https://doi:http://dx.doi.org/10.1515/cllt-2019-0071>.

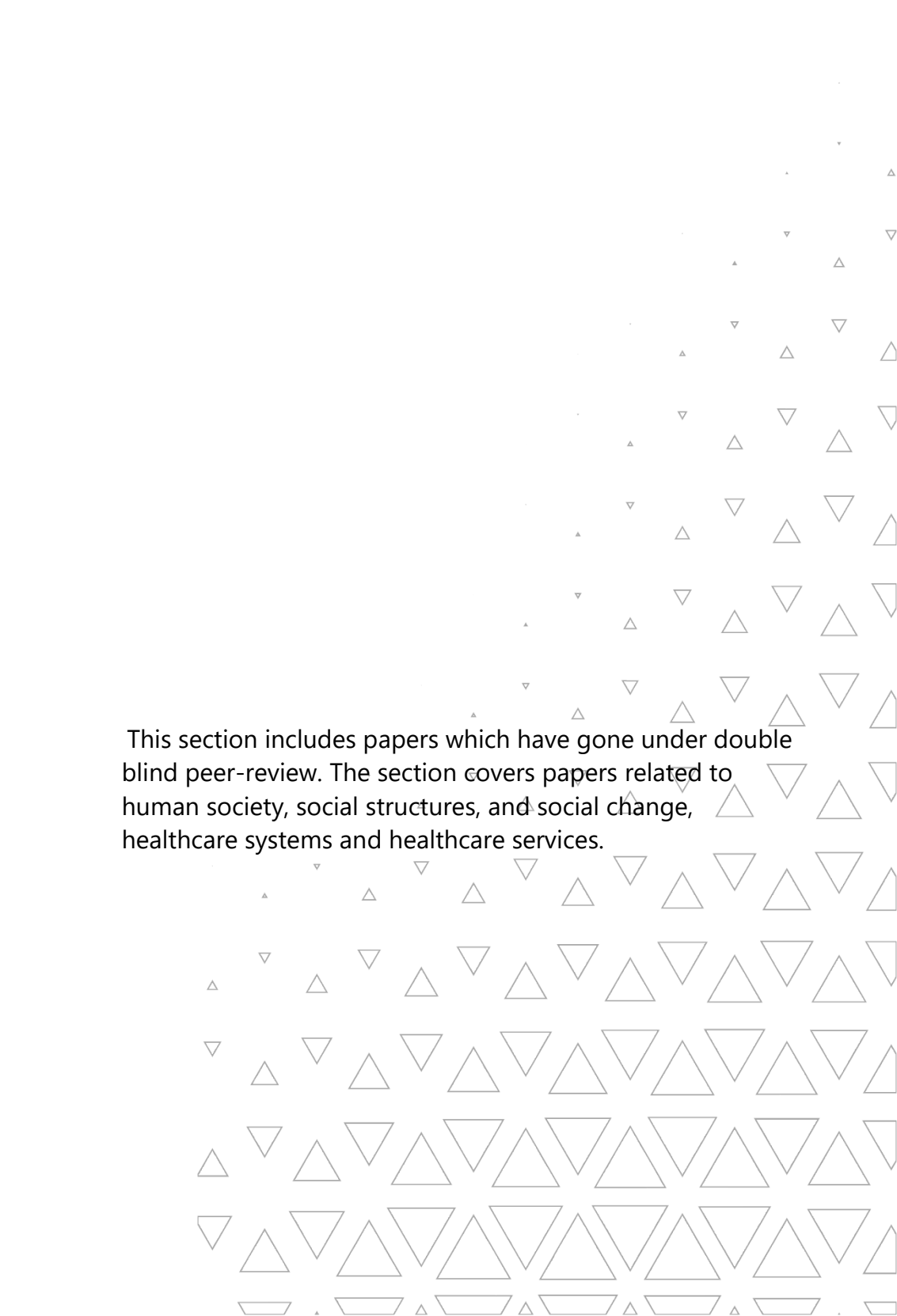
[12] Zhao, H., & MacWhinney, B. (2018). The Instructed Learning of Form–Function Mappings in the English Article System. *The Modern Language Journal*, 102(1), 99–119. <https://doi.org/10.1111/modl.12449>.

[13] Baars, B. J. (1988). *A Cognitive Theory of Consciousness*. Cambridge University Press.

[14] Baars, B. J. (1997). In the Theater of Consciousness: The Workspace of the Mind. Oxford University Press.

Section

SOCIOLOGY AND HEALTHCARE



This section includes papers which have gone under double blind peer-review. The section covers papers related to human society, social structures, and social change, healthcare systems and healthcare services.

EXPLORING THE IMPACTS OF INTERNAL DISPLACED PEOPLE (IDPS) CAMP ON LIVELIHOOD OF HOST COMMUNITIES

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ABSTRACT

The paper explores how the establishment of a IDPs camp has impacted the hosting community of Nyla city and its inhabitants. By interviewing respondents from the host community, the paper addresses the above objectives. The findings are further analyzed in light of a theoretical framework. The complication of camp impacts on the host community has resulted in both positive and negative experiences. Socio-economic impacts have been positive such as new livelihood opportunities in the camp in addition to improvements in social services such as health and education. Negative impacts experiences by hosts have mostly been in term of their relationship with the IDPs populations which has resulted in more insecurity and conflicts in the hosting community.

Keywords: IDP, host community, livelihood

INTRODUCTION

Sudan has a long history of internal displacement. Conflict and violence have plagued. The country since the year before its independence in 1956, driven by the economic, Political and socio-cultural marginalization of rural areas of the country e.g. Darfur region. Sudan's successive conflicts gave rise to one of the world's largest displacement crises, which peaked in 2005 at 6.1 million IDPs, including people displaced in areas that are now part of South Sudan.

The number of people living in displacement has decreased considerably in recent years, but the country was still home to at least 2.3 million IDPs as of the end of 2020. This reflects the continued conflict in some parts of the country and the many obstacles people face in their pursuit of durable solutions. The figure is also likely to be an underestimate, given the many challenges in obtaining data. Communal violence has been on the rise since 2019 and triggered most of the 79,000 new displacements recorded in 2020.

Sudan is very arid and large parts of the country are considered drought prone. This has had devastating humanitarian consequences because more than 54% of people live in rural areas and are largely dependent on rain-fed subsistence agriculture and animal husbandry for their livelihoods. These climatic conditions

have overlapped with conflict and economic and political instability to create extremely high levels of food insecurity. Displacement associated with slow-onset phenomena such as drought is likely to have occurred, but its scale has yet to be determined. [<https://www.internaldisplacement.org/countries/sudan>]

The paper aims to explore the effects of IDPs on host community's livelihood.

LITERATURE REVIEW

Definition of IDP

The term IDP is a descriptive, not a legal definition, since the legal rights of IDPs are upheld by their local government. As such, a difficulty arises in categorizing children born to IDPs, as the child has never actually been displaced from their habitual residence. This is another problem with the UNHCR definition of IDPs, and represents a significant protection gap for children of concern. Moreover, there is no agreement on when internal displacement ends. Confounding the problem of definition further is the fact that the internally displaced are often lazily referred to as “refugees”, despite remaining within their national borders. For the purposes of this paper, urban IDPs will thus be defined more broadly, in line with the Guiding Principles on Internal Displacement. That is, an urban IDP lives outside of a rural setting, and fulfils the following criteria:

“persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border.” UNHCR, (2007)

The majority of people displaced by conflict live in South, North and Central Darfur states, which were hosting about 1.9 million IDPs as of the end of 2020. There were also 218,000 IDPs in South Kordofan state and 47,000 in Blue Nile state. Sennar state is likely hosting IDPs too, but no organization nor the government assess the situation there. Displacement in areas outside government control is not recorded at all. Most of the new conflict displacement recorded in recent years has taken place in Darfur, particularly in the Jebel Marra mountains at the intersection of Central, South and North Darfur. While IDPs and other civilians used to be attacked by militias associated with the former regime, new conflict displacement has been mostly triggered by intercommunal violence, including violence between herders and farmers.

Host Community

Host community refers to the country of asylum and the local, regional and national governmental, social and economic structures within which refugees live. Urban refugees live within host communities with or without legal status and recognition by the host community. In the context of refugee camps, the host community may encompass the camp, or may simply neighbour the camp but have interaction with, or otherwise be impacted by, the refugees residing in the camp. (*UNCHR, 211*).

Livelihoods

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. (*Chambers & Conway, 1991*)

METHODOLOGY

The study was conducted in south Darfur State (Nyla locality). The main target group of this study hosting communities near of Otach camp, Alread 1& 3 camps. The researcher purposively selected 100household from all as a sample size. Primary data was collected by using quantitative tool (questionnaire).

RESULTS AND DISCUSSION

Demographic Characteristics:

Table 1. Distribution of Respondents by Demographic Characteristics

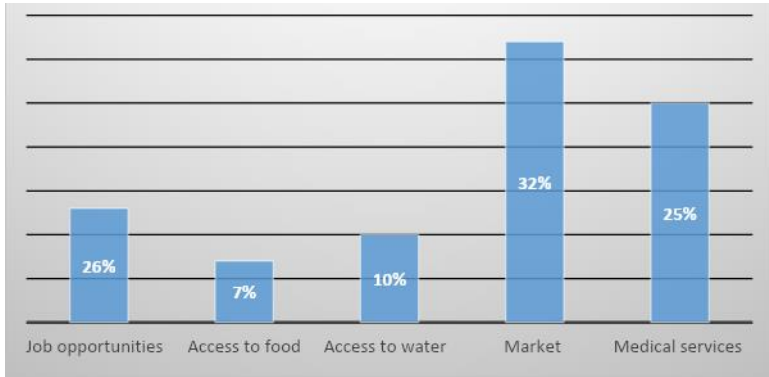
Age	Frequency	%
Less than 20	5	5%
20-40	60	60%
41-60	30	30%
61 and above	5	5%
Total	100	100%
Gender	Frequency	%
Female	56	56%
Male	44	44%
Total	100	100%
Social status	Frequency	%
Single	23	23%
Married	70	70%
Divorced	6	6%
Widower	1	1%
Total	100	100%
Educational level	Frequency	%
Illiterate	17	17%
Khalwa	5	5%
Basic school	8	8%
Secondary School	10	10%
University	60	60%
Total	100	100%

Source: filed survey 2020

In term of age of respondents 90% of them their age ranged between less than 20-60. More than half of the participants were female (56%) while 44% of them were male. The study shows that the majority of the respondents their age lay in the active age group. The individual in this age is an important part of the workforce. Thus this result indicated that the majority of the target groups are the youth, which aspires to bring about a process of change in society and is the most capable of the awareness of society. Age of a person determines the experience one has, the productive assets accumulated, social networks established for survival, energy etc.; all being important in livelihood security. Regarding marital status of the respondent, 70% of them were married, while 23% of them were single. This results that means large number of the respondents were have a family (husband wife and children). In term of education, (60%) of the respondents were university level, compared of 22% were illiterate. This result indicates that, most of the respondent their educational level is high. That referred to, all respondents are live in the area near to Nyala town.

Impact of IDPs on host community livelihood

Fig. 1. Positive Impact in host community livelihood due to IDPs camp



As Fig 1. shows, 32% of the respondents have reported that the new market opportunities have had a positive impact on their lives. These markets are according to the respondents established and located near the camp where IDPs can go and sell or trade collected firewood, charcoal and food. Most of the respondents explain this as the biggest change in terms of their livelihood approach as they now have a larger market to sell and trade different items. Job and business opportunities were also mentioned by 26% as a positive change. Business opportunities are described as closely linked to the new markets in the camp. Working small jobs for IDPs have become a main source of income for many people in the host community according to the respondents. The medical services in the camp are also available for the host community and have been reported to be used by several of the respondents. The medical clinics in the camp are free of charge also for the host community

Negative Impact

Table 2. Distribution of Respondents by Availability of Negative impact

Availability of Negative impact	Frequency	100%
Yes	67	67%
No	33	33%
Total	100	100%

Source : filed survey 2020

Regarding negative impact, more than half reported that there are several things consider as negative impact.

Fig. 2. *Negative Impact in host community livelihood due to IDPs camp*

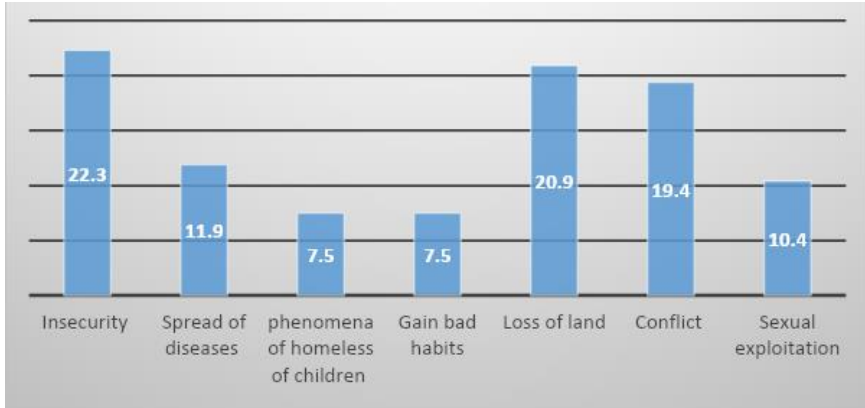
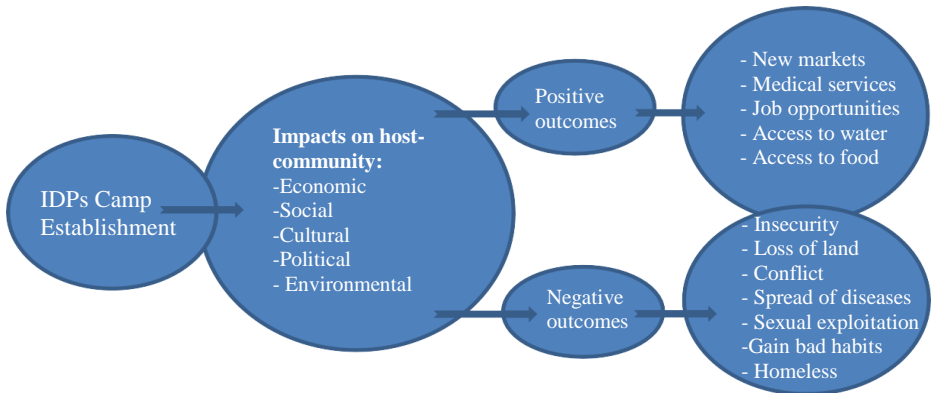


Fig. 2 shows that the 22.3% respondents reported negative impacts relate to insecurity and conflicts between IDPs and the host community. Insecurity issues mentioned by the respondents include fearing to be assaulted, harassed or subjected to other incidents of violence with IDPs when located in the camp and in their area. The term conflict used by the respondents includes various actions of violence such as aggressive, killings and shortage in resources between IDPs and the host community. Loss of land is also a negative impact by the IDPs, they explain that many from their village lost valuable grazing land used by their animals due to population growth and more specifically due to the construction of IDPs camp.

At the end the relationship between the host community and displaced people had negative and positive impacts, the negative ones new habits like traditional kahool drinks, kills people they can't go outside without their white weapons and the risk circle them under conflict region, and bad words, The positive impacts Nyala is border state and availability of camp that required a many humans needed like amore foods, clothes that makes what I mention above why the trader is more than employed and employed take off their jobs and transfer into traders, and also the availability of camps that means originations worked with them credit careers to unworked people such as a teacher work in schools in side camps and doctors work in camp's clinic, and opening large and new markets to satisfy their need.

Fig. 3. *Impact of IDPs on Livelihood of host community*

CONCLUSION

It is found that, after the IDPs established, big changes happened in the host community livelihood. It can be said that, the IDPs has had positive and negative effects. Positive effects for example, the economic situation of the people strongly improved due to new jobs or change their job. Moreover, most people became have an access to, market water and health services.

Negative effects such insecurity and loss of their land.

REFERENCES

- [1] Chambers, R., & Conway, G. (1991). Sustainable Rural Livelihoods: Practical Concepts for the 21st Century. Retrieved February 3, 2010, from <http://www.smallstock.info/reference/IDS/dp296.pdf>
- [2] <https://www.internal displacement.org/countries/Sudan>
- [3] UNCHR, 211, UNHCR-NGO Toolkit for Practical Cooperation on Resettlement. Community Outreach - Outreach to Host Communities: Definitions and FAQs.
- [4] UNHCR, (2007). Internally Displaced Persons: Questions and Answers. (UNHCR: Geneva), p. 4. Available at.

FEAR OF FALLING AMONG THE ELDERLY IN THE COMMUNITY FROM THE VIEWPOINT OF FALL HISTORY

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ABSTRACT

Fear of falling in the elderly can be determined by a variety of factors. Several studies confirm that female gender, depression, comorbidities and worse physical performance are significant predictors of fear of falling. Research studies do not give a definitive answer to the relationship between fear of falling and past history of falling. The objective of our study was to determine if there was a significant association between a history of falls in the past 12 months and fear of falling in the elderly. Data were collected by Slovak version of Fear of Falling Scale among community dwelling elderly. At the same time, self-constructed questions were used to ascertain the history of falls in the previous year, the frequency of falls and their impact on health. A cross-sectional study was conducted on a sample of 292 seniors. Non-parametric tests were used to explore relation between Fear of Falling, the history of falls in the previous year and frequency of falling. There was a significant difference between the history of falls in the last year and the fear of falling ($p < 0.001$). A low positive correlation ($R = 0.36$) was found between fall frequency and fear of falling. Assessment of fear of falling should be part of the nursing assessment of seniors, especially when a history of falls is identified. The Fall Efficacy Scale is a valid measurement tool for measuring fear of falling.

Keywords: *Fear of falling, older adults, fall history*

INTRODUCTION

Falls in the elderly represent one of the serious risk factors threatening their health and quality of life. The occurrence of falls increases during ageing and in old age. The overall number of recorded falls in Slovakia in 2020 was 42,048. For this reason, the highest accident rate was recorded in people over 65 years of age. The number of hospitalizations of seniors due to a fall was 17,528. Fall incidence was higher among women (67.21%) than in men (32.78%). Falls most frequently resulted in fractures of femurs (34.8%), endocranial injuries (12.6%), followed by fractures of the spine, shoulder and arms, ribs, fibulas, forearms and wrists [1].

Falls in seniors are associated with frailty syndrome [2]. As a result of a fall, seniors tend to suffer from physical and psychological discomfort. Chronic pain and a decrease of functional level are the main symptoms of physical discomfort. At the same time, seniors feel increasing psychological discomfort, anxiety, fear and even panic of motion, especially when there is necessity to overcome irregularities or barriers in the environment. A decrease of self-confidence and avoiding activities which the individual is even capable of performing are associated with development of a permanent fear of falling, the premature necessity of institutional care and higher economic costs [3].

Fear of falling started being seen as a specific health problem when Murphy and Isaacs described a “Post-Fall Syndrome” and defined fear of falling as a primary sign of this syndrome. There is a significant variability ranging from 21% to 85% in the reported rate of fear of falling [4]. Apart from a fall in the anamnesis, the occurrence of fear of falling is also related to several variables, including female gender, weak physical condition, use of walking aid, use of medication or psychotropic substances, depression and anxiety. Later studies explored the environmental and psycho-social factors on a larger scale. Environmental factors in the aetiology of fear of falling predominantly include uneven pavements, slippery floors, sloping and unpaved surfaces and low light. When it comes to psycho-social factors, the detected variables associated with fear of falling include a lack of social interaction with family and friends and bad neighbourly relations [5]. At the same time, fear of falling is considered to be a risk factor of falling; therefore, it is necessary to understand it as multifactorial and multidimensional phenomenon.

The objective of our study was to determine if there was a significant association between a history of falls in the past 12 months and fear of falling in the elderly.

METHODS

The data represent part of a bigger validation of a cross-sectional study aimed at researching the fear of falling in community-dwelling seniors and its psycho-social impact. The following research tools were used for data collection:

- The Fall Efficacy Scale (FES I) – Slovak version, translated and validated in Slovakia in 2021 by Bobkowska, Poliaková and Králová. The FES I is a specific tool for measuring the fear of falling among seniors over 65 years of age. The scale consists of 16 items – activities of daily life – which are assessed by elderly people according to a four-point Likert scale that ranges from 1 – I feel no fear... to 4 – I feel big fear. The resulting score ranges from 16 to 64 points (min-max), where a higher score means a higher level of concern related to a fall. A score between 16 – 19 points indicates a

low level of fear, 20 – 27 a medium level of fear and 28 – 64 points a high level of fear [6]. Cronbach's alpha was 0.785.

- Self-constructed questions aimed at obtaining demographic data – age, gender, residence (town/countryside), way of living (alone/with a partner/children/in a social facility),
- Self-constructed questions were used to ascertain the history of falls in the previous year, the frequency of falls and their impact on health.

Collection of the relevant data was completed in years 2021 – 2022. The questionnaires for the seniors were filled in by trained nurses and students of nursing directly in the households of seniors and social care institutions.

The statistical analysis included a descriptive analysis of the baseline characteristics of the sample. Differences between pairs of sets with numerical values derived from the ordinal scale of the questionnaire were verified by a non-parametric two-sample Mann-Whitney test. We considered a difference between data distributions to be statistically significant if the p-value of the test criterion was less than 0.05. For the relationship between pairs of variables, we used the nonparametric R – Spearman correlation coefficient.

RESEARCH SAMPLE

The research sample consisted of 292 Slovak seniors with an average age of 75.85 years, while the minimum age was 65 years and the maximum 95 years. There were 83 (28.42%) men and 209 (71.57%) women. The study group consisted of seniors living in their own households alone, with partners or children, as well as seniors living in social facilities capable of walking independently with or without compensation tools. Participation criteria included age over 65 years, willingness to cooperate, health condition not requiring acute treatment or hospitalization and the ability to walk with or without a compensation tool. Exclusion criteria included hospitalization, cognitive deficit and the use of a wheelchair.

RESULTS

Fall anamnesis and demographic characteristics

In the last year, a fall was recorded in 97 seniors (33.22%) from our sample. The average number of falls per one senior who fell in the last year was 1.89. Injury due to fall was suffered by 72.16% of respondents, and hospitalization as a result of injury was necessary in 27.14% of respondents. The average fear of falling score was 32.88, which means a high level of fear regardless of the history of a fall (Table 1).

Table 1. Demographic data and anamnesis of falls in the last year

	Demographic data		Fall in the last year		Average number of falls	Injury as a result of fall	Hospitalization as a result of fall	Fear of falling
	n	%	n	%	\bar{x}	%	%	\bar{x}
N	292	100.00	97	33.22	1.89	72.16	27.14	32.88
Gender								
Male	83	28.42	28	33.94	2.16	75.00	23.81	28.45
Female	209	71.57	69	33.17	1.81	71.01	28.57	34.64
Living								
Alone	39	13.40	12	30.77	1.67	41.67	20.00	29.51
Partner	103	35.39	33	32.04	1.70	75.76	8.00	27.77
Children	55	18.90	18	32.73	1.89	66.67	16.67	30.20
Social facility	95	32.65	34	35.79	2.44	82.35	50.00	41.36

From the point of view of gender (Table 1), we recorded a slightly higher frequency of falls in men (33.94%) than in women (33.17%). The average number of falls per one person was 2.16 in men and 1.81 in women, while the fear of falling was more noticeable in women (\bar{x} =34.64) than in men (\bar{x} =28.45).

In regard to the variable of living (Table 1), we detected falls in the last year in 35.79% of seniors dwelling in a social facility, 32.73% of seniors living in a common household with children, 32.04% of seniors living in a common household with a partner and 30.77% of seniors living alone. Injury as a result of falling was recorded in 82.35% of seniors dwelling in a social facility, and hospitalization was necessary in 50.00% of them. Falls in a household environment were more rarely a reason for injuries requiring hospitalization. Fear of falling reached the highest score among the seniors who live in social facilities (\bar{x} = 41.36). The lowest fear of falling score was recorded among seniors living with a partner (27.77).

Table 2. Type of injury as a result of a fall

	n	%
Minor injuries of soft tissues	34	48.57
Fractures	29	41.43
Head injuries	7	10.00
Total	70	100.00

Among those who fell in the past 12 months ($N = 97$), an injury as a result of falling was recorded in 70 seniors. As a result of falling, minor injuries to soft tissues were recorded in 48.57% of seniors, fractures in 41.43% of seniors and head injuries in 10.00% of seniors (Table 2). The average fear of falling score in seniors who suffered injury as a result of falling was 38.37 (a high level of fear).

Table 3. Differences between categories of the history of fall in the last year and the Fear of falling

Fall in the last year	n^*	\bar{x}	sd	x_m	$min.$	$max.$	p
No	194	30.9	12.4	27.0	16	64	<0.001
Yes	97	37.5	12.9	35.0	16	64	

Legend: n – number of patients, \bar{x} – arithmetic average, sd – standard deviation, x_m – median, $min.$ – minimum value, $max.$ – maximum value, p – p -value of Mann-Whitney testing criterion* - one respondent did not answer

The average fear of falling score in seniors with positive anamnesis of a fall was 37.5, while in seniors with negative anamnesis of a fall it was 30.9 (Table 3). A significant difference was detected between the level of fear of falling in seniors with positive anamnesis of a fall in the last year compared with seniors without positive anamnesis of a fall, which confirms that seniors with positive anamnesis of a fall feel a significantly higher level of concern associated with falling.

Table 4. Correlation between frequency of falling and the FES

Correlation	n	R	Interval of reliability		p
Number of falls vs.:			-95%	+95%	
FES:	97	0.36	0.16	0.53	<0.001

Legend: n – number of patients, R – Spearman correlation coefficient, p – value of testing criterion of the difference of value of correlation coefficient from zero.

A weak positive correlation was detected between the number of falls and the level of fear. The level of concern associated with falling increases along with a growing number of falls (Table 4).

DISCUSSION

The prevalence of falls in the last year among the seniors in our study was 33.22%. Similar values of the prevalence of falls also appear in other studies. The prevalence of falls resulting from longitudinal studies ranges from 20 to 60% [4]. At least one fall in the course of one year was suffered by 16.44% of seniors, while two or more falls occurred in 16.78% of seniors. One fall was recorded in 49.48% out of an overall number of 97 seniors with positive anamnesis of a fall, while two or more falls were recorded in 50.52% seniors belonging to this group. The average number of falls per person was 1.89. The maximum number of falls in one senior was six. It is worth noting that according to the records, seniors tend to fall repeatedly.

The aim of our study was to find out what the connection is between the anamnesis of a fall and the fear of falling. The average fear of falling score on the FES I scale (range of 16 – 64 points) was 32.88 in all the monitored seniors, which means a high level of fear of falling. The average score among seniors with a positive anamnesis of a fall was significantly higher (37.5) than in seniors without a history of falls (30.9). As many as 88.5% of studies declare that seniors with positive fall anamnesis had higher level of fear of falling than seniors who did not have any history of falls in the last year [7, 8]. Our study revealed a weak positive correlation between the number of falls and the level of fear of falling ($R=0.36$). A survey on a sample of Czech seniors proved that the level of fear of falling was significantly higher in seniors who fell repeatedly in the previous year [9].

A more marked fear of falling in our sample was recorded in women than in men. Female gender has been associated with a higher level of fear of falling in several research studies [10]. Women demonstrate a higher level of fear despite the fact, that the prevalence of falling in our sample was higher among men. This finding indicates that fear of falling does not necessarily have to be associated with previous falls [11]. The phenomenon of fear of falling must be seen in a certain dichotomy. On the one hand, it has a protective character, because it forces seniors to be more careful and to avoid risk while performing routine activities. On the other hand, the fear of falling limits seniors to the extent of avoiding even activities that they are capable of performing, which results in lowering their quality of life [12]. A higher risk of falling and an overall worsening of physical condition, cognitive functions and a deterioration of mental condition was paradoxically detected in seniors who suffered a higher level of fear of falling [13]. Persons who are more afraid of falling are more likely to limit their activity and reduce their social interactions, and they thus have higher risk of developing depression [14]. The level of experienced fear of falling significantly influences quality of life. The strongest impact was proven in the area of physical functioning. Quality of life in the area of subjectively perceived health and functioning in roles was less affected but was still lowered with statistical significance [15]. The stated results explain why the highest fear of falling score was observed in seniors living in social facilities and the lowest fear of falling score was found among seniors living with a partner, where mutual support and help is presupposed.

CONCLUSION

Fear of falling is a problem that significantly affects Slovak seniors. It occurs among community dwelling seniors and even more strongly in seniors living in institutional care. From the point of view of preventability, it is crucial to know the relationship between fear of falling and its potential predictors. Our study confirmed that seniors who fell in the previous year suffer from a significantly higher level of fear of falling. The number of falls positively correlates with the level of fear of falling. Fear of falling may have a protective character, because it prevents risky behaviour by a senior. However, if it significantly limits seniors'

physical activity, prevents the maintaining of their social contacts and worsens their mental condition, seniors may enter a vicious circle which ultimately leads to physical and mental decay, the emergence of a frailty syndrome and the necessity of institutional care. Information regarding the occurrence of falls in the anamnesis represent a reason for use of the FES I scale aimed at detecting the level of falling during concrete daily activities and early implementation of effective interventions to lower the level of fear of falling and support of self-confidence while performing common daily activities. Given that the high level of fear of falling was also detected in seniors without a positive fall anamnesis, it is important that screening for fear of falling becomes a common part of preventive examinations and nursing assessment.

ETHICAL ASPECTS AND CONFLICT OF INTERESTS

The authors have no conflict of interests to declare. The study was conducted with the approval of the Ethics Committee of the TnUAD in Trencin, No. 2/2021.

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REFERENCES

- [1] Národné centrum zdravotníckych informácií. Zdravotnícka ročenka Slovenskej republiky. Bratislava, 2021, pp 126-131.
- [2] Ates Bulut, E., Soysal, P., Isik, A.T. Frequency and coincidence of geriatric syndromes according to age groups: Single-center experience in Turkey between 2013 and 2017. *Clin. Interv. Aging*, vol. 13/issue 4, pp 1899–1905, 2018.
- [3] Kumar, A., Carpenter, H., Morris, R., Iliffe, S., Kendrick, D. Which factors are associated with fear of falling in community-dwelling older people? *Age and Ageing*, vol. 43, pp 76–84, 2014.
- [4] Lavedán A., Viladrosa M., Jürschik P., Botigué T., Nuín C., Masot O., Lavedán R. Fear of falling in community-dwelling older adults: A cause of falls, a consequence, or both? *PLOS ONE*, pp 1-14, 2018.
- [5] Chippendale T., Boltz, M. The Neighborhood Environment: Perceived Fall Risk, Resources, and Strategies for Fall Prevention. *The Gerontologist*, 55, pp 575–583, 2015.

[6] Delbaere K, Close JC, Mikolaizak, AS, Sachdev PS., Brodaty, H, Lord SR. The Falls Efficacy Scale International (FES-I). A comprehensive longitudinal validation study. *Age Ageing*, vol. 39/issue 2, pp 210–216, 2010.

[7] MacKay S., Ebert P., Harbidge C., Hogan D.B. Fear of Falling in Older Adults: A Scoping Review of Recent Literature. *Canadian geriatrics journal*, vol. 24/issue 4, pp 379-394, 2021.

[8] Pellicer-García B., Antón-Solanas I., Ramón-Arbués E., García-Moyano L., Gea-Caballero V., Juárez-Vela R. Risk of Falling and Associated Factors in Older Adults with a Previous History of Falls. *Int. J. Environ. Res. Public Health*, 17, 2020.

[9] Nemček D., Bobkowska M., Kurkova P., Kralova E. Fall history and fall related concerns in community dwelling older Czech adults. *KONTAKT X:X*, DOI:10.32725/kont.2022.004, Ahead of Print.

[10] Schoene D., Heller C., Aung Y.N., Sieber C.C., Kemmler W., Freiberger E. A systematic review on the influence of fear of falling on quality of life in older people: is there a role for falls? *Clinical Interventions in Aging*, 14, pp 701–719, 2019.

[11] Jørstad EC, Hauer K, Becker C, Lamb SE. Measuring the psychological outcomes of falling: a systematic review. *J Am Geriatr Soc.*, vol 53/issue 3, pp 501-10, 2005.

[12] Hamed K, Roaldsen KS, Halvarsson A. Fear of falling serves as protection and signifies potential danger : a qualitative study to conceptualise the phrase “fear of falling” in women with osteoporosis. *Osteoporos Int*, vol. 32/issue 12, pp 2563-2570, 2021.

[13] Litwin H, Erlich B, Dunsky A. The complex association between fear of falling and mobility limitation in relation to late-life falls: a SHARE-based analysis. *J Aging Health*. vol 30/Issue 6, pp 987-1008, 2018.

[14] Boltz M, Resnick B, Capezuti E, Shuluk J. Activity restriction vs. self-direction: hospitalised older adults’ response to fear of falling. *Int J Older People Nurs*. vol. 9/ issue 1, pp 44 – 53, 2014.

[15] Bobkowska M., Matišáková I. Strach z pádu a kvalita života seniorov: Systematický literárny prehľad. *Zdravotnícke listy*, vol. 8/issue 3, pp 14-22, 2020.

GENERAL SELF-EFFICACY AMONG COMMUNITY DWELLING OLDER ADULTS AND NURSING HOME RESIDENTS: A CROSS-SECTIONAL SURVEY

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ABSTRACT

General self-efficacy (GSE) encourages health promoting behaviour and is useful construct from positive psychology used also in patient's education. Unfortunately, there is currently limited evidence on GSE among elderly in Slovakia. This study aims to explore GSE and its determinants among community dwelling elderly and elderly residing in nursing homes with focus on examining the gender, age and „living situation” differences of GSE. Methods: Data were collected by Slovak version of General Self-efficacy Scale (Schwarzer, Jerusalem, 1981) from the Survey of Fear of falling among community dwelling elderly. Non-parametric tests were used to explore relation between GSE and gender, age, activity of daily living, living situation and mobility. Results: The participants older than 75 years had GSE score significantly lower than younger older adults (26.6 ± 8.1 vs. 23.7 ± 6.3 ; $p < 0.001$). There was a significant difference between elderly living in community and nursing home residents (21.1 ± 5.7 vs. 27.2 ± 7.4 ; $p < 0.001$). Age, need for constant health/social care and fear of falling were shown as significant determinants of GSE. Conclusion: More attention should be paid for the poor GSE of elderly above 75 years and nursing home residents e.g. when applied for patient's education. Results of first pilot study of GSE among elderly in Slovakia sounds with results of previously published research. Further research is recommended that focuses on the GSE of older adults and more health-related variables and outcomes.

Keywords: *General self-efficacy, community dwelling older adults, nursing home residents*

INTRODUCTION

Ageing of the population of Slovakia as a long-time consequence of reproductive behaviour and improving life conditions in various areas (education, science, hygiene, healthcare) is an irreversible process in the scope of the future decades. In the following 50 years Slovakia will transform from one of the youngest countries of the European Union into one of the oldest states [1]. That

is why, in a long-term perspective the healthcare system should focus on seniors. We see opportunities mainly in the area of health support and prevention aimed at reduction of events that lead to worsening of the quality of life of seniors on individual level and result in high treatment expenses on economical level. In some cases they lead to a long-term (often lifelong) institutional care.

The ability of health care professionals to support healthy aging requires the identification of factors that indicate poor health-promoting behaviors as well as preventable adverse events, which mean serious complication for seniors. Correspondingly, there has been increasing focus on the role of positive psychological resources, which are expected to play a role in reducing suffering on the health of older adults. General self-efficacy (GSE) is based on Bandura's theory of self-efficacy, reflecting the degree of overall self-confidence that individuals perceive when dealing with difficult situations. Self-efficacy influences the way individuals feel, think, self-motivate, and behave [2]. Older adults with lesser GSE have consistently been found to limit their involvement in activities of daily living and reduce their efforts in activities they do [3]. In case of a fear of falling (FOF) the situation is identical. FOF is defined as lasting concern about falling that leads to an individual avoiding activities that one remains capable of performing [4]. It is a frequent and serious problem of a senior population, with significant impact on senior's somatic and mental health, style of life and its quality [5]. Though self-efficacy had been studied in different areas (including balance, falls, healthcare adherence) among older adults, studies on general self-efficacy in this group are rather rare. Similarly, there is a lack of data in the FOF and its correlates in the group of older adults in Slovakia.

In recognition of this, we aimed to map: the level of GSE, FOF, mobility and self-rated health; age and gender differences in GSE; whether older adults' who receive health/social care services have lower GSE than those who do not, and the relationship between FOF and GSE.

MATERIAL AND METHODS

Design

This was a cross-sectional survey involving 292 older adults consecutively recruited from a community (via senior centers) across Slovakia and nursing home residents (only Western and Middle part of Slovakia). The participants were ambulant (with or without gait aid) older adults (65 + years) who were well-oriented in time, place and person.

The participant's socio-demographic variables (age, gender, highest educational attainment, residence) were documented. The Falls Efficacy Scale-International, Timed up and go test, the General Self-efficacy Scale, and EQ VAS were used to collect data on fear of falling, mobility, self-rated health, and general self-efficacy among the participants. All the questionnaires/measures have been

cross-culturally adapted in Slovakia [6] The questionnaires were either self- or researcher administered depending on each participant preference. Measurements were always administered by trained members of the research team. Collection of the data was conducted by the authors of the study, students of nursing and sisters working in nursing homes. Written consent was obtained from each of the participants after the aims of the study had been explained to them. This research was conducted in accordance with the Declaration of Helsinki. The Ethic committee of The Alexander Dubcek University in Trencin approved the study (i.no.2/2021)

Research instruments

General Self-Efficacy Scale is designed to assess the general sense of perceived self-efficacy with the aim of predicting coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. It is a 10-item self-administered scale with a 4-point Likert scale response options. The sum of the responses to all the 10 items are obtained to yield the final composite score which ranges from 10 to 40 with higher scores indicating higher self-efficacy. Each item refers to successful coping and implies an internal-stable attribution of success. It has acceptable internal consistency ($\alpha = 0.76-0.90$), and criterion-related validity is well documented [2].

The Falls Efficacy Scale-International [6] is a 16-item scale developed for measuring fear of falling among older adults. It has four-point Likert scale responses rated from 1–4. It includes a balanced range of items assessing basic activities that provoked: low and medium levels of fear in some people (e.g., getting dressed, going up or down stairs) and high levels of fear in some people (e.g., walking in a slippery surface). Scores of the individual items are summed to get the total score which ranges from 16 (no concern about falling) to 64 (severe concern about falling). The scoring is interpreted thus: low concern (16-19 points), moderate concern (20-27 points) and high concern (28-64 points) Scale exhibited acceptable internal consistency (Cronbach's $\alpha = 0.92$), test-retest reliability (ICC = 0.83) and construct validity ($r = 0.97$) [7].

The Timed Up and Go (TUG) test is a simple, quick, and widely used clinical performance-based measure of mobility and balance [8].

The EQ VAS records the patient's self-rated health on a vertical visual analogue scale, where the endpoints are labelled 'The best health you can imagine' and 'The worst health you can imagine'. The VAS can be used as a quantitative measure of health outcome that reflect the patient's own judgement.

Statistics

The empirical data were processed in the statistical programme STATISTICA. For statistical processing of the data we used sums, average values

(so-called average point score, \bar{x}) and medians calculated on the basis of the responses of participants. Non-parametric Mann-Whitney U-Test was used for determination of the significance of differences in the GSE. For verification of the association between the GSE and FOF we used the Spearman’s correlation. Internal consistence of the scales was detected by Cronbach’s α .

RESULTS

Among the 292 participants, 83 (28.4%) were males, 209 (71.6%) were females. Bigger part of the sample consisted of younger seniors aged 65 – 75 years (52.4 %). More than half of the elderly were community dwelling (67.5%) and the rest of the sample reside in nursing homes (32,5%). The majority of participants were high school graduates (from 11 to 12 years of schooling) (97%). The elderly’s GSE score was 25.4 ± 7.16 points and 167 (54.2%) scored under the median value. The average score of the FOF reached the value of 33 ± 12.9 points. Lower level of the FOF was recorded in 42 (14.4 %) of seniors, average score was reached by 84 (28.8 %) of seniors and high level of the fear of falling was experienced by 166 (56.8 %) seniors.

Table 1. Characteristics of older adults

Variables	n					
Age	292		65-75 years	75 < years		
			153/52.4%	139/47.6%		
Gender	292		Males	Females		
			83/28.4%	209/71.6%		
Residence	292		Community dwelling	Nursing home		
			197/67.5%	95/32.5%		
			x	SD	X_m	Min - max
GSE			25.4	7.2	25	11-40
FES-SK			33	12.9	31	16-64
Self-rated health*			66.9	17.64	70	20-100
TGUG	196		27.6	13.7	21	8-84

*VAS scale – part of EQ-5D-5L questionnaire; n – number of participants; \bar{x} – Average; SD – Standard deviation; X_m – Median; Min-max – Range

The differences and correlation between surveyed variables and GSE are comprehensively demonstrated in table 2.

Table 2. Differences and correlation of GSE and selected variables

Variables	n	GSE			p
		x	SD	X_m	
Age	292				
65-75 years		153	26.6	27	<0,001*
75 < years		139	23.7	23	
Gender					
Males		83	26.4	8.1	0.087
Females		209	24.8	7.1	
Residence					
Home		197	27.2	7.4	<0,001*
Nursing home		95	21.1	5.7	
FOF		R	CI		
TS FES-SK	-0.52	-95%	+95%	<0,001*	
		-0.6	-0.43		

n – number of participants; x – Average; SD – Standard deviation; X_m – Median

R – Spearman's correlation coefficient, p – value of the testing criterion, p <0,05*; CI – Confidence interval

DISCUSSION

Previous studies had shown that GSE can promote elderly people to develop healthy living behaviors and help delay the development of diseases and complications it plays a key role in the individual behavior change, and can improve the self-confidence and sense of achievement of the elderly. [9] Participants' median of GSE score was 25 of the range of the scoring spectrum (10–40, and 54,2% of participant scored under the median, depicting a lower level of general self-efficacy in their age group. This may be a cause for concern considering the reported adverse effects of poor self-efficacy to health and well-being of elderly. Participants in our study exhibited high level and prevalence of fear of falling. High prevalence of FOF had been reported in neighbor countries and over the world [10] and this had been attributed to the negative impact of ageing process on the body systems [11]. Our study found that males had higher GSE than females, although it has not reached statistically significant level. It may

be caused by different position of women in the society in the past, when seniors participating in this study matured and entered productive age of life. Concept of a man capable of providing for his family was wide-spread. Men were raised and supported in the spirit of independence and ambition, they were expected to dominate in the society, while women were educated in the spirit of subordinate position and their achieving of higher education was rare [12]. We assume that such attributes of traditional roles could play a certain role in creation of the differences in the GSE in a gender context. It's worthy to explore gender difference in GSE. In the present study, participants' age had significant negative correlation with their GSE and positive correlation with their FOF. This may not be unexpected considering the deleterious effect of ageing on the psychological, physical, and social health of older adults [13] which would understandably reduce their GSE general self-efficacy and increased their FOF. Also the earlier evidence indicates that global measures of self-efficacy show age differences, with older adults having lower self-efficacy and greater concern about their performance than younger adults. Our findings shows that older adults receiving health/social services in nursing homes demonstrated statistically significantly lower GSE than community dwelling counterparts (27.2 ± 7.4 vs 21.1 ± 5.7 , $p < 0.001$). Whitehall et al. [14] published similar findings in a systematic overview and meta-analysis, where seniors scored as follows: older adults receiving care provided by primary care providers had the greatest GSE score (31.80), followed by inpatients in a rehabilitation ward (30.77), then those attending education courses (29.39), then those attending an outpatient clinic (29.33), followed by residents of nursing homes (27.13), and lastly, those receiving acute medical inpatient care (27.05). Community dwelling seniors in our conditions, who are relatively active and healthy (or well-compensated) reach lower average values of the GSE score than nursing home residents or hospitalized seniors with acute health complications, which is a significant finding, which may be caused by the fact that the health care provision within nursing homes varies substantially across countries. Some nursing homes have disposal of rehabilitative services while other only very limited or none. There are also other underlying factors contribute to the GSE of elderly in nursing homes such as adaption to facility, decision to enter, the quality of care, length of stay, and social engagement influence the GSE of their residents. Participant's FOF had significant negative correlation their GSE. However, no previous study is available for referencing on the relationship between FOF and GSE. The significant relationship between fear of falling and GSE (described as an individual's overall belief in his/her ability to succeed), a construct that confers physical, functional, cognitive, behavioral and psychological benefits would also understandably reduce FOF. In case of FOF, the GSE is implemented as a universal prerequisite of specific fall efficacy associated with falling, which represents a resilience factor. Such findings led Tinetti et al. to the use of the fall efficacy concept in their research. Using Bandura's self-efficacy theory, interpreted FOF as low perceived self-efficacy in performing various activities, taking into account one's personal risk to experience a potential fall. Those who reported a significant lack of confidence were viewed to have a FOF. This initial conceptualization of falls efficacy and

fear of falling used in parallel led to much inquiry towards managing falls and FOF [15].

Limitations

The participants were conveniently recruited, and this could have to some extent affected the generalizability of the present results. The participants were recruited irrespective of their comorbidity thereby making it difficult ascertaining the roles of comorbidities on the levels and interrelationships between the constructs. The cross-sectional nature of the study did not allow the establishment of direction of causality with findings only reported based on the observed relationships and the results of presented study should be interpreted with caution.

CONCLUSION

In conclusion, our study found that more than 54 % of participant scored under the median of GSE score, depicting a lower level of general self-efficacy in this age group. This may be a cause for concern considering the reported adverse effects of poor self-efficacy to health and well-being of elderly. Participants in our study also exhibited high level (33.1 ± 12.9) and prevalence of the FOF. In this regard, the seniors are threatened by higher risk of falling, social isolation, anxiety and depression, institutionalization and worsening of the quality of their life. The GSE of younger adults (65-75 years) was significantly higher than that of the older (75+). The results of this study highlight also the slight gender difference in GSE among elderly. The significant correlates of GSE of elderly are age, living condition/residence and FOF. These results substantiate the hypothesized role of self-efficacy in FOF and underscore the need to consider ways of enhancing self-efficacy as well as fall efficacy interventions aimed at reducing FOF in community dwelling elderly and nursing home residents. The high FOF and low GSE in the sample are worrisome and require attention of relevant stakeholders (including the government, health professionals, civil society and so on).

CONFLICT OF INTERESTS

The authors have no conflict of interests to declare.

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REFERENCES

[1] Šprocha B., Ďurček P. Starnutie populácie Slovenska v čase a priestore. Bratislava: Prognostický ústav, Centrum spoločenských a psychologických vied SAV, Katedra ekonomickej a sociálnej geografie, demografie a územného rozvoja, Prírodovedecká fakulta Univerzity Komenského. 2019. 100 s. ISBN 978-80-89524-39-6.

[2] Schwarzer R, Jerusalem M. generalized Self-Efficacy scale. In J Weinman, S. Wright and M. Johnston. Measures in health psychology: A user's portfolio. Causal and control beliefs. 1995 (pp.35-37). Windsor,UK:NFER-NELSON

[3] Easom, L. R. Concepts in health promotion. Perceived self-efficacy and barriers in older adults. *Journal of Gerontological Nursing*, 2003; 29 (5),11–19.

[4] Hughes CC., Kneebone II. et al. A theoretical and empirical review of psychological factors associated with falls-related psychological concerns in community-dwelling older people. *Int Psychogeriatr*. 2015; 27 (7):1071-1087.

[5] Schoene D., Heller C., et al. A systematic review on the influence of fear of falling on quality of life in older people: is there a role for falls? *Clin Interv Aging*. 2019; 24 (14): 701-719.

[6] FES-I translated to Slovak by Bobkowska M; Poliaková N; Králová E. 2021 from Yardley L, Todd C, et al. 2005; doi: <https://doi.org/10.1093/ageing/afi196>.

[7] Delbaere K., Close J. et al. The falls efficacy scale international (FES-I). A comprehensive longitudinal validation study. *Age and Ageing*. 2010; 39: 210–216.

[8] Podsiadlo D, Richardson S. The timed “up & go”: a test of basic functional mobility for frail elderly persons. *J Am Geriatr Soc*. 1991;39(2):142–148.

[9] Wang Y, Xu L. et al. Gender Difference in General Self-Efficacy among Young-Old Elderly Aged 60-74 in Rural Shandong China: A Cross-Sectional Survey. *Int J Environ Res Public Health*. 2019 Dec 12;16(24):5070.

[10] Marques-Vieira C.M.A et al. Cross-cultural validation of the falls efficacy scale international in elderly: Systematic literature review, *Journal of Clinical Gerontology and Geriatrics*,2016; 7 (3): 72-76.

[11] Okoye E.C, Onwuakagba I. U. et al. Social Support, General Self-Efficacy, Fear of Falling, and Physical Activity Among Older Adults in a Middle-Income Country. *Gerontol Geriatr Med*. 2022; 8:23337214221097750.

[12] Hauch G. Gender and revolution in Europe, 19th-20th centuries. *Encyclopédie d'histoire numérique de l'Europe* [online], ISSN 2677-6588, published on 22/06/20. consulted on 15/09/2022. <https://ehne.fr/en/node/12343>

[13] Anand A. Understanding depression among older adults in six low-middle income countries using WHO-SAGE survey. *Behavioral Health*, 2014; 1(2), 1–11.

[14] Whitehall L. et al. The General Self-Efficacy of Older Adults Receiving Care: A Systematic Review and Meta-Analysis. *Gerontologist*. 2021;61(6):e302-e317.

[15] Hadjistavropoulos T, Delbaere K. et al. Reconceptualising the role of fear of falling and balance confidence in fall risk. *J Aging Health*. 2011;23(1):3-23.

JOB SATISFACTION AND STRESS FACTORS AMONG TEACHERS AND HEALTHCARE WORKERS IN KOSOVO: A COMPARATIVE STUDY

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ABSTRACT

Background: Healthcare workers and teachers represent two professional categories experiencing high levels of occupational stress. The purpose of the present study was to assess job satisfaction and stress factors among teachers and healthcare professionals in Kosovo, particularly focusing on patterns arising in terms of gender, age or working experience.

Subjects and methods: This cross-sectional study included 508 primary and secondary school teachers as well as 300 health workers with a mean age of 41.28 years ($SD = 11.19$). They completed a self-report questionnaire designed by the authors for the purpose of the research.

Results: Results revealed high job satisfaction for both teachers and healthcare workers, but teachers were significantly more satisfied as compared to healthcare workers. Also, weak stress factors were reported by both groups, but healthcare workers scored significantly higher than teachers across all factors except for 'physical working conditions' and 'difficult cases/tasks to solve'. The strongest stressor reported by both teachers and healthcare workers was 'inadequate salary', while the weakest one was 'Family problems'. Teachers and healthcare workers in Kosovo do not represent high risk categories for job-related stress; indeed, factors were rated as quite weak. However, results should be carefully considered particularly as regards findings on stressors, as there might be other more relevant, context/culturally related stressors which have not been investigated.

Conclusion: Findings on job satisfaction also require further investigation, particularly because of paradoxical results such as teachers being more satisfied

than healthcare workers but less likely to report that they would choose the same job again.

Keywords: *Job satisfaction, stress factors, teachers, healthcare, Kosovo*

INTRODUCTION

Job satisfaction and workplace stress have been extensively investigated particularly as regards two job categories considered at risk for high stress levels: healthcare workers and teachers [1]. Studies have consistently demonstrated that the teaching profession is highly demanding and therefore very stressful with findings being replicated worldwide and across different cultures [2]. Figures would go as high as 10–40% of teachers reporting high stress levels in European countries [3]. Stress factors related to the teaching profession include: managing student behavior [4], poor relationship with colleagues [4]; job demands; workload [4]; time pressure [4]; working experience [5]; educational level [5]; lack of support from co-workers, friends and family [4], [5] and lack of control [5].

Similarly, to teachers, healthcare professionals also experience high job stress and are at a higher risk for burnout. Based on Lyndon (2015) burnout syndrome is increasingly recognized among healthcare professionals estimating that it may affect up to 10–70% of nurses and 30–50% of physicians, nurse practitioners, and physician assistants [6]. Birhanu (2018) cites several studies that revealed high levels of stress among nurses in Sweden (80%), Saudi Arabia (68.2%), India (73.5%), the Netherlands (55%), Belgium (40.4%) and Iran (34.9%) [7].

Koinis et al (2015) cited findings of Cooper et al. (2002) who rated among the top workplace stress factors: time pressure, deadlines, poor working conditions, excessive workload, prolonged working hours, conflict between different beliefs, interpersonal relationships and maladministration [8]. To summarize research suggests the need to investigate and provide further understanding of stress factors among these two job categories: Teachers and healthcare workers. This kind of research is particularly important in countries such as Kosovo, due to the considerable challenges in education and healthcare sectors, resulting from sociopolitical transitions in the recent years. Indeed, some existing research from Kosovo demonstrates high stress levels among teachers and healthcare workers. Shkëmbi, Melonashi and Fanaj (2015) found that 33.2% of Kosovo teachers (sample of 799 teachers) reported high rates of occupational stress. Workplace stress was significantly predicted by place of residence and level of education but not age, gender, marital status, or working experience [9]. The most frequently reported stressors were inadequate wages (36.8%), physical working environment (30.1%), and undisciplined students (26.2%) [7]. Bujari (2019) found that 38.6% of teachers participating in the study (sample of 420 participants) experienced moderate stress, while 5.8% high or extreme levels, with women being significantly more stressed than men [10]. Bujari (2019) reported

the following workplace stress factors: working conditions, salary, relationships with colleagues, gratitude and appreciation by the director, pressure and workload, communication with students, student behavior, student motivation, communication with the students' parents etc. [10].

Even higher rates of job-related stress have been reported among healthcare professionals. Bardhi (2016) found that 63.3% of doctors and nurses (sample of 300 participants) stated that they experience stress during working hours and mentioned the following factors: lack of support and safety, low wages, and work overload [11]. Kraja et al. (2018) examined 200 employees of different profiles: doctors, nurses and administrative employees of Family Medicine in Prizren and found as main causes of stress and burnout – inadequate vacations (18 %), lack of gratitude (12.5 %), insecurity at work (9.5 %), excessive work (8%), inadequate payment (7%) etc. [12].

Sopi (2019) examined fifty randomly selected nurses (ages 41.02 yr.) at the Pediatric Clinic of the University Clinical Center of Kosovo and revealed that the majority were not satisfied with the salaries (58%) and payment for extra work (64 %), examination rooms (56%), offices (48%), or the quality of food (84%) [13]. Recently, Podvorica et al. (2020) examined 90 nurses (45 working in Emergency Clinic and 45 working in Central Intensive Care and reported that 81% of participants were classified with moderate to high levels of stress [14]. The purpose of the present study was to assess job satisfaction and stress factors among teachers and healthcare professionals in Kosovo.

METHODOLOGY

Study sample and Procedure

The sample included teachers and healthcare workers from Kosovo. The schools and healthcare facilities chosen for the purpose of the study were officially contacted explaining the purpose of the research, and asking for permission to conduct study in those settings. Authorities at each institution gave written permission to contact the personnel. Researchers also asked each participant to sign the informed consent form. Authors declare compliance with all ethical guidelines for data collection through self-reported questionnaires for adults. Paper and pencil questionnaires were administered to consenting participants and the data collection procedure was completed in two weeks. Approval for this research was obtained from the Ethical-Professional Committee of the University Clinical Hospital Service of Kosovo.

The final sample of teachers included 259 teachers from 20 primary schools and 249 teachers from 19 high schools. The response rate for teachers' sample was 65 %. The sample of healthcare workers included 300 participants: 32 medical doctors, 22 psychiatrists, 212 nurses, 12 psychologists, 4 social workers (missing data for 18). The response rate for healthcare workers was 55 % The

healthcare workers were employed in a. one general family health center (N=75), b. seven mental health centers (N=153), c. one special residential facility (N=42) and d. one general hospital (N=30).

In terms of gender composition, the teachers sample included 172 men and 328 women, while the healthcare sample included 90 men and 206 women. Age of participants ranged from 21 to 65 with mean age of 41.28(SD=11.19) for teachers and from 19 to 64 with mean age of 41.20 (SD=9.34) for healthcare workers. There were significant age group differences between the samples of teachers and healthcare workers ($F(4) = 10.744, p = .03$). There were significant gender differences in both samples, but no significant gender differences between samples $\chi^2(4) = 1.344, p = .24$.

Measuring Instruments

The measuring instruments included one self-report questionnaire designed by the authors for the purpose of the research with sociodemographic factors, one question about job satisfaction, one question about choosing same job again and ten questions about most stated work-stress factors, from related research. The question was ‘In your opinion which of the following factors are most stressful to you? 10 factors included 1. Lack of gratitude from others for the work you do; 2. Lack of security / Threats; 3. Work overload; 4. Family problems; 5. Coping with difficult cases; 6. Difficult cases/tasks to solve; 7. Unsatisfactory relationship with colleagues; 8. Lack of respect from supervisors; 9. Physical working conditions and 10. Inadequate salary. The items were rated on a 5-point Likert scale from “not at all” (0) to “to much” (4). The instrument was piloted in a sample of 10 teachers and 10 healthcare workers to ensure that target groups have proper understanding of questionnaire items. No issues were reported during the process.

RESULTS

Job satisfaction and stress factors: Teachers versus healthcare workers

Regarding job satisfaction results revealed mean values of 4.45 for teachers and 4.22 for healthcare workers (range 1-5), suggesting high job satisfaction for both groups. More specifically 55.8% of teachers and 52.7% of healthcare workers reported being ‘satisfied a lot’. Additionally, almost half the sample (45.6% of teachers and 56.7% of healthcare workers) reported they would choose again the same job (5 in a range 1-5). Mann-Whitney test revealed significant differences between teachers and healthcare workers for satisfaction scores ($Md_{teacher}=5, N=500; Md_{health}=4, N=300; Z=-2.023, p<.04$); teachers showed higher mean ranks. Mann-Whitney test revealed significant differences between teachers and healthcare workers for choosing again same job ($Md_{teacher}=4, N=500; Md_{health}=5, N=300; Z=-2.735, p<.00$); healthcare workers showed higher mean ranks. Mann-Whitney test revealed significant gender differences in satisfaction scores only for teachers ($Md_{females}=5, N=328; Md_{males}=4, N=172; Z=-2.950,$

$p < .00$) females showed higher mean ranks for job satisfaction and were also more likely to report choosing again same job ($Md_{\text{females}}=5$, $N=328$; $Md_{\text{males}}=4$, $N=172$; $Z=-3.047$, $p < .00$). Kruskal-Wallis analysis revealed significant differences by age-group, for teachers $X^2(4, n=493) = 10.532$, $p < .03$, i.e., the age group 26 to 35 years old had the significantly highest mean ranks scores for job satisfaction as compared to the other three groups. Kruskal-Wallis analysis revealed significant differences by age-group, for healthcare workers $X^2(4, n=275) = 31.067$, $p < .00$, as the age group 18-25 years old had the highest mean ranks scores of job satisfaction as compared to the other three groups.

Kruskal-Wallis analyses revealed significant differences by working years, for teachers $X^2(4, n=463) = 9.958$, $p < .04$; teachers with 0-5 working years had the highest mean rank scores of job satisfaction as compared to the other four groups.

Kruskal-Wallis analysis revealed significant differences by working years also for healthcare workers $X^2(4, n=281) = 21.474$, $p < .00$; as healthcare workers with 0-5 years' experience had the highest mean rank scores of job satisfaction as compared to the other four groups.

No significant differences were found in terms of age-group or working years as regards 'choosing again the same job'; the finding was confirmed both for teachers or healthcare workers.

Evaluation of stress factors in the range from 1-5, has revealed perceptions of weak stress factors both among teachers (mean of 1.19) and healthcare workers (mean of 1.59). More specifically stress factors for teachers in descending order (strongest to weakest) include: Inadequate salary (1.81), Difficult cases/tasks to solve (1.69), physical working conditions (1.59), Coping with difficult cases (1.50), work overload (1.04), Job insecurity/threats (0.70) etc. Similarly, stress factors for healthcare workers include: Inadequate salary (2.17), Coping with difficult cases (1.95), work overload (1.70), Difficult cases/tasks to solve (1.68), Job insecurity/threats (1.63) etc. The weakest stress factor on both samples was 'Family problems'. Mann-Whitney test revealed significant differences of stress factor scores between samples as healthcare workers scored higher than teachers across all factors except for physical working conditions and Difficult cases/tasks to solve.

Patterns of stress factors by gender, age group and working experience

Mann-Whitney test revealed no significant gender differences of total scores of the stress factors for both samples. Kruskal-Wallis analysis revealed significant differences by age-group for teachers in the level of stress factors $X^2(4, n=492) = 13.429$, $p < .00$; as age groups 46-55 years old and 36-45 years old, had the highest mean ranks as compared to the other age groups. However, no significant differences by age-group were found for healthcare workers in the total level of stress factors. Kruskal-Wallis analysis revealed significant differences by age-

group for teachers in three stress factors including ‘difficult cases/tasks to solve’, ‘unsatisfactory relationship with colleagues’, and ‘inadequate salary’. More specifically Kruskal-Wallis analysis revealed that age groups 46-55 years old and 56-65 years old had highest mean ranks in ‘Difficult cases/tasks’, $X^2(4, n=492) = 15.304, p < .00$. Also age groups 36-45 years old and 46-55 years old had the highest mean ranks for unsatisfactory relationship with colleagues, $X^2(4, n=492) = 9.914, p < .00$. These same two age groups also had the highest mean ranks of ‘inadequate salary’ as compared to the other groups.

As regards healthcare workers Kruskal-Wallis analysis revealed significant differences by age group only in one case; age groups 26-35 years old and 56-65 years old had the highest mean ranks for Job insecurity/threat as compared to the other groups, $X^2(4, n=275) = 13.709, p < .00$.

As regards working experience, Kruskal-Wallis analyses revealed significant differences in total stress factors for teachers, as ‘21-30 years’ group had the highest mean ranks as compared to the other groups $X^2(4, n=463) = 12.435, p < .01$. Differences were also found for healthcare workers, but the group scoring highest was ‘11-20 years’ category $X^2(4, n=463) = 29.545, p < .00$.

As regards analysis on specific stress factors, Kruskal-Wallis analysis revealed significant differences by working experience for teachers in two stress factors: Difficult cases/tasks to solve and Lack of gratitude by others. Kruskal-Wallis analysis revealed that teachers with 21-30 years of experience had highest mean ranks on ‘Difficult cases’ as compared to all other groups, $X^2(4, n=281) = 18.348, p < .00$. Similarly, teachers with 11-20 years of experience had highest mean ranks for ‘Lack of gratitude’ as compared to all other groups $X^2(4, n=281) = 26.975, p < .01$.

As regards healthcare workers, Kruskal-Wallis analyses revealed significant differences by working experience for five factors. Healthcare workers with 11-20 years of experience had highest mean scores for Job Insecurity/Threat $X^2(4, n=281) = 26.768, p < .01$; Work Overload, $X^2(4, n=281) = 19.261, p < .01$; Unsatisfactory relationship with colleagues, $X^2(4, n=281) = 14.363, p < .01$ and Working physical conditions, $X^2(4, n=281) = 27.303, p < .01$. Conversely healthcare professionals belonging into the category of 6-10 years of experience had significantly highest mean ranks for Family problems, $X^2(4, n=281) = 45.448, p < .01$; and Lack of supervision, $X^2(4, n=281) = 41.677, p < .01$.

Kruskal-Wallis analysis revealed significant differences by work settings of healthcare participants in the total level of stress factors $X^2(4, n=799) = 116.754, p < .01$; whereas mental health healthcare workers had the significantly highest mean ranks as compared to the other groups (residential institution, general hospital and family health center). Healthcare workers in residential institution had the significantly highest mean ranks as compared to the other groups for stress factors difficult cases/tasks to solve $X^2(4, n=800) = 93.659, p < .00$

and Coping with difficult cases $X^2(4, n=800)=42.696, p<.00$ and healthcare workers of general hospital had the significantly highest mean ranks for inadequate salary $X^2(4, n=800)=13.977, p<.00$.

Correlations between satisfaction and stress factors

Correlations between job satisfaction and stress factors for the overall sample revealed weak but significant negative relationships; the strongest negative correlation was to the total score ($r = -.277$), while the 3 most strongly related stress factors included family problems, unsatisfactory relationship with colleagues and work overload. Similar correlational patterns were found for men and women, examined separately; the only deviance was for 'inadequate salary' which was not significantly related to job satisfaction among women.

Correlations between job satisfaction and stress factors by professional category, revealed similar patterns; the only exception was for 'inadequate salary' which was not significantly correlated to job satisfaction among healthcare workers.

DISCUSSION

The purpose of the present study was to assess job satisfaction and stress factors among teachers and healthcare professionals in Kosovo. Results showed that more than half the sample among both healthcare workers and teachers report high job satisfaction. Teachers are more satisfied than healthcare workers, but nonetheless healthcare workers are more likely to report that they would choose the same job again. The present study does not provide an explanation of this apparently paradoxical finding, and requires further research into this direction (i.e., exploring reasons why healthcare workers' despite being less satisfied than teachers would choose the same job over again and possible gains). Findings on job satisfaction are not in line with those from the survey of 2017 [15] reporting percentages as low as 46% on job satisfaction; most important this survey also found that only 21.7% of the sample were not looking for a new job. However, findings are in line with Sopi (2009) reporting that 84% of the sample was 'satisfied' or 'very satisfied' [13].

Patterns of age and working experience were also found in terms of job satisfaction. As expected, professionals of a younger age and little experience reported higher job satisfaction. Obviously, they would be less likely to experience job burnout or come to terms with difficult cases, being at the beginning of their career.

The overall tendency in the sample is towards the reporting of weak stress factors (only about 1/5 of the sample report 'very' much or 'a lot' on stress factors). These findings are not in line with similar research reporting stress levels among teachers, e.g., up to 33.2 % [9] or 36.8 % [10] of the sample or health

professionals (e.g., 63.3%-84%) [11], [14] . However, the findings in the present study might be also due to the fact that not all relevant stress factors might be included the instrument was constructed by choosing stressors from existing research). It must be mentioned that findings are also comparable to research from other countries, e.g., 8.8%-32% as reported in Eurofund (2010).

More specifically, both teachers and healthcare workers reported as the strongest stress factor ‘inadequate salary’, and the weakest one ‘family problems’. These factors are quite context specific, as wages of these two professional categories in Kosovo are definitely lower as compared to European standards. However, it should be mentioned that ‘inadequate salary’ was not significantly correlated to job satisfaction among healthcare workers but only among teachers, hinting towards important differences on the impact of the salary within these two professional categories.

On the other hand, ‘family problems’ are considered as the weakest stressor, a finding which is comprehensible within the collectivistic Kosovo values (extended families, stability of this structure etc.). This explanation is supported also by correlation analysis revealing the strongest negative correlation between job satisfaction and family problems for both teachers and healthcare workers.

Healthcare workers scored higher than teachers on all stress factors, except for physical working conditions and difficult cases/tasks to solve, where no differences were found between groups. However even within the healthcare group, mental health healthcare workers had the significantly highest mean ranks in terms of stressors, as compared to the other groups, residential institution, general hospital and family health center, suggesting the need to focus on this specific category of health professionals. Moreover, patterns of stressors differed based on age group and working experience, a finding which suggests that specificity is quite important in terms of understanding stressors and also designing stress management programs for professionals.

CONCLUSIONS

To conclude, the present study provided comparisons between healthcare professionals and teachers in Kosovo, in terms of their job satisfaction and stress factors. Findings suggested high job satisfaction and weak stress factors in these two professional categories. and revealed several similarities and differences between these two crucial professional categories. Although these findings are very positive, they should be carefully considered, as they are not in line with existing research, and could be the result of the measuring instrument used. Follow-up research of a qualitative character might shed light on concepts of ‘job satisfaction’ as socially and culturally constructed in the specific context as well as relevant stress factors.

REFERENCES

- [1] European Foundation for the Improvement of Living and Working (Eurofound). Work related stress.2010. Available on: <https://www.eurofound.europa.eu/publications/report/2010/work-related-stress> [Last accessed: 2020, April 26].
- [2] Kabito G. G.Wami, S. D. Perceived work-related stress and its associated factors among public secondary school teachers in Gondar city: a cross-sectional study from Ethiopia. *BMC research notes*, 2020, 13(1), 1-7.
- [3] Chaplain R. P. Stress and psychological distress among trainee secondary teachers in England. *Educational Psychology*, 2008, 28(2), 195-209.
- [4] Boyle G. J., Borg M. G., Falzon J. M., Baglioni Jr, A. J. A structural model of the dimensions of teacher stress. *British Journal of Educational Psychology*, 1995, 65(1), 49-67.
- [5] Agai–Demjaha T., Minov, J., Stoleski S., Zafirova B. Stress causing factors among teachers in elementary schools and their relationship with demographic and job characteristics. *Open access Macedonian journal of medical sciences*, 2015, 3(3), 493.
- [6] Lyndon A. Burnout among health professionals and its effect on patient safety. Agency of Healthcare Research and Quality, 2016.
- [7] Birhanu M., Gebrekidan B., Tesefa G.,Tareke, M. Workload determines workplace stress among health professionals working in felege-hiwot referral Hospital, Bahir Dar, Northwest Ethiopia. *Journal of environmental and public health*, 2018.
- [8] Koinis A., Giannou V., Drantaki V., Angelaina S., Stratou E., Saridi, M. The impact of healthcare workers job environment on their mental-emotional health. Coping strategies: the case of a local general hospital. *Health psychology research*, 2015, 3(1).
- [9] Shkëmbi F., Melonashi E., Fanaj N. Workplace stress among teachers in Kosovo. *SAGE Open*, 2015, 5(4), 2158244015614610.
- [10] Bujari R. Factors related to teacher's stress of pre-university education. *Knowledge International Journal*, 2019, 34(2), 367-372.
- [11] Bardhi N. Stress at work among health professionals in primary and secondary health care in Gjakova. *European Journal of Research in Medical Sciences Vol*, 2016, 4(1).
- [12] Kraja E., Shahini M., Bardhi N. Analysis and anticipation of stress factors in the workplace.. *Proceedings Book*, 2018, 15.
- [13] Sopi V. Determinants of Job Satisfaction Among the Nurses of the University Clinical Center of Kosovo. *Thesis*, 2019, 8(1), 187-205.

[14] Podvorica E., Rrmoku B., Metaj A., Gashi H. Level of Stress at Nurses Working in Emergency Clinic and Central Intensive Care: University Clinical Centre of Kosovo. *Open Journal of Emergency Medicine*, 2020, 8(02), 39.

[15] EPPC. Available on: http://www.eppc.al/images/SONDAZH_MBI_KENASINE_NE_PUNE_NE_SHQIPERI_KOSOVE_RAPORT.pdf [Last accessed: 2020, September 22]

NEW TECHNOLOGIES USED AS THE EVIDENCE IN HEALTHCARE MALPRACTICE PROSECUTION

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ABSTRACT

New technologies and digitalisation in medical procedures and patient communication have made significant progress in the last three years and have become part of everyday life. The paper examines the above facts and how they impact healthcare providers' obligations and patients' rights. The use of digitalisation has changed and will also change the requirements for the documentation of each medical case. Content and communication between the doctor, other healthcare professionals, patient and provider have a qualitatively new character. The paper points out the advantages and risks of digitalisation in health care. The author argues that new recordings of health care will also change the proof of misconduct in court and administrative proceedings. The author explores the examined issues using the desk research method to analyse recent doctrinal views and the case law.

The author underlines specific areas of investigation on which the plaintiff, the administrative authority and the prosecution must focus. In conclusion, the paper introduces Czech legal practice and case law examples.

Keywords: *digitalisation, health care, malpractice, prosecution, desk research, case law*

INTRODUCTION

Digital technologies, Artificial Intelligence (AI), video conferences, and collaborative sharing of ideas have influenced and changed everyday life during the last twenty years. Science is no exception. Natural science, medicine, and social sciences, including law and ethics, underwent substantial changes accelerated by the SARS-COVID-19 pandemic. Face-to-face communication becomes unnecessary and remote access or social media replaces it. Due to lockdowns and distancing, many people have entirely moved to social networks and the online world. Now they are afraid to make a simple phone call. [1]

However, the digitalisation of society progresses, despite its negative impacts. Medicine and healthcare in practice form the most current examples. The development of science and technology in digital medicine is enormous. The implications for healthcare delivery's ethical and legal issues are immense, as the legal regulation always delays the practice.

The online world and digitalisation have fundamentally changed communication and relationship between healthcare professionals, providers, and patients. Many services moved online. Telemedicine became very popular and even overused during the pandemic. It avoids direct contact between the doctor and the patient, using electronic communications and software for remote consultations and medication management. Supporting and surveillant systems, known as telehealth, facilitated the clinicians' and other healthcare professionals' exchange of patient data and information. Nevertheless, the sensitivity of generated and transferred health-related data and latent risks of misuse or cyber-attacks pose serious challenges. The patients cannot retain control over their data due to the scale, scope and complexity of systems that create, aggregate, and analyse personal health. [2]

Health care professionals and providers face the employees' negligence in data protection and severe threads of blocking intranet and web communications or data thefts. The healthcare services, especially the public, were and are still considered untouchable and impregnable. That is why providers underestimate cyber security and adequate hardware and software coverage. However, all techniques and technology serve a primary purpose: to provide the required and appropriate health care. The discussion about proper technology use and whether any misconduct can be proven is thus becoming a new phenomenon in medicine, ethics, and law.

CHALLENGES OF DIGITAL TECHNOLOGIES IN HEALTHCARE

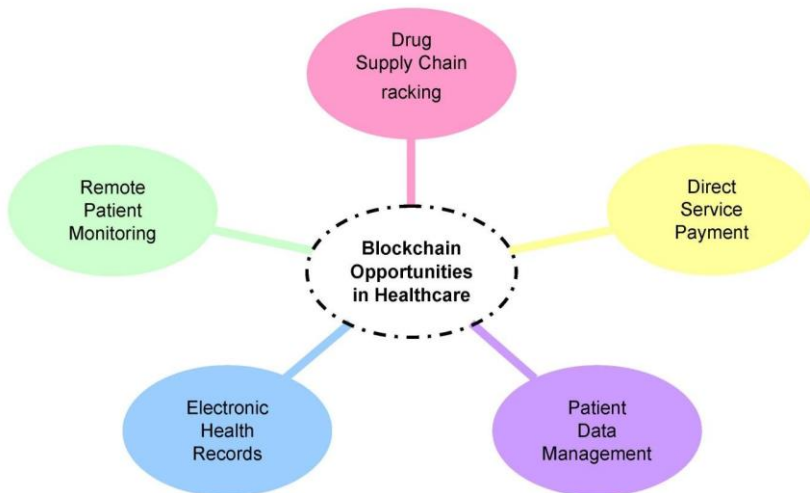
The author has already devoted her research to the benefits and issues of modern technologies in healthcare - see reference [3]. New technologies and artificial intelligence in healthcare and medical services enable the providers to compile, process and share data and information quicker, in more detail and to a much greater extent than heretofore possible. Big data are the future of natural and social sciences, medicine included. AI is not only capable of analysing not only enormous amounts of data in a brief period (big data), but also these processes of analysis are easily improved by machine learning. [3] Modern technologies facilitate progress in operations, genome manipulations or artificial human reproduction.

Nevertheless, all efficient healthcare services depend heavily on information technology. Recording, storing, and exchanging information quickly, efficiently, and economically form the main challenge. If there is a lack of interoperability and limited linkage between the healthcare storage systems, retrieving, transmitting, cleaning, and analysing data becomes difficult. [4] Last but not least, the security, possible changeableness and traceability of originator and user are the conditions without which it is impossible to work with medical data.

Blockchains are becoming the future technology in healthcare delivery. Blockchain-related to and has still been connected with transactions of cryptocurrencies and tracking assets as a shared, immutable ledger. [5] All the parties involved have their data available on a decentralised system. Users can access the storage at any given point in time. Moreover, anyone who tries to tamper with the data can be tracked and located easily. According to research conducted in 2018, the global blockchain in the healthcare market is estimated to amount to \$5.61 billion by 2025, witnessing a double-digit growth throughout the forecast period of 2018-2025. [4]

The author argues that blockchains will become a new form of medical documentation and patient surveillance in the coming decade as the European Union strongly supports its introduction in everyday life. Blockchain is a system of recording information in a way that makes it difficult or impossible to manipulate; Distributed ledger technology is a system for recording the transaction details in multiple places simultaneously, with no central data store or administration functionality. These might be used as a new information infrastructure that could support and ensure the safe exchange of information between public administrations, citizens and businesses. [6] Data in a blockchain is ordered chronologically, validated before storage and gets the time-stamp. [7] All this traceability and reliability are significant for both medicine and law.

Fig. 1. Possible usage of blockchain in healthcare management.



Source: <https://www.mobileappdaily.com/blockchain-in-healthcare>

The SARS-COVID-19 pandemic and the need to resolve global health threats connected with local wars, migration or any other epidemiology risks speed up the demand for re-designing concepts of medical care in a broad sense.

Medical professionals trained for personal healthcare delivery and the systems designed for the manual input of information should change their daily practice. The professional becomes a manager of data and information compiled by the AI and stored in the cloud. Face-to-face medicine will apply only in urgent cases.

LEGAL CHALLENGES OF THE DIGITAL EVIDENCE

The current legal doctrine still focuses on individual questions regarding health issues. The above-mentioned substantial changes in healthcare services call for new approaches when discussing and solving legal problems of medical law in the era of digitisation. It is necessary to examine the impact of international instruments, particularly the Convention on Biomedicine [8], the Charter of Fundamental Rights of the European Union (EU), and the EU4Digital Initiative for developing and supporting ehealth platforms.[9] However, remote medical care, data storage, and exchange cross the EU border. The digital evidence is globalised, especially in randomised clinical trials.

The patient's autonomy and the right to self-determination form the basis for any medical intervention and treatment, even under critical or pandemic circumstances. The decision-making autonomy is an essential precondition for the performance of health services, both on the part of the provider and the patient. The specialist determines what treatment and related procedures he will propose to the patient. Based on proper instruction and informed consent, the patient accepts or rejects. Also, each medical data collection requires legal authorisation. However, digitalisation has changed the relationship between the doctor and the patient. There are doctors and medical professionals whom the patient does not even see or know in the background of the treatment. The new doctor, oriented toward the process of experiments on people and armed with new technologies, has replaced the doctor treating people's illnesses. [10]

The General Data Protection Regulation, 2016 (GDPR) brought a new level of protection and safeguards for protecting health information. Such sensitive information should be collected based on the approval of the data holder or because of legal obligation. Compulsory treatment, vaccination, or emergency are the main reasons for collecting and storing data without a patient's consent. The patient must always get the information on which data, for what purpose and who keeps them. Moreover, healthcare providers and their employees have the duty of confidentiality regarding all the information they obtain because they provide healthcare services. Breaching medical confidentiality whilst wrongfully publishing, communicating a patient's data, or enabling access to another person constitutes unlawful disposal of personal data under the GDPR and in national legal orders. The legal obligation of privacy protection is adequately secured. The main legal challenges are assuring legally valid informed consent when all medical files are digitalised and stored in the cloud, keeping the records topical,

and providing evidence when the medical professional and the provider are subjects of malpractice litigation.

The Supreme Court of the Czech Republic, in its ruling 25 Cdo 1381/2013, defined the legal nature of informed consent as follows: *The term "free and informed consent" means consent given in a situation in which the patient, to whom the purpose, nature, risks and alternatives of the procedure, as well as the consequences of not performing it, have been explained, without coercion and with sufficient time for consideration and with the possibility to supplementary questions, scheduled to undergo the proposed procedure.*

The more extensive the access to personal, often confidential and discreet data, whether on the part of their users, such as insurance companies, pension institutions, or statistical authorities of the state administration, brings the more relative the relationship between doctor and patient. This relativity undoubtedly affects the current practice of informed consent and non-consent, which often become formal documents not meeting the legal and medical requirements of providing care.

Digitisation of consent, when access to documentation will be based on e-identity, an authoritative register of patients and the use of an electronic signature with biometric data, can, on the one hand, lead to more precise and more concrete data. However, on the other hand, some patients, doctors and providers may have a problem with equipment service and internet access. In such a case, on the contrary, the authorised person may not access, but another person under her identity, who gives invalid informed consent or disagreement. Moreover, current legal theory and practice underline that valid consent/disagreement results from the confidential conversation between the doctor and the patient. Written materials serve only as a supplement when clarifying or repeating information. [11] Thus, it can be expected that legal and judicial practice will require the fulfilment of oral and personalised edification. In the digital world, however, this requirement must be tied to the technical possibility of the health service provider and the patient to meet virtually. Furthermore, the doctor must record the procedure in digital documentation. Suppose the documentation, including informed consent/disagreement, will be conducted exclusively in electronic form. This type of data storing can be expected primarily within cross-border healthcare. In that case, it is necessary to resolve the signature of digitised documents by both the patient and the doctor or possibly another healthcare professional, e.g. evaluation of various laboratory examinations or findings. The descriptions of results must also be uniform. Blockchain can enable and guarantee all of this.

Artificial Intelligence could be used for keeping records, as it learns much quicker than a human being. It also can better correct mistakes when evaluating the data collected. A robotic nurse can collect personal and anamnestic data. However, human supervision is always needed, as the medical professional and the provider is responsible. The AI is just an intermediate article.

The pandemic also speeded the judicial transition to remote communication. Nevertheless, the personal interaction and evaluation of nonverbal communication and parties' reaction are principles of the court hearing. In many countries, including the Czech Republic, public authorities, state prosecution and courts are not equipped to hear the virtual evidence. Public digital systems very often do not communicate appropriately with each other or are not able to transfer large amounts of data or pictures. Moreover, medical picture programmes differ significantly from those used publicly, like png., jpg., or pdf. format.

Based on the above mentioned, the leading legal challenge for the European states is to create a unified platform for collecting and storing medical data, pictures, and files. Digitalised medical documentation could be relevant evidence only if it is reliable, suitable and understandable for patients, doctors, providers, lawyers, public officers and judges.

Blockchain technology could be a solution. Nevertheless, the judicial and public health service systems must transition from individualised, mutually non-communicating systems to self-learning cooperating and easily accessible platforms. Blockchain technology will be adopted if it is economically advantageous, and there will be social pressure to assure a real digitalisation of publicly financed services.

Different digital systems and incompatible hardware and software in courts, state prosecution and public administration significantly delay the attorneys' digitalisation. The companies and private persons are also pretty much better equipped., even if in some regions might the internet connection be slower. Procedural regulations form an obstacle to digitalisation, too. EU offers platforms for e-justice. However, those provide quicker access to the courts in EU countries in business and family cases, where the evidence and the procedure could run without the parties' participation. If any party denies something or the witness or expert should be heard, the process must always be oral and public. Then, hearing the evidence is a crucial issue.

In medical cases, the sustained injury is very often irreparable. Expertise is inevitable; the plaintiff and the defendant provide plenty of medical and legal evidence. Medical files in blockchain comply with the requirement of reliable evidence. Nevertheless, these blockchains are private with restricted access. Procedural parties, experts, and judges need access to the documentation. The Czech legal regulation, Act. No. 372/2012 Coll. The case-law limits access to the patient's file for necessary information. The Constitutional Court, in its decision No. I. ÚS 2050/14 and I. ÚS 321/06 underlined that only the court summons could grant strictly circumscribed access to the patient's files. Despite the criminal proceedings' public character, the police and prosecution authorities cannot disseminate sensitive data unreasonably. [12]

During the proceedings, the court poses the questions to the expert and parties and determines the scope of browsing the documentation. The court keeps case files in combined form- electronic and paper. Parties can provide their documents in the same way. Access to the case file in any procedural stage is a fundamental right of litigants. The digitalisation of case files and remote access is very slow in EU states. According to the 2021 EU Justice Scoreboard, making blockchain-based tools widely available requires further attention to improve the quality of courts and prosecution services through blockchains and the deployment of AI. [13] In the Czech Republic, only the Constitutional Court enables online viewing for attorneys after registration in an internet application. The Supreme Administrative Court and some public administration authorities send parts of the file on the requirement.

Before the pandemic, Czech courts used video conferences to hear witnesses unable to attend the courtroom due to being on the other continent or very ill. Courts cancelled scheduled hearings at the pandemic's beginning, and the criminal proceedings were limited to urgent matters. Little by little, judges started to organise video court proceedings. Still, the parties provided evidence by email or paper by registered post. The pandemic proved that judiciary digitalisation is at the beginning. The advocates, as private subjects, moved forward much quicker, using cloud storage and remote consultations with clients daily. Nevertheless, the systems are incompatible, and the medical records are still being printed and scanned for online communication. Unprotected data circulate in cyberspace and could be easily misused. So, digital medical evidence becomes unreliable because of its transformation into a paper file. The burden of misconduct and malpractice proof is often moved to the defendant, as the plaintiff considers the healthcare provider (defendant) violated the obligation to maintain medical documentation properly.

CONCLUSION

The transition from voluntary to the compulsory use of AI and web or mobile applications for medical professionals, providers, and patients generates the main risk for privacy protection. Despite this, the diagnosis error rate is almost the same as in the cases of "simple" human evaluation of available information. [14] One of the challenges is that some professionals and patients could be excluded from receiving the appropriate medical care because they could not use modern technologies or simply because of poor mobile network coverage in certain areas. Suppose the health insurance, responsible for health services, is publicly financed. In that case, the public authorities must take care of the internet access and assist users who cannot reach their respective medical care. However, the main issue is and will be, in the next future, the education of medical professionals, public administration, lawyers, patients and their relatives to cope with new problems. The global digital society, as well as new imminent pandemic threats, bring new challenges. The right to health is a fundamental human entitlement, the specific

character determined by the boundaries of the legal regulations and interpretations of all fundamental human rights. [15]

The legal order of current social states must be resilient on the one hand. On the other hand, it must steadily balance the protection of the rights of individual patients and protecting societal health, even under exceptional and, so far, unknown circumstances. The interdisciplinary nature of medical law and the sometimes conflicting interests of the parties involved may cause tension between proponents of traditional approaches in medicine and law and supporters of technological approaches. Despite the increasing attention that blockchain, cloud technologies and remote access receive, it will be inevitable to examine the impact on court procedures and the rights of procedural parties. Unless a common trustworthy platform for sharing digital evidence, especially medical records, would not be created, hearing the evidence in medical malpractice cases would be much more the play of medical experts. The judge and the procedural parties will be just the audience with an advisory voice.

REFERENCES

[1] Phone Anxiety in the Age of Coronavirus: Telephone phobia, April 8, 2020. <https://www.claritychi.com/phone-anxiety-telephone-phobia-phone-anxiousness/>

[2] Mittelstadt, B. Designing the Health-related Internet of Things: Ethical Principles and Guidelines. UK. Information 2017, 8(3), p. 77. <https://www.mdpi.com/2078-2489/8/3/77> <https://doi.org/10.3390/info8030077>.

[3] Sovová, O. Healthcare in the Era of Digitisation: Legal Possibilities, Limits, and Borders' Czech Republic. Common Law Review, 2020, p.33 - 35. HeinOnline. <https://heinonline.org/HOL/License>. www.commonlawreview.cz.

[4] Global Blockchain in Healthcare Market. Focus on Industry Analysis and Opportunity Matrix – Analysis and Forecast, 2018-2025. <https://bisresearch.com/industry-report/global-blockchain-in-healthcare-market-2025.html>.

[5] What is blockchain technology? <https://www.ibm.com/topics/what-is-blockchain>.

[6] https://knowledge4policy.ec.europa.eu/foresight/digital-transformation-public-administration-services_en.

[7] Maher A.N. Agi, Ashish Kumar Jha. Blockchain technology in the supply chain: An integrated theoretical perspective of organisational adoption. International Journal of Production Economics, 2022.Vol 247, <https://doi.org/10.1016/j.ijpe.2022.108458>.

[8] Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on

Human Rights and Biomedicine. <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=090000168007cf98>.

[9] <https://eufordigital.eu/wp-content/uploads/2020/09/EU4Digital-eHealth-Factsheet.pdf>.

[10] Koutecký, J. Problems and Paradoxes in Medicine at the Turn of the Century. Germany. In: Hofmeister, H. Der Mensch als Subjekt und Objekt der Medizin. Germany, 2000. p. 30. 2000.

[11] Šustek, P., Holčápek, T., et al. Zdravotnické právo. Czech Republic. 2017, pp 232-262.

[12] Available in Czech on www.usoud.cz.

[13] https://ec.europa.eu/info/sites/default/files/eu_justice_scoreboard_2021.pdf

[14] Brdička, R. Artificial intelligence and modern information and communication technologies entering medicine. Czech Republic, Čas.Lék.čes. 158: 2019, p 87.

[15] SOVOVÁ, O. Current Research Issues in Regarding Health as a Fundamental Human Right. Czech Republic Faculty of Law Research Paper No. 2017/III/2. <https://ssrn.com/abstract=3046484>

POPULARITY OF ANTISYSTEM MOVEMENTS ON SOCIAL MEDIA IN THE SLOVAK REPUBLIC

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ABSTRACT

Liberal democracies have been hit by political populism and, thanks to the almost unlimited penetration of the Internet, narratives that would be stopped by editorial mechanisms in a serious media environment have informational reach. Social networks and so-called alternative media provide recipients with one-sided content and a narrow view of social issues. The plurality of competent opinions, which is the basis of a democratic society, is disappearing from the debate, and part of the population has slipped into having a black and white vision of the world. After the global Covid-19 pandemic, the most discussed topics are the Russian invasion of Ukraine and the energy crisis. Governments and the European Union are looking for ways to respond to the hybrid information operations by which authoritarian regimes have long sought to subvert democratic environments from within. Society is polarising. The aim of this study is to use a theoretical background to analyse Slovak politicians on social networks, where they have virtually unlimited space to spread lies, distorted facts and anti-system views.

Keywords: *disinformation, fake news, politics, populism, social media*

INTRODUCTION

Facebook has become for many people an essential source of information and a space for unrestricted freedom of expression. We observe a recurring trend in user comments - if an editorial office shares a news article, the recipients do not read the journalistic texts themselves. They express their own opinion on social media based on merely the information from the headline and the perex. The user environment of social networks has simplified dramatically and even people with basic digital skills can use them. A historic turning point, online journalism penetrated the information dissemination system, creating multiplatform media opportunities that all other traditional media lacked. In addition to the ability to publish content instantly, it also benefits from the ability to tailor content to the target audience and significantly reduce the cost of content production and distribution. [1] According to A. Sámelová, people on the Internet have learned to receive information through the self-representation of individuals and institutions, which has not passed through the editorial hierarchy, even though throughout the 20th century professionals from traditional media were accused of editorial manipulation. [2] Social networks have brought new opportunities for

easy information sharing, and a system that reinforces an algorithm focused solely on keeping the recipient's attention is an ideal platform for the dissemination of sensationalism and misinformation. It is an environment that has not escaped the attention of politicians and populists, who have gained virtually unlimited space to spread one-sided information. At the same time, they have a tool at their disposal to effectively target their content at target groups. Since Russia's invasion of Ukraine, we are witnessing a second unifying element in populist communication in a short space of time that knows no national boundaries. Already, the Covid-19 pandemic has shown us that in times of adversity, we observe a tendency for a unification of communicated narratives, ideas and communication approaches in different countries. [3]

GOALS AND METHODS

The study provides a theoretical basis for research on populist communication of elected representatives in the Slovak Republic. We analyse the popularity of the members of the National Council of the Slovak Republic on the social network *Facebook* and focus on the content analysis of their posts with the largest number of interactions. N. Ernst et al. defined populist stylistic elements on social networks in three dimensions: negativity, emotionality, and sociability. In particular, younger and extremist left and right political parties are more prone to disseminate content via social media, as online platforms allow them to bypass traditional media and make voters feel close to the people. [4] We predict that, as in other liberal democracies, politicians from the populist and extremist scene will have the most followers on social media. To measure the popularity of MPs on *Facebook*, we used *CrowdTangle*, an analytical tool that collects data from all public pages, public groups, and verified profiles. We searched the pages and verified accounts of all 150 members of the National Council of the Slovak Republic and compiled a ranking based on the number of their followers. We then analyze the posts with the most interactions of the ten most popular MPs. We expose misinformation and explain the distorted information that MPs work with in their posts.

POPULISM

Social networks, according to B. Moffitt have undoubtedly reshaped politics, but warns against jumping to the conclusion that they are the main reason for the rise of populism worldwide. The rise of populism has been observed even before the advent of social networks [5]. According to the European Committee of the Regions, an association of municipal politicians in the European Union, populists challenge all three pillars of liberal representative democracy: the legitimacy of elected representatives, the accountability of elected representatives and the transparency of the exercise of power. [6] The standard themes of Slovak populists are the protection of traditional values, the rescue of the poor, the fight against migration, anti-Americanism, and the elevation of common peasant sense over intellectuals from the "Bratislava café", who are supposed to be divorced

from reality. According to J. W. Müller, however, a proper understanding of populism helps to deepen our knowledge of democracy. He identifies populism as a permanent shadow of modern representative democracy and a constant danger that allows us to define the shortcomings of democracies. [7] Research by I. Piterova et al., states that in the geographical environment of the Slovak Republic, voters of populist parties share a high emotional attachment to their country and lower to Europe. They have negative attitudes towards migration and call for state care for poor people or income equality. [8]

THE MOST POPULAR MEMBERS OF THE NATIONAL COUNCIL OF THE SLOVAK REPUBLIC ON THE SOCIAL NETWORK FACEBOOK

Based on our analysis of *CrowdTangle* data, we found that 123 out of 150 MPs have an established *Facebook* page as of early September 2022. Peter Pellegrini, the chairman of the Hlas-SD party, had the most followers in the period under review - 314,089. After descending order of the respective pages, we select the ten most popular MPs on *Facebook* according to the number of followers. We give the exact name of the page in the monitored period.

Table 1. *MPs with the most followers on Facebook*

	Name of Facebook page	Nr. of followers
1.	Peter Pellegrini	314089
2.	Robert Fico	191628
3.	Milan Mazurek – kandidát na prešovského župana	175203
4.	Boris Kollar	143991
5.	Jozo Pročko - stránka	74182
6.	Tomáš Taraba – predseda ŽIVOT NS	57566
7.	Richard Raši	55400
8.	Denisa Saková	55157
9.	Erik Tomáš	54461
10.	Patrick Linhart poslanec	42869

Source: own processing, 2022.

Members of the current political opposition have the biggest reach on *Facebook*. Of the coalition MPs who support the Government, only Boris Kollár, chairman of the Sme rodina party, and Jozef Pročko, MP for the OĽaNO movement, made it into the top ten. It should be pointed out that the analysis in question may not provide a picture of the overall political situation in Slovakia, because the study does not focus at this stage on the communication of political representatives in the executive, but only on the members of the National Council of the Slovak Republic.

ANALYSIS OF POSTS WITH THE MOST INTERACTIONS ON FACEBOOK

We also used *CrowdTangle* to analyse the popularity of posts. We chose the start of the Russian invasion of Ukraine from February 24, 2022 to August 31, 2022 as the period of interest. Sociological research in Slovakia has long described pro-Russian sentiment among the population and a desire for the establishment of a government of a decisive, authoritarian leader, modeled after the Russian Federation. [9] We suggest that the war in Ukraine, which has brought with it a wave of refugee migration and indirect effects on the population not in the immediate vicinity of the conflict, has become a breeding ground for populists to further divide a polarised society.

1. Facebook page of *Peter Pellegrini*

On 9 April 2022, the day the Slovak Government decided to allocate 530 million euros of unspent money from EU funds to support Ukrainian refugees, Pellegrini called on Prime Minister Eduard Heger not to solve the world's problems, but mainly the problems of the people in Slovakia. He invited the Prime Minister to go with him to central, eastern or southern Slovakia to see how difficult life is there. The post received 18,188 reactions, 2,299 comments and 1,349 shares.

Pellegrini has held senior executive positions, having been prime minister from 2018-2000, previously serving as deputy minister for investment and informatisation, being temporarily in charge of the health and culture ministries, and in 2014 he served as education minister for five months. He is himself co-responsible for the state of the regions and the country's preparedness for crises such as the SARS-CoV-2 coronavirus pandemic and the impact of Russia's invasion of Ukraine. He received the greatest number of interactions simply by questioning the legitimacy of the current government of the Slovak Republic, which has decided to redirect unused European Union funds to help the population of the war-stricken country.

2. Facebook page of *Robert Fico*

Robert Fico, the chairman of the opposition Smer-SD party, achieved the highest number of interactions in the period under review with a post containing a video with a four-minute clip from a press conference at which he criticized Ukrainian President Volodymyr Zelensky the day before his speech in the National Council of the Slovak Republic. Mr Fico said that he firmly rejected the Ukrainian President's threats to cut off Slovakia's gas and oil and would therefore not attend his speech in Parliament. The post, dated 9 May 2022, had 63,036 reactions, 7,058 comments and 30,877 shares.

In the post, Robert Fico emotionally mentions the Ukrainian president's alleged words about "losing patience" with EU policy on sanctions against Russia. He claimed that the decision to adopt sanctions on the withdrawal of energy carriers from Russia was born in the US. He stressed that the Slovak Republic had nothing to do with the war in Ukraine and that it was, in his view, a war between the US and the Russian Federation. He projected a personal dimension to his recipients and asked, "What do Jozef, Peter, Milan, who live somewhere in Puchov, Žilina, Banská Bystrica, Košice, Prešov, have to do with the fact that they have to solve the oil problem and have to pay three euros (for fuel) for the war in Ukraine, I would really like to know, let somebody explain it to me". In line with Russian propaganda, R. Fico claims that fascists are fighting on the side of the Ukrainian army, to whom the government is sending weapons.

3. Facebook page of *Milan Mazurek – candidate for Mayor of Prešov*

Milan Mazurek is deputy chair of the Republika movement, which split from the openly racist and xenophobic Kotleba People's Party Our Slovakia. Mazurek was convicted in 2019 by the Supreme Court of the Slovak Republic of the deliberate offence of defamation of a nation, race or belief for a racist interview on the local radio station Frontinus. During the SARS-CoV-2 coronavirus pandemic, he spoke out against anti-epidemic measures, the wearing of masks and respirators, vaccinations, and spread misinformation and hoaxes. During the reporting period, he achieved his highest number of interactions on *Facebook* with a post from March 3, 2022, which is no longer publicly available, but is still recorded by *CrowdTangle*. M. Mazurek shared a video in which he refers to the Governor of Florida in the US and calls for an end to "corona theatre". Media hysteria about the disease, he said, has been replaced by hysteria about the war. He urges his followers not to believe the media. The post has garnered 11,521 reactions, 704 comments and 12,392 shares.

4. Facebook page of *Boris Kollar*

Boris Kollár, the chairman of the National Council of the Slovak Republic and the chairman of the Sme rodina movement, is a businessman who was already a popular figure in the tabloid media in Slovakia before he entered politics. He is known to have twelve children with ten wives and even after entering top politics he claims that he is not a politician. B. Kollár has not shied away from sharing articles from disinformation online media on *Facebook* in the past. In the period under review, he recorded the highest number of interactions on *Facebook* on the day of the beginning of the Russian invasion of Ukraine - 24 February 2022. Under the post in which he strongly condemned the military aggression of the Russian Federation against Ukraine as a sovereign state, we register 2,587 reactions, 721 comments and 94 shares.

5. Facebook page of *Jožo Pročko*

OĽaNO MP Jozef Pročko recorded the highest number of interactions on *Facebook* during the period under review under a post from 31 August 2022. He uploaded a video to the social network, which he himself recorded while driving, with the caption "I believe that a decent and fair person will open his heart..." It recorded 8,380 reactions, 5,108 comments and 557 shares under it. In the video interview, he responds to the crisis in the ruling coalition. He criticises the attitude of his coalition partner, the SaS party, and defends the chairman of his movement, Igor Matovič. In his contribution, Pročko states that at the time when there is a war in Ukraine, when everything is becoming more expensive, the return of Robert Fico's government is imminent... there is no room to put pressure on Igor Matovic to leave his position as finance minister. J. Pročko is a former television entertainer, known for his emotional and unconventional speech.

6. Facebook page of *Tomáš Taraba – president of ŽIVOT NS*

The chair of the Život - Narodná strana party and MP Tomáš Taraba ran for the National Council of the Slovak Republic on the candidate list of the extremist party Kotleba - People's Party Our Slovakia. In the period under review, he achieved the highest number of interactions on *Facebook* under a post in which he uploaded a one-minute excerpt from a press conference of the director of the employers' association Klub 500, Vladimír Soták, to the social network. In his speech, he reads from a sheet of paper a statement about which he says, "it looks like it is from the president's office" and paraphrases the words of President Zuzana Čaputová, "So whoever today is still talking about our continued dependence on Russian gas is acting against the interests of Slovakia and directly endangering the security of our citizens." In connection with the dependence of Slovak industry on Russian gas, V. Soták states in the video "what kind of bullshit is this, who dares to say that...?" In the video, the director of the Club 500 association does not read from an official document of the Presidential Office, but responds to the conclusion of a *Facebook* post by President Zuzana Čaputová, which is taken out of context. In the post, dated 11 March 2022, the Head of State explains in detail that the Russian Federation has been restricting gas supplies to Europe even before the invasion of Ukraine, and in order to maintain security, we must find other and more reliable suppliers of strategic raw materials. The narrative, taken out of context, is also taken up by Taraba in the description of his most successful paper. Taraba said: "Zuzana Čaputová called the entire Slovak industry, which wants to produce and employ people in Slovakia and does not want to be cut off from the only source of oil and gas available today, a threat to Slovak security." It has received 14,112 reactions, 1,058 comments and 4,527 shares.

7. Facebook page of *Richard Raši*

Richard Raši, the former health minister and deputy chair of the Hlas-SD party, received the most interactions on *Facebook* under a post from 27 March 2022, in which he shared a short video of a political debate in which he himself was speaking. In it, he criticises the Interior Ministry, led by Roman Mikulc, which he says has bought overpriced beds and mattresses for asylum facilities for war refugees from Ukraine. Mr Raši said that the ministry had bought one thousand mattresses at EUR 114 apiece and five hundred bunk beds at EUR 246 apiece, whereas he said that a bunk bed could be bought in a Swedish chain for EUR 136 and a mattress for EUR 26. The post has received 2,052 reactions, 290 comments and 742 shares. The Interior Ministry said in response that the main criteria for the purchase was durability and reusability, so that the beds and mattresses could be used in the future.

8. Facebook page of *Denisa Saková*

Denisa Saková, the former Interior Minister and deputy chair of the Hlas-SD party, received the most interactions on *Facebook* under a post from 3 April 2022, in which she shared a short video from a political debate in which she herself spoke. In it, she focuses on her criticism of the Slovak government, which she says is putting the country into record debt, spending billions, and no one is feeling it. Emotionally, she states, "health workers are angry, teachers are angry, state and public administration employees are angry, private companies are on their knees..." The post garnered 4,866 reactions, 480 comments and 1,485 shares.

9. Facebook page of *Erik Tomáš*

Erik Tomáš, the former health minister and deputy chair of the Hlas-SD party, received the highest number of interactions on *Facebook* under a post from 23 June 2022, in which he shared a short video of a political debate in which he himself was speaking. He criticizes the government for its poor assistance to seniors and states that if Finance Minister Igor Matovič came to the Unity of Pensioners of Slovakia, he would be chased out of there with shovels. According to E. Tomáš, they are terribly frustrated with the government's failure to help them at all at a time of rising prices. There are 6379 reactions, 716 comments and 748 shares below.

10. Facebook page of *Patrick Linhart MP*

Patrick Linhart, MP for the We Are Family movement, shares a personal selfie photo from his car in his most popular post of the period under review. On 26 February 2022, he is pictured with four Ukrainian refugees whom he was supposed to have picked up in Ukraine and bring to safety in Slovakia. In the caption of the photo he writes: "I took a family from Kiev out of the crowd. 3 small children with their mother and 15 year old daughter. The parting with their

father who stayed at the border brought me to tears. I managed to do what I wanted to do and that was to take at least one family." The post has garnered 1,948 reactions, 270 comments and 27 shares.

CONCLUSION

In all the monitored posts, we observe a strong emotionality and references to current crises. In most posts, they refer to the war in Ukraine and the problems it has caused on a national level. MEPs are no strangers to the communication practices of exaggeration, distortion of facts and creating an impression of social sensitivity. The largest number of interactions, 100,971, was achieved by Robert Fico's *Facebook* page during the period and in the sample studied. In this paper, we observe all the populist features defined by Nicole Ernst et al. Negative tuning in the form of the threat of an energy crisis which for Slovakia is represented by Ukrainian President V. Zelensky, via an emotional speech in the video of the press conference shared with the paper and the declared social proximity in the form of naming random names of potential Slovak citizens from different regions.

Facebook pages of the most popular politicians are managed by teams of communication experts and spend thousands of euros on sponsored messages to increase the visibility of their posts. According to publicly available information on *Facebook*, all the pages we analysed may have multiple administrators. Sponsored links were not used only by the *Facebook* pages of Jožo Pročko and Denisa Saková. In disseminating one-sided, misleading, or outright deceptive information, the creators no doubt rely on the lack of critical thinking of the recipients and the gaps in the school system in teaching critical thinking. [10] Among the top ten most popular members of the National Council of the Slovak Republic on *Facebook* was also the MP Patrick Linhart, who is not well known to the public and does not receive much space in the mainstream media (in the news agency TASR his name appeared in a total of thirty articles between January and August 2020, including daily news summaries). Based on the available tools, we are currently unable to analyse the practices of MP Ľuboš Blaha, who was one of the most popular politicians on social media. *Facebook* blocked his page with over 174,000 followers for violating the social network's rules. [11] Ľuboš Blaha, has already been ordered by the Regional Court in Bratislava to refrain from spreading false information about the President of the Slovak Republic, Zuzana Čaputová. [12]

Despite the fact that in Slovakia politicians manage to work with the theme of nationalism and the supposed preference of national interests over world interests, the trends in political communication in Slovakia are the same, or at least similar, to other democracies that have been affected by populism. [13] In the communication of politicians on social networks we observe the application of elements of political entertainment - Politainment. MPs pretend to be in conflict with the system, although they themselves created it and are an integral part of it.

Strategic populism is an integral part of political communication in both liberal democracies and authoritarian systems. [14]

Expanding the research sample to include other posts to which recipients respond directly on social media will be the subject of further research.

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REFERENCES

- [1] Pravdová, H., Ungerová, M.: Periodical Press and Media in the Online Environment, Slovak Republic, 2018, pp 148.
- [2] Sámelová, A.: Online človek ako nový evolučný typ homo onlinensis, Megatrendy a médiá 2020: On the Edge, Slovak Republic, 2020, pp 81-90.
- [3] Panasenکو, N. I. et al.: Covid-19 as a media-cum-language event: cognitive, communicative, and cross-cultural aspects, *Lege Artis: Language yesterday, today, tomorrow*, Vol. 5/issue 2, Slovak Republic, 2020, pp 122-210.
- [4] Ernst, N. et al.: Populists Prefer Social Media Over Talk Shows: An Analysis of Populist Messages and Stylistic Elements Across Six Countries, *Social Media + Society*, Vol. 5, Issue 1, United Kingdom, 2019, pp 10-11.
- [5] Moffitt, B.: Social media and the false allure of 'unmediated' representation, *Populism and the Crisis of Democracy*, Vol. 2, United Kingdom, 2018, pp 51-71.
- [6] Európsky výbor regiónov. Správa skupiny na vysokej úrovni pre európsku demokraciu, Belgium, 2022, pp 12-13.
- [7] Müller, J.-W.: What is populism? USA, 2016, pp 19-20.
- [8] Piterová, I. et al.: My sme ľud, kto ste vy? Storočie populizmu v (Česko)Slovensku, Slovak Republic, 2021, pp 70.
- [9] Hajdu, D. et al.: GLOBSEC Trends 2021: Central & Eastern Europe One Year into the Pandemic, Slovak Republic, 2021, pp 66.
- [10] Kvetanová, Z. et al.: Debunking as a Method of Uncovering Disinformation and Fake News, *Fake News Is Bad News*, United Kingdom, 2021, pp 60.

[11] Struhárik, F.: Facebook zrušil stránku Ľubošovi Blahovi pre opakované hrubé porušovanie pravidiel, Available at: <https://dennikn.sk/2893230/facebook-zrusil-stranku-lubosovi-blahovi-pre-opakovane-hrube-poruvovanie-pravidiel>

[12] Blaha zasahuje do práv prezidentky, potvrdil Krajský súd v Bratislave. Available at: <https://www.teraz.sk/slovensko/krajsky-sud-v-bratislave-potvrdil-ze/651131-clanok.html>

[13] Škarba, T., Višňovský, J.: Deliberative communication in the context of authoritarian sentimentalism and disinformation chaos, *Communication Today*, Vol. 13, No. 1, Slovak Republic, 2022, pp 4-16.

[14] Radošinská J. et al.: Politainment: Reflecting on political affairs via audiovisual media entertainment, *EJTS European Journal of Transformation Studies* 2021, Vol. 9, No. 2, Georgia, pp 72-90.

REGIONAL HEALTH VULNERABILITIES OF TRIBAL HOUSEHOLDS DURING COVID-19

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ABSTRACT

The National Family Health Survey Reports for 2015-16 (NFHS-IV) and 2019-20 (NFHS-V) and the Expert Committee Tribal Health Report (GOI 2018) outline the unsatisfactory health performance and growing health vulnerabilities at the state level. Across social groups, STs, particularly in states like U.P. M.P. Bihar, and Jharkhand, face the highest burden. The spread of infection and illness, specifically during the second wave of the pandemic, was intense due to the overburdened and inadequate primary health care system in the tribal regions. Against this backdrop, the present study aims to assess the health vulnerabilities and coping strategies of the tribal populations in the aftermath of the Covid 19 Pandemic.

DATA AND METHODS

The paper analyses the unit-level data from the NFHS-IV and V to understand the health vulnerabilities of the tribal households. Further, the paper analyses the case study based on the Tharu Tribes' survey in Uttar Pradesh. Seventy-five households were surveyed using in-depth interviews and a semi-structured questionnaire to assess the impact of the Covid lockdown on the household health burden. Apart from the qualitative analysis, the survey data uses the binary logistic regression model to determine the factors causing vulnerabilities. The model analyses the relationship between out-of-pocket health expenditure and factors determining health status and outcomes in tribal households. The determinants considered are income status, nature of employment, education status, family size, vehicle ownership, non-public health providers, types of diseases, and prominent health issues in tribal households. The model indicates that Family size, health expenditures, and prevalence of non-communicable diseases increase the probability of catastrophic out-of-pocket expenditures for tribal households.

Keywords: *Covid-19, public health care, tribal health, universal health coverage, vulnerabilities*

INTRODUCTION

Health vulnerabilities in the Covid times have become deeper and broader than the risk of getting infected with the Virus. This pandemic has acted as an equalizing and non-regressive to a great extent among various communities and geographies. Nevertheless, it has accumulated the health burden and, therefore, health vulnerability, particularly for the disadvantaged sections, one of them being tribal (indigenous) households. Health vulnerabilities have been defined in the literature as a multidimensional concept [1]; [2]; [3], including four major factors. A) awareness about health problems, their causes, and possible remedial provisions by the government. Low-income and disadvantaged people have low awareness levels for obvious reasons. Moreover, in the context of the tribal population, health awareness is contingent upon their cultural beliefs and systems. With the increasing mainstreaming, awareness is increasing but remains confined to the rising use of medicines rather than causes and available institutional support for their health problems. B) access to the public health system. It is one of the factors leading to not only increasing expenditure burden or health-driven poverty trap but also low awareness levels about basic health care. Government reports always emphasize upon the health access gaps (in terms of physical and human infrastructure as well as medicines and medical treatment) for rural and tribal areas. C) health outcomes, morbidities, and risk of worsening health outcomes. Although, there have been significant improvements in standard health outcomes for the tribal population between the National Family Health Surveys of 2005-06 and 2019-20, such as life expectancy, fertility rates, mortality, and prevalence of communicable diseases across age groups. But, there is a growing risk and inequalities based on non-communicable ailments and coverage of any type of health scheme. D) socio-economic determinants of health vulnerability, such as income, education, livelihood options, household level amenities, household size, and many others, have been regularly investigated. Impact on livelihood, food security, market access for minimum sustenance needs, mobilization and migration, non-farm activities, and a few others were much more severe than infections and deaths. Health vulnerabilities have also been examined under three groups: exposure, sensitivity, and adaptive capacity [4]; [5]; [6]. Exposure and sensitivity depend not only on the geographical location and demographics of a particular population group but also on socio-economic determinants of health, including access to a formal health system. Adaptive capacity is related to the coping mechanism and alternative strategies available at the time of any health shock.

In India, the Constitution assigns a predominant role to the State Governments for providing health infrastructure and delivering primary health services. Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttaranchal and Uttar Pradesh, referred to as the Empowered Action Group (EAG) states, are considered the focus states for health provisions and health outcomes. The National Health Policy, 2017, proposes that the States should increase their health spending to at least 8% of their budget and two-thirds

of such expenditure should be on primary care. Under the National Health Mission, the umbrella health programme in the country, state governments are required to increase their annual health budget by at least 10% annually. Interestingly, India has been highlighted as the country with one of the highest Out of Pocket health expenditures, lowest health insurance coverage and lowest universal coverage. WHO(World Health Organization) documents since 2020 and SDG (Sustainable Development Goals) Report 2022 show that India's health expenditure as a percent of GDP and investment in the health sector is one of the critical challenges among the suggested six strategic transformations for the progress towards SDG agenda 2030.

RESEARCH DESIGN

The research question for this study is: Covid-19 Pandemic led to a significant increase in health vulnerabilities and health consumption expenditure for the tribal households in Uttar Pradesh. It has been more than two years since the first wave of Covid-19 was experienced in India. Across households, health expenditures and health issues have widened along with the increased awareness about health care. The analysis in the paper is based on a survey of 75 selected tribal households. The survey work was conducted through personal interviews and a semi-structured questionnaire during the month of November 2021.

Exhibit-1 Sample Design: Selected State in India: Uttar Pradesh
Selected District and the survey area
District: Lakhimpur Khari
This is the second largest district in Uttar Pradesh. It is located on the northern side and in the Terai Region of the foothills of the Himalayas on the Nepal Border. There is a dense Forest Area inside and around Dudhwa National Park, where the tribal population resides.
Selection of 1 Development Block and Village with highest Tribal concentration in rural areas and highest poverty ratio (both above 75 percent)
Development Block: Nighasan , Village: Belapursua , Sample size:75
Method for Data Analysis
The paper uses the binary logistic model to measure the relationship between the categorical target variable i.e. probability of out of pocket health expenditure for the household being greater than 20 percent (as per the WHO definition of catastrophic health expenditure) and the selected independent (predictor) variables such as size of the family, types of ailment, availability of public health provisions, per capita income, nature of employment, migration status, educational status. This technique helps in identifying the important factors impacting the health burden for the tribal households who have incomplete access of public health provisions due to several established reasons.

LITERATURE REVIEW

Researchers have discussed tribal health and its vulnerabilities from different perspectives, including sociological, psychological, anthropological as well as economic perspectives. Health vulnerability (i.e. risk or probability of getting caught in an "adverse health-related event") and its dimensions for various population groups are based on physical, psychological, and social health[1]. According to the WHO, health has positive and negative dimensions measured through different variables, such as height, weight, nutrition, malnutrition, morbidity, and several others. Moreover, for vulnerable population groups, health needs and health-seeking behavior and their determinants are affected explicitly by social norms, resource availability, the higher significance of non-medical community services, and the benevolence of the policymakers. All the above factors lead to the accumulation of vulnerability measured through health indicators. A multi-weighted logistics regression model is used to investigate Kerala's and EAG states' health inequalities and vulnerabilities between tribal and non-tribal population groups [2; 7]. The vulnerabilities are measured through the prevalence of undernutrition, anaemia, goiter, tuberculosis, and hypertension. State-specific characteristics significantly affect the overall socio-economic development gaps along with the tribal health gaps in India. Two important reports in the context of the tribal population have analyzed a couple of critical questions [8]; [9]. Firstly, why are tribal people more health vulnerable (explained through health gaps between tribal and non-tribal populations)? Further, they are affected by the "triple burden of diseases" [described as a) acute levels of malnutrition; b) widespread infectious diseases and gradual increase in non-communicable diseases; c) mental illness]. Secondly, critical gaps in health infrastructure and health service provider personnel affect the access and quality of health care provision for tribal regions and thus worsen the marginalization of any emergency.

Regarding Covid-19, the statistics show that the spread of infection and thereby fatal cases have remained concentrated to a more considerable extent in urban areas. Fortunately, backward regions and communities got a respite from a new burden or threat to their income and resources vulnerability for the first time. According to the United Nations Report, although "missing numbers" have remained a new agenda for the Indian economy, but for tribal people, the health crises have unfolded in a distinct manner. It has been reemphasized that the inequalities existing before the Covid crisis have worsened for the tribal and indigenous population to the largest extent coupled with health, economic and environmental inequalities. The vulnerability in terms of infectious and non-communicable diseases remains the strongest for the tribal population in general and women and children in particular. In the case of India, ineffective public health infrastructure in the rural areas and social gradient (mainly water, sanitation, housing, and food) issues for the tribal population have deepened the pre-existing health gaps (as discussed in GOI 2018) for the tribal people. For instance, diversion of health professionals, diversion as well as the reduction in

budget allocation, shortage of medical supplies, and postponement of essential health services [10]; [11]; [12]; [13]. Authors have developed health and economic vulnerability indices for 22 major states and have found that Uttar Pradesh, Bihar, Madhya Pradesh, Assam, Haryana, Orissa, and Jharkhand are the most vulnerable states in pre and post-Covid scenarios [14]. Health vulnerabilities faced by the tribal women (multiple tribal communities, including nomadic in selected blocks of Nanded district Maharashtra are highlighted by using a case study approach [15]. The vulnerabilities are two-sided, led by a loss of forest-based livelihood and job loss push migration and further deterioration in health hazards on one side, whereas lower access to adequate monitoring of emerging emergencies and public safety net provisions. Social stigma, inadequate health infrastructure and personnel, and poor health standards are the most common features among the tribal population. For EAG states, the issue of health care access is the most critical [7] besides the availability and quality of public health provisions. The health outcomes for these states are the lowest and have huge disparities for the poor and disadvantaged sections of the population.

DATA ANALYSIS & DISCUSSION

The research question for this study is: Covid-19 Pandemic led to a significant increase in health vulnerabilities and health consumption expenditure for the tribal households in Uttar Pradesh. It has now been more than two years since the first wave of Covid-19 was experienced in India. Before the onset of the pandemic, tribal populations were the worst affected by the “triple disease burden” (GOI:2018). i.e., malnutrition, nutritional deficiencies, and communicable diseases. NFHS round 4 and 5 reports show that health vulnerabilities measured through various health outcomes are the highest among the ST population across states. Health vulnerabilities have been defined in the literature as a multidimensional concept including a) awareness about health problems, their causes, and possible remedial provisions by the government b) access to the public health system, c) health outcomes, morbidities, and risk, and d) socio-economic determinants of health vulnerability, such as income, education, household level amenities, and many others. Impact on livelihood, food security, market access for minimum sustenance needs, mobilization and migration, non-farm activities, and a few others were much more severe than infections and deaths. The spread of infection and illness due to the pandemic during the second wave of the pandemic was severe due to the overburdened and inadequate primary health care system in the tribal regions. For instance, in the Lakhimpur Kheri district, only 4.8 percent of villages have a Primary Health Centre or any Hospital. The availability of government hospital beds is 3.23 per lakh population in the entire district. There is no specific component for tribal health issues in the National Rural Health Mission and the central government-funded health schemes. Government initiatives and interventions for the health sector appear to be contributing, though at a slower pace, to improving health outcomes. The majority of the mortality parameters (Infant Mortality, Under 5 Mortality, Neo-Natal Mortality, Maternal Mortality, and communicable diseases)

have shown a decreasing pattern during the NFHS-V, and institutional coverage (childbirth, immunization, Integrated Child Development Service beneficiaries, Mother and Child health care, and hospitalization cases) has increased.

Table 1. Comparative Health Performance for EAG States

EAG States	Total Fertility Rate		Child Sex Ratio		Below Normal BMI(Body Mass Index) Women		Anaemic women (age 15-49 years)		Under 5 Mortality rate		Prevalence of stunting	
	V	IV	V	IV	V	IV	V	IV	V	IV	V	IV
NFHS Rounds												
Bihar	3	3.4	908	934	25.6	30.4	63.5	60.3	56.4	58.1	49.6	50.0
Chhattisgarh	1.8	2.2	960	977	23.1	26.7	60.8	47	50.4	63.3	41.8	52.6
Jharkhand	2.3	2.6	899	919	26.2	31.5	65.3	65.2	45.4	54.3	49.8	55.2
Madhya Pradesh	2	2.3	956	927	23	28.4	54.7	52.5	49.2	64.6	47.9	56.1
Odisha	1.8	2.1	894	932	20.8	26.5	64.3	51	41.1	48.1	46.0	56.8
Rajasthan	2	2.4	891	887	19.6	27	54.4	46.8	37.6	50.7	49.1	49.0
Uttarakhand	1.9	2.1	984	888	13.9	18.4	42.6	45.2	45.6	46.5	33.3	47.9
Uttar Pradesh	2.4	2.7	941	903	19	25.3	50.4	52.4	59.1	78.1	52.2	69.9
India	2	2.2	929	919	18.7	22.9	57	53.1	41.9	49.7	43.9	54.2

Source: compiled by the author from NFHS IV and V rounds reports published by Ministry of Health and Family Welfare, Government of India.

The highlight of Table 1 is the increasing prevalence of anaemia in women in the age group of 15-49 years and unchanged stunting prevalence during the NFHS-V. A higher level of fertility rate (TFR) in Bihar and Uttar Pradesh should be seen along with the lowest prevalence of antenatal care visits in these states among their counterparts. Further, the Child Sex ratio is a bigger concern across these states, excluding Uttarakhand. With Janani Suraksha Yojana(JSY) coverage expansion, institutional childbirth has increased substantially in the EAG states, but immunization and supplement medicine intakes among pregnant mothers have remained unsatisfactory. Health status and health standards are one of the critical components of human development in developing regions. This is mainly due to the weak demand side forces for health provisions by various sections of the population. It has been proved that with the increase in per capita income levels, health status improves, and there is a higher demand for health provisions. In this context, public health provisions in developing regions become a challenging task for the government being the sole financing institution. Further, with decreasing fiscal space and constraints due to fiscal sustainability concerns, optimum allocation and efficient utilization of funds compound the challenge.

From the beneficiary side, i.e., sections of the population for whom dependence on public health provisions is mostly not a voluntary choice, the challenge is related to access and utilization of the public health system.

Table 2. Descriptive Statistics from the field survey

	N	Min	Max	Mean		Std. Deviation	Varian ce	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error
Family size	75	2	35	10	1	7	44	1.89	0.28
Earning members	74	1	10	3	0	2	4	1.11	0.28
Annual income	75	6500	320000	164727	42044	364114	132578738468	8.03	0.28
Per capita income	75	1176	246154	17393	3247	281197	790676060	7.47	0.28
Annual exp	75	7032	408000	97029	8926	772986	5974921049	1.95	0.28
Medical expenses	75	600	200000	18983	3384	293054	858760912	4.59	0.28
Lockdown medical expenses	75	0	150000	19865	3041	263321	693359323	2.70	0.28
Share of medical expenses	75	0	300	23	5	40	1580	5.13	0.28

Table 3. Results from Binary Logit Regression

		Odds Ratio	Wald	Sig.	Exp(B)
Step 1	Healthexp	.000	13.546	<.001	1.000
	Constant	-2.783	20.749	<.001	.062
Step 2	Familysize	-.264	8.804	.003	.768
	Healthexp	.000	14.314	<.001	1.000
	Constant	-1.585	4.289	.038	.205
Step 3	Familysize	-.303	9.576	.002	.739
	Healthexp	.000	12.855	<.001	1.000
	Communicable ailment	-2.265	5.696	.017	.104
	Constant	-.945	1.428	.232	.389

Table 2 and 3 shows the descriptive statistics and results from the binary logit model for the survey data. The dependent variable, i.e, the target variable, is the probability of out-of-pocket health expenditure being larger than 20 percent of the total household expenditure. Out of the 75 surveyed households, 28 percent of households reported this share as 5 percent, whereas 35 percent reported their health expenditure ranging up to 20 percent. 32 percent of the households fall

under the category of health expenditure burden with greater than 20 and up to 300 percent of their household expenditure being used up on their health problems. These households have been affected more by non-communicable diseases and ailments given their vulnerability in terms of lack of public infrastructure and access to public provisions and low education levels. 52 percent of the head of the households and respondents are illiterate, and only four percent of the households have education above class 10. 55 percent of the households are dependent on non-public health service providers (mainly, ojhias and unqualified doctors). Distance and lack of public transport are one of the major bottlenecks for these households in accessing public health provisions, besides the unavailability of permanent doctors and other nursing staff. This forces them to become non-receptive to the formal health care provisions. The logit model is based on the forward likelihood ratio method, which includes independent variables one by one in three stages and includes only those variables as predictors which are significant. This helps in explaining the impact as well as the variability of independent variables in the model. In the present case, with several iterations before the final model, income status, employment status, household total expenditure, and educational status gets omitted as they are not only insignificant but have no variation across the household. For instance, almost all households are dependent on farming and casual labor as their employment status. Further, as the dependent variable is the share of health expenditure and the independent variable is the amount of health expenditure; therefore there can be an autocorrelation issue leading to the odds ratio value coming to 0.000. The results show that households suffering from non-communicable diseases have a 2.26 times higher probability of experiencing catastrophic health expenditure. Similarly, smaller family size increases the probability of a higher health burden. It is important to highlight that 67 percent of the household resorted to borrowing or selling their land or food stock to cope with this health burden. The community-based health care in this community provides these households with a better coping mechanism, and therefore the public health provisions appear to be ineffective except for the child immunization program. The model is a good fit, as reflected by the high pseudo R^2 value for step 3 and the Hosmer Lemeshow test.

The selected village for the survey, i.e. Belapursua, the highest populated village of the THARU tribe, has one primary health center with two Bachelor of Ayurvedic Medicine and Surgery (BAMS) male doctors, two pharmacists, and 6 paramedical staff. Out of the 75 selected households, 25-35 households experienced larger health vulnerabilities. In the context of four important dimensions of health vulnerabilities, as mentioned earlier, households are equally affected by all. For more than 50 percent of the households, health-related expenditures became the biggest item of expenditure, even more, prominent than food and agriculture-related expenditure. It is important to note that irrespective of the corona infections, households were forced to spend more on health mainly due to two reasons. Firstly, doctors from Primary Health Centres (PHC) at the village level and Community Health Centres (CHC) at the district level were

assigned duties in some other parts of districts; therefore households must visit private sector health care providers even for delivery, accident, and some common ailments. Second, lack of awareness and public health support mechanisms within or near villages led to panic-driven reallocation of household expenditures. Although a majority of the households are dependent on the agricultural sector for their living, their cost of production increased in a larger proportion as compared to the decline in income from the pre-pandemic days. Further, it is important to note that the tribal households largely depend on the barter system for their day-to-day living and livelihood needs. In case of health problems or emergencies, they need cash, which makes them even more vulnerable as they are forced to either borrow money or sell their food stock. During the pandemic and lockdown, borrowings (predominantly informal sources) have increased, and on the other hand, their dependence on non-certified health service providers has increased considerably.

CONCLUSION

The paper analyses the state-level data from the NFHS-IV and V to highlight the health vulnerabilities of the tribal households. Further, the paper analyses the case study based on the Tharu Tribes' survey in Uttar Pradesh. Seventy-five households were surveyed using in-depth interviews and a semi-structured questionnaire to assess the impact of the Covid lockdown on the household health burden. Apart from the qualitative analysis, the survey data uses the binary logistic regression model to determine the factors causing vulnerabilities. The model analyses the relationship between out-of-pocket health expenditure and factors determining health status and outcomes in tribal households. The determinants considered are income status, nature of employment, education status, family size, vehicle ownership, non-public health providers, types of diseases, and prominent health issue in the tribal households. The data analysis indicates a significant correlation between health expenditures in pre-Covid times and Covid times. Family size, health expenditures, and prevalence of non-communicable diseases increase the probability of catastrophic out-of-pocket expenditures for tribal households. Per capita income, migration status, employment status, and private health provisions are correlated to health vulnerabilities. The data analysis also indicates that the Covid pandemic has widened the health vulnerabilities of tribal households in EAG states due to their increasing dependence on private health clinics and incomplete public health provisions. Public provisions, particularly health provisions, also suffer from improper utilization of funds and leakages [7]. The pandemic has led to a higher prevalence of malnutrition for mother and child as well as a higher health care burden for all tribal households as there was an irregularity in Integrated Child Development Services and postponement of non-Covid-based health care services. Therefore, the paper concludes that Covid-19 infection remained mild, but the vulnerabilities due to non-existent public health support mechanisms increased significantly among the tribal households.

REFERENCES

[1] Aday L.A. Health Status of Vulnerable Populations, Annual Reviews Public Health, Issue No.15, pages 487-509 accessed from www.annualreviews.org, 1994

[2] Haddad S. et al., “Health divide” between indigenous and non-indigenous populations in Kerala, India: Population based study *BMC Public Health*, 12:390 <http://www.biomedcentral.com/1471-2458/12/39>, 2012

[3] The Lancet. Redefining Vulnerability in the Era of Covid-19, *Lancet*, 395: 1089, 2020

[4] Acharya R. & Porwal A. A vulnerability index for the management of and response to the COVID-19 epidemic in India: an ecological study, *Lancet Glob Health* 2020; 8: e1142–51 Published Online July 16, 2020 [https://doi.org/10.1016/S2214-109X\(20\)30300-4](https://doi.org/10.1016/S2214-109X(20)30300-4)

[5] Dhanraj S. Economic vulnerability to health shocks and coping strategies: evidence from Andhra Pradesh, India. *Health Policy and Planning*, Volume 31, Issue 6, July 2016, Pages 749–758, <https://doi.org/10.1093/heapol/czv127>

[6] Haddad S. et al. Reducing Inequalities in health and access to health care in a rural Indian Community: An India Canada collaborative research project, *International Health and Human Rights*, 11 (Suppl 2):53, 2011, retrieved from <https://www.biomedcentral.com/1472-698X/11/52/53>

[7] Kumar V. & Dingh P. Access to healthcare among the Empowered Action Group (EAG) states of India: Current status and impeding factors, *The National Medical Journal of India*, VOL. 29, NO. 5, 2016, pp 267-273

[8] Government of India, Tribal Health Committee Report, Ministry of Tribal Affairs 2018

[9] PSMRI, Compendium of Districts Factsheets: Tribal Health and Nutrition, Piramal Swathya Management and Research Institute for Ministry of Tribal Affairs, Volume 1 & 2, 2021

[10] ILO, Bearing the Brunt The Impact of Government Responses to COVID-19 on Indigenous Peoples in India, The International Work Group for Indigenous Affairs (IWGIA) International Labour Organisation, 2020

[11] Mohanty A (2020) COVID-19 is lethal for the world's indigenous peoples, accessed from <https://www.downtoearth.org.in/blog/environment/covid-19-is-lethal-for-the-world-s-indigenous-peoples-71458>, May 29.

[12] Saini, A & Nancy, Whither Adivasi amid the COVID catastrophe? DOI: 10.1002/ajhb.23661, *American Journal of Human Biology*;e23661, 2021

[13] Agoramoorthy & Hsu. COVID-19 and India's vulnerable indigenous populations, *American Journal of Human Biology*. 2021:e23608. wileyonlinelibrary.com/journal/ajhb from <https://doi.org/10.1002/ajhb.23608>

[14] Bhattacharya & Banerjee COVID-19: Indices of economic and health vulnerability for the Indian states, *Social Sciences & Humanities Open* 4 (2021) 100157 from <https://doi.org/10.1016/j.ssaho.2021.100157>, Elsevier Ltd.

[15] Wakharde, S. B (2021). Covid-19 Pandemic and Tribal Women in Nanded District of Maharashtra, *Economic Political Weekly* ISSN (Online) - 2349-8846.

REMOTE WORK AND WORK-LIFE BALANCE: EXPERIENCE FROM COVID-19 IN A CROSS-CULTURAL PERSPECTIVE

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ABSTRACT

Covid-19 impacted the whole globe in a major way, leaving an impact on the economy, physical health, and mental health of the population. Remote work was an option to manage workplace productivity. This paper explores the impact of remote work on work-life balance, and also highlights how inhibition and use of technology have created certain positive and negative advantages. On the basis of the literature review and findings, we provide propositions. In the future exploratory research is required to prove the directions of the propositions.

Remote work is not a new concept, but after covid-19 it become a necessity, therefore this paper provides insight into how future workplaces need to maintain a balance in terms of technology and human aspects to enhance productivity. It also provides the relationship between remote work and work-life balance in a cross-cultural context like India and Hungary.

***Keywords:** Work-life Balance; Remote work; ICT Technology; India; Hungary*

INTRODUCTION

In general, organizations evolve, in response to internal and external stimuli. Organizations that were following traditional modus operandi were forced to change their way to operate due to Covid to accommodate business continuity plans This pandemic has not only brought changes in the daily routine of individual life but it has changed the complete functions of the workplace [2].

Physical interaction and presence at the workplace have become redundant and online and virtual platforms have taken a major role across all segments of the work sphere. Work from home was earlier based on employee choice towards flexibility but that has become a mandatory feature after Covid- 19 [7]. Work from home, virtual teams, and remote work have become the reality of the day.

Given the scenario, the pandemic has accelerated work from home and especially remote work. Covid-19 has been an accelerator to an organization where virtual team working and working from home was not a new context, however, for many production companies, the impact has been enormous. Companies were forced to change their production and business processes. Earlier due to the nature of the distributed workforce or needs like working from clients' locations, business travels, or individuals' choices to work pro bono, organizations had been accepting and enabling work from anywhere aka Remote Work (RW) putting in technology infrastructure, organizational policies, communication mechanisms in place. Because of travel restriction on people making business trips and the constant interruption of supply chains owing to the shortage of raw materials has been a major challenge for organizations to maintain the production process [6].

Adoptions for remote work and work from anywhere have increased during covid in the form of the business continuity plan.

To carry out our research, we used systematic literature review (SLR), which helped us in the assessment of the topic and synthesis of different views, even let us to have a short intercultural comparison. While doing our SLR we concentrated only on articles from social sciences and business and put a special focus on available research written in English from India and Hungary. We used the following search words: Covid.19 and remote work; Covid-19 and remote work impact; Covid-19 and mental health; Covid-19 and remote work and India; Covid-19 and mental health and India; Covid-19 and remote work and Hungary and Covid-19 and mental health and Hungary. We carried out our research in three rounds: first generally, then for India and thirdly for Hungary.

This paper has been divided into three parts, we start with the necessity and emergence of remote work, in the second part we present the resistance toward technology that was prevalent towards remote work, thirdly it presents the relationship between remote work and work-life balance, fourthly, the relationship between remote work and technostress, fifth remote work effectiveness in terms of ease of technology across culture i.e. India and Hungary and towards the end it present conclusion and suggestion for future research.

Perspectives on resistance towards technology.

Researchers have tried to present the status of pre-covid and post-covid behaviour of employees and organizations, there is an argument about the new normal.

The pandemic swept away a lot of technical barriers and employees' resistance to technology which impacted institutional cultures and managerial attitudes. Though a lot of creative approaches have been developed in the client-facing roles and online teachings in schools and colleges, however, there is a lack

of research on how working from home experiences would be after the pandemic towards the technology and what behaviour will be in the future to design the new normal workplace [15]

According to Williamson, Colley & Hanna-Osborne (2020) [15] change in the workplace from office to work from home brought a lot of resistance in the Australian context, citing the example of Australia's biggest employers state and federal governments. They highlighted that there was a lot of change resistance, especially in senior employees. Some employees showed concerns about appropriate technology, compliance with employment regulations, and employees' productivity and performance.

Before covid-19 Automation and AI were supposed to make the workplace lean and less interactive as far as a human being was concerned, covid-19 has taken altogether a different kind of context since march 2020. The future of the workplace would be different in the forms of remote work. Work would be organized in a manner where employees can work partially from home and partially at the office.

Gajendran and Harrison's (2007) [5] meta-analysis also supported the beneficial effect of remote working on perceived autonomy, which in turn was associated with desirable individual outcomes (e.g., task performance and job satisfaction).

Studies suggest that remote working is usually detrimental to the relational aspects of work [14]. Employees who stay with families faced challenges of resources to create office space at home because they need to navigate the space of others as well [7]. In general, studies have highlighted a higher level of performance with remote work less conflict with work-life balance aspects.

Remote working has increased the work-to-life conflict as work-related boundaries have interfered with personal space, this has created contamination into private life to work life, which is likely to enhance life-to-work conflicts. Apart from work-life conflicts, a second important challenge has emerged in terms of social distancing and loneliness. Researchers have highlighted that social interactions including informal chats at the workplace are crucial to employees' physical and mental health.[7]. Loneliness at the workplace has been negatively associated with performance and affective commitment.

Though there are a large number of studies that highlight the negative outcome of remote work there are some studies that describe the other side of the picture. The positive impact of remote work has been highlighted as increased life and family satisfaction -especially for single male workers - and better work-life balance which again contributes to life satisfaction [13]. Therefore we propose.

P1: Relationship between remote work and work-life balance lacks direction.

Remote work and Work-Life Balance

When it comes to work-life balance, studies have shown that remote work can have both positive and negative effects on the life domain, including work-life balance, life satisfaction and family satisfaction. Among the positive impacts, we can mention increased life and family satisfaction -especially for single male workers - and better work-life balance which again contributes to life satisfaction. Studies highlight that remote work can decrease turnover, increase productivity, job satisfaction and performance and even flexibility by enabling them to complete their work in flexible time which is specifically valued by women with young children [9].

Generally having a work-life balance while working remotely is not an easy task as shown by literature too, yet the pandemic made it even harder both for single employees and for employees with children. Due to remote work, employees find it harder to unplug from work demands and have an increased inability to separate work from their private life [11] In COVID-19 times this is combined with increased parental demands due to the closure of schools and childcare services. This further blurs the line between work and private life but also puts extra weight on the shoulders of working parents as they have to take care of their children too while working from home resulting in difficulties in maintaining family-work boundaries, The increased family-related and autonomous work-related demands can highly affect the well-being of these workers.

A large number of researchers have highlighted the impact of the covid and a new method of dealing to maintain the growth and productivity of the employees and the organization. Several studies ponder on the impact of remote work on employee productivity, mental health, loneliness, technostress, and information technology as a resource.

Contributing to the increased stress level and as a result of blurred work-life balance, we can mention overwork too. While working from home, people tend to work more than in the office but this can have serious impacts on employees' mental and physical health and can lead to insomnia, depression, stress, anxiety, weight gains, exhaustion, headaches or backaches [1].

To lessen the already mentioned negative effects of remote work on work-life balance, the first step from the side of the organisation is to understand them and gain an insight on what are the most striking issues for their workers. Without a clear understanding, they can hardly cope with the problem. Then the firms should know if and how additional organizational support is available for employees and should communicate to them. On the basis of the above-mentioned analysis we propose:

P2. Remote work is more negatively associated with work-life integration than positively.

Remote work and Technostress

Remote work has merged the boundaries of workplace and home and it has created work-life balance distortions, another important issue in connection with remote work and well-being is the increased level of stress. Just the removal of boundaries between work and personal life can significantly increase stress which might affect the productivity and motivation of workers [1]. Besides these, many employees are experiencing remote work for the first time as a result of the pandemic, they are also isolated from their colleagues, friends and even family. Moreover, their daily routine has been disrupted resulting in increased stress which is further accelerated if the economic situation of the firm is declining and employers end up at layoffs .

Technostress is a form of stress, which can be defined as “*a modern disease of adaptation caused by an inability to cope with new computer technologies, affecting mental health in a manner which may manifest as a struggle to accept computer technology, or as over-identification with computer technology*” [3].

Not so surprisingly when working from home the level of technostress can increase due to the fact that we have to use ITC technologies even for regular communication with colleagues. This can impact productivity and even can cause work-life conflicts [10]. The remote workforce showed some pieces of evidence about antecedents and consequences of techno-stressors experienced by them during the Covid-19 emergency. Studies highlight the impact of ICT effect of remote work and work-life balance therefore we propose our third proposition.

P3: ICT mediates the relationship between remote work and work-life balance in the context of technostress.

Remote work and Ease of Technology: Cross-cultural Context

The pandemic swept away a lot of technical barriers and employees’ resistance to technology which impacted institutional cultures and managerial attitudes. Though a lot of creative approaches have been developed in the client-facing roles and online teachings in schools and colleges, however, there is a lack of research on how remote work and working from home experiences would be after the pandemic towards the technology and what behaviour will be in the future to design the new normal workplace.

Applying remote work demands a very quality of technology infrastructure. ICT is a big challenge for many countries, for example, India and Indians are known to be more favourable towards technology. India has been able to put up a

very successful record in the field of the IT industry, providing services to almost 60 per cent of countries around the globe [12].

Even the IT industry in terms of technology has faced challenges to accommodate the requirement of remote work or work from home.

The major challenges that the industry faced were due to the lack of appropriate new information technology tools on a wider scale. Apart from that internet connectivity is also a challenge for some parts of India. A lot of infrastructure in terms of IT technological requirements and training of IT tools to employees remained a challenge for the sectors like higher education, starts up, and banking and financial services sector.[12] Organizations like higher education setup and starts have started working with online collaboration platforms like WebEx, Google Meet, Zoom, etc. But these facilities are easily available in bigger cities of India, for tier two cities internet speed is still a major challenge, therefore remote work in tier two cities is not easy in terms of technology.

P4: Remote work in the context of Indian work -the setting is negatively associated with work-life balance, especially in the context of tier two (smaller cities).

Similarly, we tried to understand the impact of Remote work and work-life balance in the Hungarian context. Remote work is not a new concept in the Hungarian context. Prior to Covid-19 also almost 3.7% of the total 9% of white-collar job employees were working remotely. However, Covid-19 has increased this trend, as per the research in Nordic Benelux countries remote working has increased in all European Union countries. Research conducted in Hungary suggests that remote work is expected to stay and play an important role in defining the future of work [4]. In terms of ICT, Hungary is having a better position in tier two cities, compared to India but still, the research literature suggests infrastructure constraints are very clearly existing. ICT especially lack access to the internet and not owning a computer are big challenges for Hungary to implement Remote work. The research elaborates that in certain parts of Hungary not even half of the households have wired internet subscriptions [8]. Therefore, ease of technology cannot be studied unless the country has full infrastructure. This leads us to propose our final proposition

P5. Information and Communication Technology (ICT) has a major role in remote work and work-life balance.

On the basis of this study, we propose a model for future research that can provide a complete analysis and picture of remote work and work-life balance study. Lack of ICT provides a limited chance to implement remote work, while higher usage leads to technostress and other imbalances.

CONCLUSION

Remote work is not a new workplace practice, but Covid-19 has forced organizations to implement remote work as standard work practice. This study highlights that remote work has also various forms like working from home or working from anywhere. Future studies need to bring more clarity to the nature of Remote work. implementation of Remote work as standard practice would not be a challenge for developed nations as ICT is not a major challenge there. But is playing a significant role where ICT may not be as developed as its counterpart. In this research study, we have found a significant amount of literature that highlights that remote work implementation is a big challenge for India and Hungary both due to not up to the mark ICT especially internet speed and owning a laptop.

Apart from the crucial role of infrastructure findings of this study suggest that remote work has both positive as well as the negative effect on work-life balance. According to the literature, remote work has a more negative effect on the work-life balance due to mixing the boundaries of both spaces. Future research studies are required in the form of exploratory based on quantitative methods to test the relationship and direction of remote work on work-life balance.

REFERENCES

- [1] Adonu, D. - Opuni, Y. A., - Dorkenoo, C. B. Implications of COVID-19 on Human Resource Practices: A Case of the Ghanaian Formal Sector. *Journal of Human Resource Management*, 8(4), pp. 209-214. 2020.
- [2] Alonso, M.; Rubio, A.; Escrig, T.; Soto, T.; Serrano-Lanzarote, B.; Matarredona-Desantes, N., Identification of Measures to Strengthen Resilience in Homes on the Basis of Lockdown Experienceduring COVID-19. *Sustainability* , 6168. <https://doi.org/10.3390/su13116168>. 2021.
- [3] Bondanini, G. – Giorgi, G. – Ariza-Montes, A. – Vega-Munoz, A. – Andreucci-Annunziata, P. (2020): Technostress Dark Side Of Technology in Workplace: A Scientometric Analysis. *International Journal of Environmental Research and Public Health*, 17(21), pp. 8013-8036. 2020.
- [4] Cserhádi, I., “Business is unusual”– remote work after COVID-19.” *KÖZ-GAZDASÁG* 15(2): 38-53, 2020.
- [5] Gajendran, R.S.; Harrison, D.A. The Good, the Bad, and the Unknown about Telecommuting: Meta-Analysis of Psychological Mediators and Individual Consequences. *Journal of Applied Psychology*. Vol. 92, 1524–1541.2007.
- [6] Gómez, S.M., Mendoza, O.E.O., Ramírez, J. & Olivas-Luján, M.R., Stress and myths related to the COVID-19 pandemic’s effects on remote work. *Management Research*, 18(4),401-420. <https://doi.org/10.1108/MRJIAM-06-2020-1065>, 2020.

[7] Kniffin, K. M. – Narayanan, J. – Anseel, F. – Antonakis, J. – Ashford, S. P. – Bakker, A. B. – Bamberger, P. – Bapuji, H. – Bhawe, D. P. – Choi, V. K. – Creary, S. J. – Demerouti, E. – Flynn, F. J. – Gelfand, M. J. – Greer, L. L. – Johns, G., COVID-19 and the Workplace: Implications, Issues and Insights for Future Research and Action. *American Psychologist*, 76(1), pp. 63-77, 2021.

[8] Kovács, S. Z., B. Koós, A. Uzzoli, B. Páger, and I. Egyed. , “Regional effects of the COVID-19 pandemic and policy responses in Hungary.” *R-Economy* 6(3): 208-221. <https://doi.org/10.15826/recon.2020.6.3.018>, 2020.

[9] Mas, A & Pallais, A. (2017). Valuing Alternative Work Arrangements. *American Economic Review*, 107(12), 3722-3759. <https://doi.org/10.1257/aer.20161500>.

[10] Molino, M. – Ingusci, E. – Signore, F. – Manuti, A. – Giancaspro, M. L. – Russo, V. – Zito, M. – Cortese, C. G., Wellbeing Costs of Technology Use during Covid-19 Remote Working: An Investigation Using the Italian Translation of the Technostress Creators Scale. *Sustainability*, 12(15), pp. 5911-5931, 2020.

[11] Palumbo, R. Let me go to the office! An investigation into the side effects of working from home on work-life balance. *International Journal of Public Sector Management*, 33(6/7), pp. 771-790, 2020.

[12] Ramaswamy, K. and S.L. Reddy. “The challenges in the Indian IT industry due to COVID-19 - An Introspection.” *Studies in Indian Place Names* 40(70): 161-174, 2020.

[13] Virick, M., DaSilva, N. & Arrington, K., Moderators of the Curvilinear Relation between Extent of Telecommuting and Job and Life Satisfaction: The Role of Performance Outcome Orientation and Worker Type. *Human Relations*, 63(1), 137–154, <https://doi/10.1177/0018726709349198>, 2010.

[14] Wang, B., and Y.L. Curtin. “Achieving Effective Remote Working During the COVID-19 Pandemic: A work Design Perspective.” *Applied Psychology: An International Review* 70(1): 16-59. <https://doi.org/10.1111/apps.12290>. 2021.

[15] Williamson, S; Colley, L; & Hanna-Osborne S., Will working from home become the ‘new normal in the public sector? *Australian Journal of Public Administration*. Vol. 79 pp. 601–607, 2020.

THE ADOPTION OF HEALTHCARE 4.0 IN POLISH HEALTHCARE SECTOR

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ABSTRACT

The intensive development of new technologies has brought about changes in the functioning of many organisations, the so-called Industry 4.0 includes, in general terms, changes concerning a significant increase in the automation and robotisation of production processes and the expansion of the use of internet information and computer data management systems in organisations. These changes also apply to the field of healthcare, where telemedicine, artificial intelligence, Big Data analytics, among others, are increasingly used and a megatrend called Healthcare 4.0 or Health 4.0 has emerged. The concept of Healthcare 4.0 is the result of research into the applicability of the concept. The use of Industry 4.0 in the healthcare field is a relatively new research direction. In order to realise the full potential of Healthcare 4.0, comprehensive governance models are needed that also allow for the early teasing out of flaws, limitations and their elimination. The ongoing research fits in with this demand. One of the barriers to wider implementation of the Healthcare 4.0 concept in the area of healthcare entity management may be insufficient acceptance of new technologies by their directors. The article presented here addresses precisely the problem of acceptance of modern technologies by hospital directors and their use in the process of strategic decision-making. A literature review was used as a research method.

Keywords: public management, health 4.0, health sector, decision making process

INTRODUCTION

Industry 4.0 is the common name for the development programme initiated by the German government in 2011. [1]. Industry 4.0 involves the technical integration of new technologies such as artificial intelligence (AI), cloud computing, cyber-physical systems and the internet of things into industrial production [1, 2, 3, 4]. The fourth technological revolution has also extended to the public sector, where technologies specific to Industry 4.0 are being used with increasing intensity, e.g. artificial intelligence in medicine, digitisation of social services provided. It is significant that the modernisation and thus improvement of the efficiency of public organisations does not apply to the operation of individual organisations that decide to do so, but to entire areas of public service provision through the implementation of relevant programmes at central or

regional level, thus realising the aspiration to transform the public sector towards Government 4.0. These changes also apply to the field of healthcare, where telemedicine, artificial intelligence, Big Data analytics, among others, are increasingly used and a megatrend called Healthcare 4.0 or Health 4.0 has emerged [5]. Chen [5] and his team described the changes taking place as 'The new brain and new hands in Healthcare 4.0'.

The concept of Healthcare 4.0 is the result of research into the applicability of the concept. The use of Industry 4.0 in the healthcare field is a relatively new research direction. As Cavallone and Palumbo [6] point out - Industry 4.0 in healthcare should not be seen as a self-absorbed innovation; rather, it should be carefully managed at both the policy-making and management levels. In order to realise the full potential of Healthcare 4.0, comprehensive governance models are needed that also allow for the early teasing out of flaws, limitations and their elimination. The ongoing research fits in with this demand. One of the barriers to wider implementation of the Healthcare 4.0 concept in the area of healthcare entity management may be insufficient acceptance of new technologies by their directors. The article addresses precisely the problem of acceptance of modern technologies by hospital directors and their use in the process of strategic decision-making. The article focuses on the consideration of the possibility of using the Unified Theory Of Acceptance And Use Of Technology (UTAUT) to assess the degree of acceptance of new technologies by hospital directors to improve decision-making. A literature review was used as a research method.

HEALTH 4.0 CONCEPT

The stages of penetration of modern IT solutions into the health services sector were presented in their work by Chanchaichujit, Tan, Meng and Eaimkhong [7]. Between 1970 and 1990, modular or siloed IT systems mainly geared towards paperless medical records based on simple automation (Healthcare 1.0) were developed. The next step was the networking of most IT systems, and the electronic health records (EHRs) generated began to integrate with clinical imaging, giving physicians a better perspective (Healthcare 2.0). Since 2000, the emergence and development of patient-worn devices and implants can be observed. There is an integration of all outcome data, along with electronic patient records on a network (Healthcare 3.0). There is an emerging problem of data incompatibility and resistance from healthcare providers. Currently, we are seeing the rapid development of Healthcare 4.0, the intention of which is to apply some of the elements of Industry 4.0 to the healthcare sector, including the Internet of Things, Big Data analytics, cyber-physical systems and cloud computing.

The development of the Healthcare 4.0 concept is shown in Table 1.

Table 1. Transition from Healthcare 1.0 to Healthcare 4.0

Distinctions	Healthcare 1.0	Healthcare 2.0	Healthcare 3.0	Healthcare 4.0
Main objectives	Improving efficiency and reducing paperwork	Improving information sharing and efficiency	Provision of patient-centred solutions	Provide solutions to monitor patient status and respond in real time
Focus	Simple automation	Liaison with other organisations	Inteaction with patient	Integrated real-time monitoring, AI-enabled diagnostics
Sharing information	With the organisation	Within the cluster of providers	In the country	As part of the global health supply chain
Key technologies	Administrative systems	Cloud computing	Big Data, mobile devices, optimisation systems	IoT, Blockchain, AI, data analytics
Restrictions	Single, isolated systems with limited functionality	Sharing only critical information but no interaction with patients	Different standards udes in a community with limited interoperability	New and untested technologies raising data security concerns

Source: [7]

The Internet of Things are technologies that enable any device to be connected to the internet, remotely access and manage these devices from anywhere with internet access. An example application of the IoT is monitoring health conditions remotely and performing medical procedures at home, which are possible in this way. As well as being used to remotely monitor a patient's health, the data obtained from biosensors can also aid scientific research. Cyber-physical systems are intelligent systems comprising machines, devices and software that operate autonomously or in a network, communicate over the internet and use web services, and make decisions in a decentralised manner or in collaboration with humans. These systems are used to monitor and control devices in the physical world and the processes in which these devices are used. The main application of cyber-physical systems in the healthcare sector is the modelling of therapeutic reality. Cloud technology allows data to be remotely stored and processed within secure servers. Sources of data can include medical records, laboratory test results, prescription data, wellbeing data, data generated by electronic gallantry and demographic factors such as postcode, local weather,

shopping habits. Cloud computing uses analytics and calculation systems to process data.

Current digital health technology is widely used, ranging from mobile health applications, or m-health, to decision support systems that use algorithms derived from mining clinical datasets, to biometric sensors such as continuous glucose monitoring, video-linked consultations ('telemedicine') and electronic personal health records. The implementation of these technologies has been a key driver of change in healthcare and has helped to bridge the divide between healthcare providers and patients through digital communication.

Reaping the full benefits of applying the technologies known to Industry 4.0 to the public sector, however, requires overcoming certain obstacles. One of these is the lack of acceptance of modern technologies among doctors, managers and other employees of healthcare providers [8], [9], [10]. Without an appropriate level of acceptance, it is not possible to effectively introduce modern technologies into the practice of medical entities. It seems that this problem is smaller among physicians and nurses, as they perceive the direct impact of modern technologies on improving the quality of provided health services or facilitating their work. Less acceptance of the use of modern technology may concern managers of healthcare entities, who may not perceive a direct link / or understand it / between modern technology and improved efficiency in the management area. One possible application of Industry 4.0 technology is to support decision-making processes using, among other things, Big Data analysis. However, the lack of sufficient managerial acceptance of modern technologies may hinder the process of implementing Industry 4.0 technologies in the management area of the healthcare entity, especially in the decision-making process.

The above justifies the need for a deeper analysis of the level of acceptance and use of modern technologies among the management staff of hospitals, especially with regard to the support of Industry 4.0 technologies for decision-making.

DECISION MAKING PROCESS IN PUBLIC ORGANIZATION

Modern Industry 4.0 technologies can significantly support the decision-making process in public healthcare entities, e.g. in the area of investment decisions or organisational risk management. At this point, however, it is important to point out the specifics of the decision-making process itself in public organisations.

Essentially, both in private and public organisations the management comes down to decision-making, however, it should be borne in mind that the decision-making process in public organizations differs fundamentally from the decision-making process in commercial organisations, both in terms of the process itself and its determinants [11].

The source literature indicates that private organizations have definitely smoother and quieter decision-making processes [12]. On the other hand, public organisations experience more turbulence, breaks, recirculation and conflicts. These differences are attributed by the researchers to the roles of public and private organisations in society. Commercial organisations act with the aim to make profit, while public organisations pursue goals of social importance, the hierarchy of which is changed from time to time and dependent on the currently prevailing political forces and electoral preferences.

The decision-making process in the public sector organisations is complex. The managers, when performing their tasks, are forced not only to strive to achieve economic efficiency, but also to consider social and political consequences of their actions [13].

The rules and regularities of general management are applicable in public management, however, referring them to the public organizations, it is necessary to take their specificity into account , i.a. [14]:

- the existence of many stakeholders, whose interests do not coincide and sometimes are disputatious,
- large impact of stakeholders that have a significant power,
- decision-making rarely performed in a rational way due to operation in a highly political environment,
- lack of profits as a measure of efficiency, evaluating, at the same time, political interests and legislative elections, from the point of view of citizens' preferences
- less susceptibility of the participants to financial incentives, and more focus on the mission of the organization, need to cross the organizational barriers in order to recognize various aspects of problem solving, relatively high public visibility and transparency of intra-organizational activities.

The differences in decision-making in the private and public sector organizations were also pointed out in the works of Nutt [12]:

- in public organizations decision-makers must recognize the market, because it is created by state authorities, and behaviour of buyers is the factor defining the market for private organizations;
- in public organizations, cooperation replaces competition;
- in public organizations, there is greater need for consensus and simultaneous pressure to understand the mandates and commitments, and the range of choices available is smaller. In private organizations autonomy and flexibility of an organization is limited only by law and internal needs of the organization;

- in public organizations more time is needed for balancing expectations of the users with the requirements of the authorities, which is a result of networks between the users and authorities;
- in public organizations the need for opening the processes of external participation is increasing, it is difficult to keep the decision-making in secret;
- in public organizations the need for determining public expectations regarding the way in which the service is provided is increasing because the citizens behave like shareholders and often impose their expectations concerning activities of the organization;
- in public organizations, clarity of selection criteria is decreasing, there is the need to take into account the soft criteria and the criteria that will ensure equal access to the services;
- in public organizations the need for bargaining over resources is increasing, decision-makers have less power enabling them to change the shape of organization, also the time to search for options for this change is more limited.

Industry 4.0 tools, including artificial intelligence (AI) or Big Data, provide decision support and even empower decision-making in different contexts. The change for Industry 4.0 tools is driven not only by the availability of massive amounts of data, but also by the shift from decision support to actual decision-making. Industry 4.0 tools may indeed be able to process a lot of data, even in real time, to come to conclusions that can be the basis for good decisions, thus freeing employees to think more strategically and/or abstractly. Modern technologies, their sophistication and their operation on large data sets in real time allow them to be more widely used as decision support for more complex problems, often of a strategic nature.

Research carried out by the author of this article [11] indicates that decision-making among managers of public healthcare entities is dominated by making decisions based on previously made decisions, the so-called historical model. These decisions are based on previous experiences and decisions made by managers and do not take into account the new context in which decisions are made, thus limiting the effectiveness of actions. Supporting the decision-making process with modern technology therefore seems fully justified to move towards a more innovative decision-making process.

However, as indicated earlier, one of the barriers to wider implementation of Industry 4.0 technologies in the practice of organisational functioning, including decision-making processes, is the lack of acceptance of modern technologies by managers. Therefore, it is reasonable to investigate more deeply the extent to which managers of public healthcare entities accept and use modern technologies. For this purpose, the Unified Theory Of Acceptance And Use Of Technology (UTAUT), recognised in the literature, can be used.

UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY (UTAUT)

UTAUT was proposed in 2003 by Venkatesh and his team [15]. It combines previous models of acceptance of modern technology and is now widely used in research on this phenomenon. The Unified Theory Of Acceptance And Use Of Technology model is shown in the figure below.

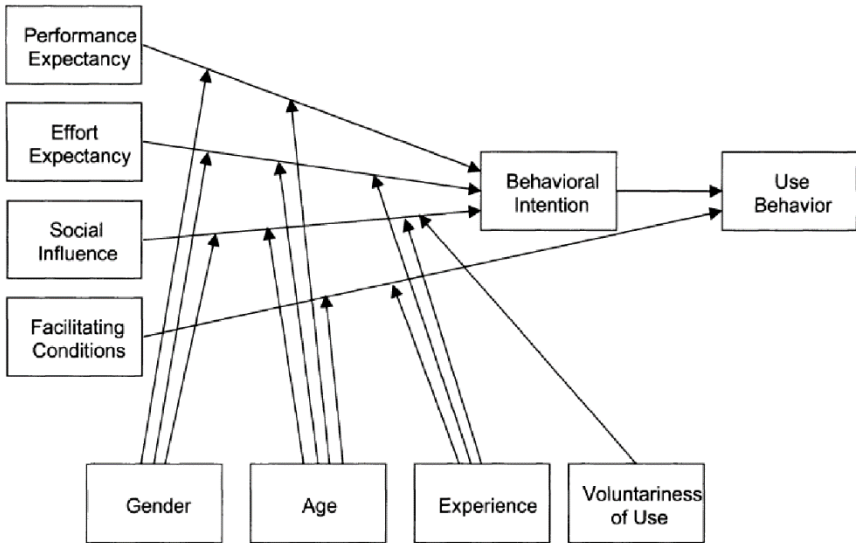


Fig. 1. Unified Theory Of Acceptance And Use Of Technology

Source: Venkatesh V., Morris M. G., Davis G. B., & Davis F. D., User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), pp. 425–478, 2003.

The authors of the model propose the following independent variables: performance expectancy, effort expectancy, social influence and facilitating conditions. They influence the intention to use modern technologies and, consequently, their ultimate use. As moderating variables, the model authors proposed gender, age, experience and voluntariness from use.

Performance expectancy refers to the expected efficiency, productivity from the use of modern technology. It means that the use of ICT increases an employee's productivity, allows me to complete tasks faster; the belief that the use of ICT at work is useful, improves the quality of work.

Effort expectancy means that the effort involved in using modern technology.

Social influence is a variable that refers to the importance of the influence of the immediate environment as a determinant of acceptance of modern technology. For example, people who are important to me think that I should use ICT, people who influence my behaviour/actions think that I should use ICT, I get help from my manager when it comes to using ICT, I use ICT because of the percentage of my co-workers who also do so.

Facilitating conditions are expressed, for example, in access to equipment or training to acquire the appropriate knowledge and skills to use modern technology. Facilitating conditions also refer to knowledge sharing within the organisation itself, including access to people with the necessary knowledge and skills.

CONCLUSION

The above considerations clearly indicate the need for deeper research into the degree of acceptance of modern technologies by managers of public healthcare entities, who are active participants in the process of change - the transition to Health 4.0.

In the designed research, after the exploratory research, which has a qualitative character, the author of the article will move to the stage of quantitative research, the first stage of which will be the development of a research tool. The aim of the designed research is to ocean the degree of accppetation of modern technologies as a support for strategic decision-making by managers of public healthcare entities.

It should also be noted that Industry 4.0 and Health 4.0 not only promote improvements, technological progress, but above all promote transformation. The development of the Health 4.0 concept implies a fundamental change in the way health services are delivered, both for healthcare providers, medical professionals, but also for patients. In addition to triggering institutional, structural and cultural changes for healthcare organisations, Health 4.0 also aims to achieve greater patient and carer participation in the value creation process.

The growth of a population familiar with IT solutions, who are more aware of the importance of modern technology in their lives, including the provision of public services, and thus require better service from their healthcare providers. At the same time, healthcare providers themselves - diagnosticians, doctors, surgeons and hospitals as a whole - recognise that the increasing use of modern solutions specific to Industry 4.0 in healthcare improves their productivity and efficiency.

REFERENCES

- [1] Zengin Y., Naktiyok S., Kaygın, E., Kavak, O., Topçuoğlu, E., An Investigation upon Industry 4.0 and Society 5.0 within the Context of Sustainable Development Goals. *Sustainability*, 13(5), 2021.
- [2] Zezulka, F., Marcon, P., Vesely, I., Sajdl, O., Industry 4.0 – An Introduction in the phenomenon. *IFAC-PapersOnLine*, 49(25), pp. 8–12, 2016.
- [3] Manogaran G., Thota C., Lopez D., Sundarasekar R., Big Data Security Intelligence for Healthcare Industry 4.0. [in:] L. Thames & D. Schaefer (ed.), *Cybersecurity for Industry 4.0: Analysis for Design and Manufacturing*, Springer International Publishing, 2017, pp. s. 103–126.
- [4] Gajdzik B., Grabowska S., Leksykon pojęć stosowanych w przemyśle 4.0. *Zeszyty Naukowe. Organizacja i Zarządzanie / Politechnika Śląska*, z. 132, 2018.
- [5] Chen C., Loh E., Kuo K.N., i in., The Times they Are a-Changin’ – Healthcare 4.0 Is Coming!. *J Med Syst*, 44, 40, 2020.
- [6] Cavallone M., Palumbo R., Debunking the myth of industry 4.0 in health care: insights from a systematic literature review. *The TQM Journal*, 2020.
- [7] Chanchaichujit J., Tan A., Meng F., Eaimkhong S., Healthcare 4.0: Next Generation Processes with the Latest Technologies. Palgrave Pivot, 2019.
- [8] Al. Naqvi J.M., Munoz M., *Handbook of Artificial Intelligence and Robotic Process Automation: Policy and Government Applications*. Anthem Press, 2020.
- [9] Müller D., Abildgaard Skau S., Success Factors Influencing Implementation of E-Government at Different Stages of Maturity: A Literature Review. *International Journal of Electronic Governance*, 7.2, pp. 136–70, 2015.
- [10] Salgues B., *Society 5.0 : Industry of the Future, Technologies, Methods and Tools*. London: ISTE and John Wiley&Sons, 2018.
- [11] Szymaniec-Mlicka K., The decision-making process in public healthcare entities – identification of the decision-making process type, *Management*, vol. 21, No. 1, pp. 191-204, 2017.
- [12] Nutt P.C., Comparing Public and Private Sector Decision-Making Practices, *Journal of Public Administration Research and Theory*, Vol. 16, pp. 289-318, 2005.
- [13] Rainey H.G., Chun Y.H., Public and private management compared, [in:] L. Ferlie, E. Lynn, C. Pollitt (ed.), *The Oxford handbook of public management*, Oxford University Press, Oxford, pp. 73-95, 2005.
- [14] D’Aunno T., Management scholars and public Policy: A bridge too far ?, *Academy of Management Journal*, No. 48, pp. 95-117, 2006.

[15] Venkatesh V., Morris M. G., Davis G. B., & Davis F. D., User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), pp. 425–478, 2003.

THE HEALING POWERS OF AUTHENTICITY: EXPLORING THE IMPACT OF AUTHENTIC LEADERSHIP ON WORK-LIFE INTEGRATION AND EMPLOYEE MENTAL WELL-BEING

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ABSTRACT

The COVID-19 pandemic and consequent lockdown restrictions induced an upheaval in the traditional ways of working, mandating a shift towards a hybrid work setting. Organizations across the globe are trying to adopt strategies and interventions to reduce associated stressors of hybrid workplaces like isolation, increased responsibilities, and blurring work-life boundaries. There is an intense focus on employee mental health and overall well-being, which sets the context for current research, however, limited research focuses on the positive leadership behaviors that can help reduce or eliminate these stressors. Further, most of the studies have leveraged the constructs of work-life balance, work-family conflict, etc. for their research which presents a highly dichotomous view of work and life, which is no longer relevant in the virtual and hybrid set-ups. The changing context necessitates the current research. The paper proposes that leadership capability is key in driving these interventions and explores how authentic leadership can help drive mental well-being and work-life integration for the employees. For this paper, the four sub-constructs of authentic leaders., self-awareness, balanced information processing, authentic behavior, and relational transparency, have been studied. The conceptual paper leverages resource conservation theory to propose how authentic leaders help individuals retain and enhance their resources contributing to their experiences of work-life integration which in turn creates a positive impact on employees' subjective, psychological, and workplace well-being. The paper makes leverages its conceptual model to make 7 propositions of how authentic leadership improves employees' capability for integrating their work-life demands thus reducing the negative effects that may negatively impact their well-being. The paper contributes to employee well-being literature and traces the importance of positive leadership behavior in the workplace. It further is relevant to academics and practitioners alike as it helps navigate through the added challenges of isolation, and workplace stress in the post-COVID hybrid workplace.

Keywords: Authentic Leadership, Mental Well-being, Work-Life Integration

INTRODUCTION

The current market environment has undergone a volcanic shift with complexities in technology and ways of working, shifts in the socio-economic landscape, and rising health adversities. The world also grappled with one of the biggest pandemics, the COVID-19 disease which forced regulatory restrictions and critical health concerns for the global population. Organizations and leaders struggled immensely to ensure business continuity. Leaders attempted to identify ways to help teams manage their personal and professional commitments and also to manage the distractions that may emerge in the work-from-home setup. This necessitated the need for employees and leaders to ponder on the need for work-life integration where in the absence of clear physical boundaries between work and non-work demands, individuals can navigate through.

Moreover, with the invasion of technology and digital connectedness, employees are deprived of physical and emotional connections with their teams. Individuals working extensively in remote setups have reported less frequent communication with co-workers. Most workers were used to commuting or having meals or celebrating with their co-workers which is beyond their work-related requirements. However, lately, the strength of relational ties has weakened in the virtual set-ups.

Through the ages, especially in times of crisis and extreme turmoil, historical figures such as Alexander the Great, Washington, Gandhi, Churchill, Eleanor and Franklin Roosevelt, Mandela, and Rudy Giuliani have risen to the occasion to provide positive leadership to move forward to address the problems confronting their communities and societies. The current study explores this construct of authentic leadership which draws from positive psychology and leadership theory to propose how the authenticity of a leader acts as a compensatory mechanism in the current business landscape. Avolio et al., describe authentic leadership in organizations as a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviors on the part of leaders and associates, fostering positive self-development [2]. The study evaluates the role, authentic leaders play in the evaluation of this stress and an individual's coping ability resulting in improved employee mental well-being.

The paper is segregated into three key sections. We begin by introducing the three critical variables of study: authentic leadership, work-life integration, and employee mental health. We then leverage the resource conservation theory to present a comprehensive theoretical model for the relationship between these models. The section also includes the key propositions for further testing. Finally, we present the limitations and future directions of this study.

LITERATURE REVIEW

Authentic leadership has borrowed from the philosophical literature on authenticity. Walumbwa et al., 2008 [14] defined authentic leadership in terms of its outcomes: *“a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development”*. This definition has been the most cited and accepted in the literature for Authentic Leadership and contributed to the research in the domain by highlighting four key components i.e., **self-awareness, balanced information processing, authentic behavior, and relational transparency** [2].

The literature for Authentic leadership draws from the stream of positive psychology and positive traits have been leveraged by researchers to describe an authentic leader. As per research an authentic leader is confident, hopeful, optimistic, resilient, transparent, moral/ethical future-oriented, and gives priority to developing associates into leaders themselves [2]. Shamir & Eilam (2005) attempted to distinguish authentic leaders from non-authentic leaders through four key characteristics: (i) The degree of person role merger i.e. the salience of the leadership role in their self-concept, (ii) the level of self-concept clarity, and the extent to which this clarity centers around strongly held values and convictions, (iii) the extent to which their goals are self-concordant, and (iv) the degree to which their behavior is consistent with their self-concept [13]

Authentic Leadership has emerged from the discussions on moral and ethical foundations of leadership. Walumbwa et al. (2008) in his research found a positive relationship between authentic leadership and job satisfaction & job performance [14]. It also fosters follower development and research establishes a relation between empowering behavior of leader (e.g., fostering participation in decision making, facilitating goal accomplishment) and increased work effectiveness of the team [15]

Employee Mental Health

Employee mental health literature stems from theoretical discussion and works on employee well-being. Researchers in this domain accept two major philosophical perspectives of well-being, namely hedonism and eudaimonism (Ryan & Deci, 2001) [11]. Hedonism is happiness oriented and focuses on subjective well-being (SWB) while Eudaimonism explains well-being in terms of achievement or self-actualization i.e., psychological well-being (PWB).

The hedonic approach includes a cognitive and affective component within itself. The cognitive component is the individual’s subjective judgment regarding

his/ her happiness and life satisfaction. The affective component indicates the presence of a high positive affect and a low (or absence of) negative affect.

The Eudaimonic approach involves acceptance of the existential challenges of life and acknowledges that all human pursuits might not result in optimal well-being for an individual, despite being pleasurable. It is best understood through the 6 factors for positive functioning described by Ryff, 1989 [12]. These include acceptance of self, identifying life's purpose, focusing on personal growth, feeling autonomy, mastering the environment, and building harmonious relations with others. The two components holistically form the definition of well-being.

A third component of the model was suggested by Page and Vella-Brodrick (2009) [9] termed Workplace Well-being. Workplace well-being encompasses job-related affect and job satisfaction levels experienced by the employee

Theoretical Model & Proposition

Given the identification of key challenges (inability to integrate work life) and the consequent impact on employee mental health, a theoretical model is developed (Fig. 1). As the model shows the constructs of authentic leadership i.e., Self-awareness, internalized moral perspective, balanced information processing, and relational transparency will help employees cope with stressors at the workplace by building ability to integrate work-life balance and hence impacting employee's overall mental well-being

Self-awareness Is the individual's ability to examine and identify their strengths and weaknesses. It allows individuals to be aware of the method they use to derive meaning from the world and how they develop a comprehensive view of themselves. The leaders present their actual thoughts and feelings to their followers helping them establish their credibility [1]

The authentic leadership concept has been a critical contribution to the ethical leadership literature. The construct of Internalized moral perspective signifies the extent to which the leader is aware and riven by an internal set of guiding ethics and values. These ethics are translated into the actions and decisions of the leader (Avolio and Gardner, 2005) [1] and helps establish them as role model in the organizations.

Balanced information processing requires leaders to analyze all given information from an objective and unbiased lens. The leaders are open to ideas that contradict deeply held existing notions to process additional new information. They attempt to proactively solicit information and ideas which challenges them (Gardener et al. 2005) [5].

The final construct is relational transparency. This is defined as the leader's ability to present their true self. At the same time, the leaders display emotional

intelligence to regulate the display of emotions as per the situational demands (Kernis, 2003) [7].

Given existing research and theoretical constructs discussed earlier, the first proposition is suggested. The proposition explains that these four dimensions will collectively build an authentic leader in the workplace

P1: Self Awareness, internalized moral perspective, balanced information processing, and relational transparency contribute to authentic leadership

The conservation resource theory suggests that individuals are motivated to ‘obtain, retain and protect’ available resources (Hobfoll, 2000) [6], and the threat of loss or call loss of these resources results in stress. Leadership support acts as a contextual and volatile resource available to employees. The pandemic has created a context where there is a merger of multiple domains requiring two or more individuals within a family simultaneously work in the same home and have additional demands of managing the household and possibly childcare needs. This has further made it difficult for employees to successfully balance their personal and professional lives adding to their workload and consequently increasing stress. Work-life integration focuses on balance and is aimed to achieve ‘harmony or equilibrium between work and life domains’ (Chang et al. 2010) [3]. Basis the conservation of resource theory and available literature on authentic leadership, we propose authentic leadership as a resource empowering the individual to balance their work and home/ family demands. They can help followers integrate their work and personal commitments through their moral values and interpersonal consideration.

First, authentic leaders can channel their internal values into everyday work. They possess self-reflective capabilities that allow them to understand and communicate their needs and expectations from members. This helps them regulate their behavior as per the situational demands. The capability for self-awareness and internalized moral perspective of concern for others let authentic leaders help followers integrate their work-life balance

Another explanation stems from the ability of leaders to process information in a balanced way and their relational transparency with followers. The leaders can build trust in the teams and followers can highlight their concerns and challenges. While leaders might feel the relevance and urgency of a deliverable, they will be able to objectively hear concerns from members on personal needs (household chores, caregiving responsibility) and attempt to solutions together (extend team, reschedule meetings, etc.). Given how the sub-constructs of authentic leadership interact to help followers harmonize their work and family demands, the next proposition is suggested

P2: Authentic leadership supports followers' work-life integration

Impact of Work Life integration on Psychological Well being

The absence of work-life integration has been found to negatively impact the psychological well-being of employees (Duxburry and Higgins, 2003) [4]. Another element of work-life integration, work-life flexibility, was found to be positively related to employee psychological well-being. Work-life integration allows employees to balance their personal and professional commitments. This contributes to an individual's ability to balance time and involvement at work. Individuals take up multiple social roles and work-life integration allows for equity across these roles leading to increased satisfaction.

The concept of role overload helps explain the relationship between work-life integration and psychological well-being. Role overload implies the invasion of a social role into the boundary of other social roles played by the individual. These roles can include the role of a manager, a father, a son, a husband, etc. The inability to successfully balance these roles causes a role overload [4]. Role overload eventually may result in feelings of fatigue, stress, exhaustion, anxiety, and depression [4]. These feelings create a sense of inadequacy in the individual due to a lack of environmental mastery and autonomy. Basis the above discussion, the next proposition is suggested.

P3: Work-life integration is positively related to employee's psychological well being

Impact of Work Life integration on Subjective Well being

The concept of subjective well-being relies on an individual's perception of their well-being. The relationship between work-life integration and subjective well-being can be explained via self-determination theory. The Self Determination Theory (SDT) suggests that all individuals have core psychological needs that contribute to their adjustment and well-being. (Ryan and Deci, 2000) [10]. These universal needs are of three types i.e., need for autonomy, need for competence, and need for relatedness. Borrowing from, the literature on work-life integration, the variables like the ability to set self-concordant goals, setting boundaries between work and life, defining schedules, and time invested across social roles contribute to an individual's feelings of autonomy. Further, the ability to balance these often-conflicting roles increased their perceived competence. These result in harmonious relationships contributing to the fulfilment of their relatedness needs. The fulfilment of these needs through work-life integration positively impacts their satisfaction. However, this impacts their perceived notions of life satisfaction contributing to a positive evaluation of their life. And hence basis the above discussions, it is proposed that work-life integration will positively influence the subjective notions of well-being an individual has.

P4: Work-life integration is positively related to an employee's subjective well being

Impact of Work Life integration on Workplace Well-being

Page and Vella-Brodrick (2009) [9] have suggested the concept of workplace well-being which includes the work-related affect that individuals experience and their overall satisfaction with the work-related constructs. The affect is typically measured in terms of employees' job satisfaction levels, turnover intention, engagement, and absenteeism. Intuitively, the ability to integrate work life should have the highest impact on employees' workplace well-being. Work-life integration builds an individual's capability to respond to work demands, manage commitments, and deliver desired work outcomes. Individuals invest in job crafting to increase the meaning they attain from their work, consequently enhancing their workplace well-being. Individuals leverage job crafting in designing work that aligns with their individual needs and values thus resulting in the creation of more opportunities for satisfaction at work, establishment of relationships, and enhancing one's purpose. Leveraging job crafting as a methodology to integrate work-life commitments, employees can enhance their mental well-being at work. Thus, the next proposition is suggested:

P5: Work-life integration will positively influence employee's workplace well being

Employee mental health is gaining momentum in research especially post in post-COVID ways of working. Well-being is no longer identified as the absence of illness, but rather a holistic state of peace and satisfaction experienced by an individual. This state denotes the absence of stressors and the presence of harmonious relationships at the workplace. The constructs of Subjective and psychological well-being have been studied as two distinct yet interrelated concepts of well-being. Further, the concept of workplace well-being draws elements from both subjective and psychological well-being. To build a comprehensive model for future testing, these elements have been proposed to contribute to the overall mental well-being of an individual

P6: Psychological, subjective, and workplace well-being contribute to employees' overall mental well-being

Lazarus and Folkman (1984) [8] proposed the transaction model of stress. The model proposes a person-environment transaction i.e., the response to stress by an individual is highly influenced by his/ her appraisal process. It includes the elements of stressor-appraisal-emotion-outcome. The individuals may experience stressors in the environment (E.g., pandemic-led fear, job insecurity, work overload) which led individuals to evaluate their resources to overcome stress. The evaluation or appraisal of the stressor results in the decision of choosing a coping mechanism by the individual. Inability in coping with this stress results in

emotions of anxiety, and stress, which leads to ultimate negative outcomes of decreased employee well-being and psychological functioning.

Authentic leadership calls for a higher standard of supervision and leadership at the organization, one which is focused on building an organizational moral compass. The leaders attempt to build interpersonal and intrapersonal trust in teams which allows the members to come forward with their challenges. Additionally, the leaders hold themselves accountable to a higher standard of ethics and behavior and provide a positive role models for employees. The leaders are high on self-awareness and they build self-knowledge by seeking and internalizing feedback from others. These capabilities encourage authentic leaders to understand employees’ challenges and help solve teams. Employees are encouraged to transparently share their responsibilities and feeling with leaders and leaders in turn provide support to manage these conflicting priorities. The leader’s ability to influence employee resources and help integrate their work-life demands reduces the stress experienced by an employee resulting in their well-being. Hence the final proposition for the current study is:

P7: Authentic leadership is positively related to employee mental well-being

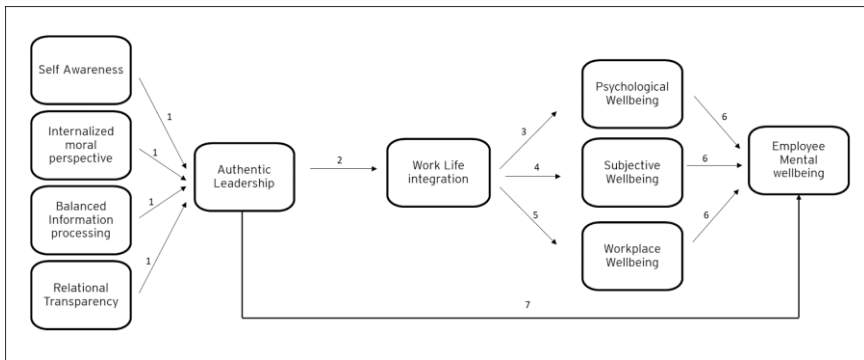


Fig. 1. *The impact of authentic leadership on employee mental well-being*

The current study proposes a model for evaluating the impact of authentic leadership on employee mental well-being. It proposes that authentic leadership improves employees’ capability for integrating their work-life demands thus reducing the negative effects that may negatively impact their well-being.

CONCLUSION

Mental well-being is not a new phenomenon. However, the pandemic and the subsequent tectonic shift to virtual and hybrid teams have created a unique set of challenges threatening the employees’ mental well-being. More and more individuals are reporting suffering from feelings of overwhelm, stress, and isolation resulting in a spike in the number of cases reported of workplace anxiety and depression. Given this context, the current paper attempted to explore the role

of positive leadership to compensate for external stressors. We discussed in the paper how subconstructs of authentic leadership, self-awareness; internalised moral perspective; balanced information processing and relational transparency help individuals integrate their conflicting work-life demands which consequently improved their psychological, subjective, and workplace well-being. This in turn improves their mental well-being experiences. The study holds the phenomenal potential to inform practitioners and academicians about the substantial contribution authenticity brings to the workplace. Further, it also presents a mediating variable (work-life integration) that can be leveraged in organizations to improve employee well-being. The study has both theoretical and practical applications which are extremely relevant in the current context of loss of temporal and physical boundaries between work and life. The authors suggest scholars to undertake empirical studies to validate the propositions of the study and form relevant interventions for leveraging the constructs of authentic leadership and work-life integration in the post pandemic workplace.

REFERENCES

- [1] Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, 16, 315-338.
- [2] Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., and May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly*, 15(6), 801–823.
- [3] Chang, A., McDonald, P., & Burton, P. (2010). Methodological choices in work-life balance research 1987 to 2006: A critical review. *The International Journal of Human Resource Management*, 21(13), 2381-2413
- [4] Duxbury, L., Higgins, C., & Canadian Policy Research Networks Inc., O. (2001). Work-life balance in the new millennium: Where are we? Where do we need to go? *CPRN Discussion Paper*.
- [5] Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. O. (2005). “Can you see the real me?” A self-based model of authentic leader and follower development. *The Leadership Quarterly*, 16, 343-372.
- [6] Hobfoll, S. E., & Shirom, A. (2000). Conservation of resources: Applications to stress and management in the workplace. In R. T. Golembiewski (Ed.), *Handbook of organizational behavior* (2nd ed.). (pp. 57–81). New York, NY: Dekker.
- [7] Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry*, 14, 1–26
- [8] Lazarus, R.S., Folkman, S., 1984. Stress, Appraisal, and Coping. Springer Publishing Company, New York, N.Y

[9] Page, K. M., & Vella-Brodrick, D. A. (2009). The ‘What’, ‘Why’, and ‘How’ of employee well-being: A new model. *Social Indicators Research*, 90, 441–458

[10] Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68–78.

[11] Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166.

[12] Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069–1081.

[13] Shamir, B., & Eilam, G. (2005). “What’s your story?”: A life-stories approach to authentic leadership development. *The Leadership Quarterly*, 16, 395–417

[14] Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34, 89–126.

[15] Yavuz, M. (2020). Transformational leadership and authentic leadership as practical implications of positive organizational psychology. In E. Baykal (Ed.), *Handbook of research on positive organizational behavior for improved workplace performance* (pp. 122–139). Hershey, PA: IGI Global.

WHAT IS THE CORRECT POINT OF VIEW: FEAR OF FALLING AS A PREDICTOR OF DEPRESSION OR DEPRESSION AS A PREDICTOR OF FEAR OF FALLING?

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ABSTRACT

The aim of the study was to determine if there is a connection between depression and fear of falling. Many elderly people have problems with physical activity, which often causes them falls and injuries. In addition to the physical consequences, a serious problem often appears, namely the fear of falling. Fear reduces physical activity, fitness and often causes older people depression. Subsequently, the fear of falling and depression can result in a further reduction in the activity of elderly people, which paradoxically causes a greater risk of falling than with activity, and the elderly person enters a circle of inactivity. A cross-sectional study was conducted in 2022 among 134 seniors living in the community and social facilities in two-time intervals, 14 days apart. The Fall Efficacy Scale (FES) - Slovak version and the Geriatric Depression Scale (GDS). The non-parametric Spearman correlation coefficient and the Wilcoxon paired test for data analysis were used. Results shows that the differences in FES distribution in the first and second case were not statistically significant ($p=0.238$). The results show that the fear of falling is a significant factor to be considered when assessing seniors' depression. When measuring depression, it was found that only 5% of elderly people suffer from severe depression, almost 17% suffer from mild depression, and more than 77% of elderly people have no symptoms of depression. It is important not to underestimate the symptoms of depression, because there is a clear therapeutic potential and their early recognition can be important for eliminating the fear of falling. The introduction of specific measures also depends on the individual attitude and health of the individual.

Keywords: *fear of falling, depression, elderly people, health of the individual*

INTRODUCTION

The 21st century brings new challenges for the present and the future, among which we can subsume the issue of aging of the population, and not only in European context, but also in the context of particular countries. Worldwide

demography has changed, and the share of elderly people in the population has been gradually increasing. The availability of the new methods of treatment enables elderly people to get health and subsequent care based on modern technologies, which was not possible in the past. Elderly people need community and social support above all [1]. The human life span has prolonged, which brings other health, social problems and needs to elderly persons and their families. The Global Strategy and Action Plan on Ageing and Health (WHO) creates a political mandate for activities of particular member countries to ensure not only long but especially the healthiest possible life. Healthy ageing means strengthening the functional skills of elderly people in the most efficient way that would enable them to live the longest possible self-sustaining life according to their priorities. In this regard, the WHO sees as crucial reducing as much as possible the diminution of functional abilities associated with age and implementing the principles of healthy ageing supported by scientific evidence [2].

A very frequent problem among elderly people, mainly fragile geriatric patients, is geriatric syndromes, which also include falls. Their consequences have an impact on every sphere of the life and health of elderly people. Apart from fractures, contusions, functional repercussions and subsequent reduction of self-sustainability and independence in activities of everyday life, there are also social consequences and the risk of isolation. Psychological repercussions include fear of falling. Evidence point to the fact that fear of falling (FoF) is not unjustified and represents a predictor of future falls [3]. Fear of falling means persisting worry about falling, which results in the limitation of performing of one's everyday activities. It is also known as a post-fall syndrome or post-fall phobia [4]. Fear of falling has a vast impact, including activity limitations, functional decrease and reduced quality of life. These are common consequences of falls but can also be present among elderly people who do not fall [5]. Fear of falling and avoiding activity are rather common in old age and are considered to be health problems that are equally significant to falls [6].

Fear of falling is the main health problem among older people living in communities who both have and do not have a fall in their anamnesis. The reported prevalence of FoF ranges between 3 – 85% [4]. Apart from loss of mobility, physical weakness, reduction of physical activity and increased risk of falling, fear of falling may also lead to a reduction of social activity, loss of self-confidence, depression and a lower quality of life [4]. Depression is often associated with a higher risk of falls. Older people with symptoms of depression are subject to approximately a 2.2-times higher danger of falling. Depression can be a risk factor as well as consequence of a fall and may appear due to the fear of falling [7].

METHODS

The data represent a part of a bigger validation of a cross-sectional study aimed at research of the fear of falling among seniors in the community and its psycho-social impact. The following research tools were used for data collection:

- The Fall Efficacy Scale – Slovak version, validated in Slovakia in 2021 by Bobkowska, Poliaková and Králová,
- self-constructed questions aimed at obtaining demographic data – age, gender, residence (town/countryside), way of living (alone/with partner/children/in social facility),
- The Yesavage Depression Scale (GDS) – a reliable screening tool for measuring depression in elderly people (resulting score: 0-7 points is the norm, 8-12 is mild depression and 13-15 is severe depression).

Collection of the relevant data was completed in years 2021 – 2022. The questionnaires for the seniors were filled in by healthcare and social nurses and students of nursing in social care institutions and households of seniors.

RESEARCH SAMPLE

The research sample consisted of 134 seniors, 25.37% of whom were men and 74.63% women. The average age of the seniors was 76 years. This group consisted of seniors who filled in the test FES repeatedly after 14 days, with participation of seniors living in social facilities and seniors living in their own households (alone, with children or partners). Participation criteria included age over 65 years, health condition not requiring acute treatment or hospitalization, willingness to cooperate and the ability to walk independently with or without compensation tools. Exclusion criteria included cognitive deficit, hospitalization and the use of a wheelchair.

The Fall Efficacy Scale – Slovak version (translated in 2021 by authors Bobkowská, Poliaková, Králová) and the Yesavage Depression Scale – a tool designed for measuring depression in elderly people, were used for the collection of the data. Analysis of the data was conducted with non-parametric R – Spearman correlation coefficient.

RESULTS

Table 1. Demographic data and depression occurrence

Variables			No depression		Mild depression		Severe depression	
	n	%	n	%	n	%	n	%
N	134	100.00	103	76.11	20	15.67	11	8.20
Gender								
Male	34	25.37	4	11.76	30	88.24	0	0
Female	100	74.63	73	73.00	16	16.00	11	11.00
Living								
Alone	22	24.44	19	86.36	1	4.54	2	9.09
Partner	39	43.33	33	84.61	4	10.25	2	5.12
Children	29	32.22	23	79.31	4	13.79	2	6.89
Social facility	44	32.84	29	65.90	8	18.18	7	15.90
Age								
65 – 74	58	43.28	48	82.76	4	6.90	6	10.34
75 – 89	71	52.98	50	70.42	15	21.13	6	8.45
90 and over	5	3.73	3	60.00	0	0	2	40.00

Table 1 presents the demographic results of the surveyed group. Out of a total of 134 respondents (100%) participating in the survey, most seniors belonged to the age category 75 – 89 years (52.98%). About a third (32.84%) of the seniors lived in social care facilities and two-thirds (67.16%) lived in households. The results show that 57.46% of seniors do not suffer from depression.

Table 2. Relation between the occurrence of depression and the fear of falling

Variables	Low level of fear		Medium level of fear		High level of fear	
	n	%	n	%	n	%
No depression	9	11.69	35	45.45	33	42.86
Mild depression	0	0.00	1	2.17	45	97.83
Severe depression	0	0.00	0	0.00	11	100

Table 2 presents the results pointing to the mutual relation between the occurrence of depression and fear of falling. A total of 42.86% of seniors without depression admit to feeling a high level of fear, while medium level of fear is felt by 45.45% and low level of fear by 11.69% of respondents. High level of fear of falling is acknowledged by 97.83% of seniors with mild depression, and 2.17% of respondents with mild depression admit a medium level of fear of falling. There was no respondent who reported no fear at all. When it comes to seniors with severe depression, a high level of fear of falling is felt by 100% of them.

Table 3. Correlation between depression and the FES

Correlation	n	R	Interval of reliability		p
			-95%	+95%	
Between GD and:					
FES	134	0.54	0.41	0.66	<0.001
rFES	134	0.51	0.37	0.63	<0.001

Legend: n – number of patients, R – Spearman correlation coefficient, p – p -value of testing criterion of the difference of value of correlation coefficient from zero.

Table 4. Differences between the FES and rFES in the group of 134 respondents

FES	n	\bar{x}	sd	x_m	min.	max.	p
First case	134	35,0	12,3	33,0	16	61	0,238
Second case	134	35,4	12,0	34,0	16	61	

Legend: n – number of patients, \bar{x} – arithmetic average, sd – standard deviation, x_m – median, $min.$ – minimum value, $max.$ – maximum value, p – p -value of testing criteria of Paired Wilcoxon test

The results of the first survey revealed a moderately tight relationship between the total score of the GDS and the FES ($R=0.54$, $p<0.001$); after 14 days the results were very similar ($R=0.51$, $p<0.001$). The differences in FES distribution in the first and second case were not statistically significant ($p=0.238$).

Cronbach's alpha for the FES was 0,670, Cronbach's alpha for the rFES was 0,956 - significantly higher than for FES.

DISCUSSION

In our study aimed at research of the fear of falling of seniors in the community and its psycho-social consequences, we focused on several aspects related to fear. We used The Fall Efficacy Scale and Geriatric Depression Scale, which is why our sample consisted only of seniors aged 65 years and older. One part of the study concentrated on the search for a relation between fear of falling and depression. We found that depression occurred among 23.87% of respondents, and that 11.00% of women and no men from our group suffer from severe depression. The average GDS score was 5. A study from 2020 (Erazo et al.), in which the surveyed group consisted of seniors aged 65 – 90, proved the occurrence of depression among 55% of seniors, with an average GDS score of 6.11. [8] The study by Rubian et al. (2014) focused on the risk of depression of elderly people over 75 years of age found out that the prevalence of depression risk was 37.5% [9]. Respondents in our study were divided according to their age. The highest depression occurrence was recorded among seniors in senium, i. e. aged 75 – 89, which is similar to the mentioned studies. When it comes to elderly people living in social care facilities, 15.90% of them suffer from severe depression and 18.18% from mild depression. Among seniors living in

households (alone or with family member) 6.67% suffer from severe depression and 10.00% from mild depression. The main task was to find out whether there is any relation between depression and fear of falling. A rather high level of fear of falling (42.86%) was recorded among seniors without depression, while 45.45% of the elderly people without depression feel a medium level of fear of falling. A high level of fear of falling was reported by 97.83% of seniors who suffer from mild depression and by 100.00% of those who suffer from severe depression. Statistical processing of the data revealed a moderately tight relationship between the total scores of the GDS and FES ($R=0.54$, $p<0.001$), and the results after 14 days were very similar ($R=0.51$, $p<0,001$). The study by Kee-Lee Chou and Iris Chi (2008) focused on the fear of falling with use of the GDS scale, with a marked score among those seniors who prefer a sedentary lifestyle to an active lifestyle. However, on the basis of the results we can say that the fear of falling potentially raises the risk of depression [10]. Our study focused solely on active seniors. Hughes et al. (2015) focused on apprehension related to falling (fear of falling, self-efficacy associated with falls, confidence in balance, expected lasting of results). They found evidence of depression that predicts falling and preliminary evidence of self-efficacy related to falls predicting depression [11].

CONCLUSION

The world population is ageing quickly. It is estimated that between 2015 and 2050, the share of world population over 60 years of age will almost double, from 12% to 22%. Approximately 15% of adults age 60 or more years suffer from a mental disorder. The depression that affects around 5 – 7% of the older world population ranks among the most frequent mental diseases among people who age 60 or older. Depression may cause major suffering and lead to disruption of everyday life [8]. Depression is constantly being related to various problems of older age, in this case with the fear of falling that represents one of psycho-social problems of senior age.

Fear of falling is a relatively little explored aspect within the community of seniors. Our study focused on determining the impact of depression on the fear of falling among active seniors living in social facilities and households. Considering the results, we can affirm that only a moderately tight relationship between depression and fear of falling was found.

Very interesting are the findings that even seniors without depression suffer from medium or high level of fear of falling. Seniors who suffer from mild depression frequently admit high level of fear of falling, while elderly people whose suffering from depression is severe, always show a fear of falling. The results point to the fact that more severe depression and fear of falling are typical for elderly people in senium and those who live in social care facilities. Many studies confirm that fear of falling influences mental health and causes social isolation and inactivity, which is also confirmed by a study (Lach, 2005)

describing that fear of falling represents a common problem of living in the community and is related to the results of both physical and mental health [12].

Fear of falling increases the risk of limitation of an active independent life of individuals in a community, which influences their physical and mental health by provoking depression. And vice versa – depression causes and increases fear of falling, which is also supported by other psycho-social problems of seniors. On the basis of the results, we cannot say with certainty which parametre is the trigger of problems – if fear of falling is provoked by depression or whether depression results from fear of falling. We want to proceed with our survey, exploring particular parametres more deeply and search for answers.

ETHICAL ASPECTS AND CONFLICT OF INTERESTS

The authors have no conflict of interests to declare. The study was conducted with the approval of the Ethics Committee of the TnUAD in Trenčin, No. 2/2021.

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REFERENCES

- [1] Matišáková I., Pracovná zátáž v práci sestry s geriatrickým pacientom. Trenčín: TnUAD, 2020. 105p. ISBN 978-80-8075-904-9.
- [2] Macháčová K., Holmerová I. et. al. Aktivní gerontologie aneb Jak stárnout dobře. Praha: Mladá fronta, 2019. 248p. ISBN 978-80-2045-489-8.
- [3] De Roza JG, Ng DWL, Mathew BK, Jose T, Goh LJ, Wang C, Soh CSC, Goh KC. Factors influencing fear of falling in community-dwelling older adults in Singapore: a cross-sectional study. *BMC Geriatrics*, vol 22/issue 1, pp 186, 2022.
- [4] Birhanie G, Melese H, Solomon G, Fissaha B, Teferi M. Fear of falling and associated factors among older people living in Bahir Dar City, Amhara, Ethiopia- a cross-sectional study. *BMC Geriatrics*, vol 21/issue 1, pp 586, 2021.
- [5] Martínez-Arnau F., Contreras , L. P., Pérez-Ros P. Factors associated with fear of falling among frail older adults. *Geriatr Nurs.*, vol 42/issue 5, pp 1035-1041, 2021.

[6] Kempen GI, van Haastregt JC, McKee KJ, Delbaere K, Zijlstra GA. Socio-demographic, health-related and psychosocial correlates of fear of falling and avoidance of activity in community-living older persons who avoid activity due to fear of falling. *BMC Public Health*, vol 9/issue 170, 2009.

[7] Košutzká Z. Pády u seniorov. Bratislava: Lekárska fakulta Univerzity Komenského v Bratislave, 2022. 71p. ISBN 978-80-223-5330-4.

[8] Erazo M, Fors M, Mullo S, González P, Viada C. Internal Consistency of Yesavage Geriatric Depression Scale (GDS 15-Item Version) in Ecuadorian Older Adults. *The Journal of Health Care Organization, Provision and Financing*, vol 57, 2020.

[9] Rubiano K E., Frias R D., Abarca O I., Villanueva, M. Martínez B E., Villalba C M., Ortega A J., Fransi C J., García R Y., M. S., Coria C R, Gavaldà B M., Loren C B , Fernández M, Oliver B L. Risk of depression in 75 years or older persons, comprehensive geriatric assessment and associated factors in primary care: cross sectional study. *Aten Primaria*, vol 47/issue 19, 2015.

[10] Chou K L., Chi I. Reciprocal relationship between fear of falling and depression in elderly Chinese primary care patients. *Aging Ment Health*, vol 12/issue 5, pp 587 – 94. 2008.

[11] Hughes C C., Kneebone I I., F Jones F., Brady B. A theoretical and empirical review of psychological factors associated with falls-related psychological concerns in community-dwelling older people. *Int Psychogeriatr*, vol 27/issue 7, 2015.

[12] W Lach W H. Incidence and risk factors for developing fear of falling in older adults. *Public Health Nurs*, vol 22/issue1, pp. 45-52, 2005.

