
**COVID'S EFFECTS ON HIGHER EDUCATION: FROM CHALLENGES
TO OPPORTUNITIES**

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Abstract: This research embraces medical and social issues that lead to changes particularly in the activities of higher education systems, focusing first of all, on the functioning of higher education institutions in the context of the COVID-19 Pandemic and the “quarantine” period. This research is designed to attract the attention of decision-makers and society in general to the importance of a focus on mental health in the higher-education system and to highlight these issues as a part of educational policy in the process of adapting to new living conditions during and after the quarantine period. As educators in different universities, we have noticed many shifts in energy and mood in ourselves and our students during the tsunami of changes brought on by COVID-19. As the way we deliver education pivots and pivots again, rather than just weather these changes, this research seeks to identify just what those changes are, how they are being addressed and the impact of them. The article analyses the reasons that brought the world community to actively study the social, psychological and mental consequences of the COVID-19 pandemic on students and staff of higher-education institution in general. Special attention in the article is given to the peculiarities of maintaining and saving the psychological health of students in conditions of chronic fatigue, overwork and ongoing stress. Based on the existing strategic` analysis and through the prism of the COVID-19 determinants, the main directions for changes in higher education institutions are proposed so as to preserve the mental health of people in the context of the COVID-19 pandemic, during the period of quarantine, and following.

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Introduction

For decades, systems of higher education in different countries have laid out their own approaches to achieve the most effective, highest quality educational services. However, the Covid-19 outbreak that extremely quickly turned into a pandemic led not only to significant losses in the healthcare sphere, crisis in the world economy, high social losses, but also showed the fragility/unsustainability of higher-education systems. Overall, reactions of major education systems, as a whole, were laid bare in Covid-19 pandemic conditions, revealing numerous weak points in the links between their structural elements. The models of system functioning and management, perfected for years, turned out to be ineffective in conditions of new sociomedical threats, incapable of timely adaptation under new circumstances.

Until recently, policy in the education sphere was based on the so-called “*man-at-the-wheel vision*” and had no evidence of its efficiency (Schleicher, 2018). Over the last years, educational policy in Ukraine has been characterized by substantial changes, accompanied by easing of the influence of national structures on higher-education institutions. The Ministry of Education and Science of Ukraine, which until recently formulated a unified policy for all educational establishments, gave autonomy in decision making to higher education institutions and with that the possibility for these institutions to shape their educational policy on their own authority. However, in 2020, these institutions have faced another enormous challenge – to retaliate against a pandemic, finding a way to deliver quality education in ever-fluctuating conditions for human contact. A drastic change of modes of study forced institutions to rearrange their priorities, and these new priorities simultaneously became their challenges. In the conditions of unpredictable, sharp transformations of the external environment, higher education institutions were confronted by an urgent need to find new adaptation mechanisms that would restore both internal organizational balance and build effective models of adaptation to the new social context.

This article, reflecting on a review of current literature and the results of an empirical study, attempts to identify ways of adaptation to the new challenges brought on by the pandemic both at the organizational level, and at the level of universities, which in the conditions of autonomy are forced to reorient not only the mechanisms of delivery of educational services, but also, often by association, the content, all of which involves decision-making in higher education. The challenges we are facing are so serious that they cannot be handled at the level of one country alone. The data we have today do not provide answers to many questions. At this point, it is possible to provide only a brief outline of educational systems at a particular time

Higher-education systems can and should be changed, since they can provide a solid foundation for the future welfare of society. At the same time, processes of change can be very painful. In order to change approaches to higher education, it is necessary not only to have an alternative vision of what can be changed fragmentally, but also to have complex strategies, aimed at creating an organizational environment which can enable the full potential of both students and educators. Therefore, an efficient system of higher-education institutions is not happenstance, but rather the result of pointed efforts and a conscious decision to make education a foundation for development and an economic growth engine.

Evidently, a society in a state of crisis as a result of a pandemic, has as a first priority, health per se, this health being directly influenced by an infectious agent that caused the pandemic spread of disease. When the threat of being infected with COVID-19 coronavirus for you or your close group becomes a dangerous reality, the study of the changes occurring in human behaviour in the situation of forced social and physical isolation is of great importance for taking adequate managerial decisions. Studying the quality of functioning of educational

establishments is no small part of these considerations, and those related to higher education in particular. The active participants today in this sector alone include 1.5 million students and 200 thousand persons of pedagogical science and scientific assistant workers in Ukraine, which constitutes about 4% of the population (*State Statistics Service of Ukraine, 2020*).

In order to carefully and in an unbiased manner analyse the efficacy of approaches in our country and to develop educational policy, it is necessary to find out what works and under what circumstances. This approach allows forward movement, taking into consideration the errors and successes of other countries, shaping the confidence of students and educators in the possibility of achieving high results. There are a lot of successful international practices, which can offer valuable insights; however, it is not a matter of merely copying ready-made solutions, but rather considering what aspects are important in the process of forming ones' own approaches. It is, therefore, vital to conduct research on approaches that are effective in other countries and apply this data as information in developing appropriate changes for our own context. The institutions responsible for policy development and implementation should draw conclusions based on research, if they strive for changes, to avoid taking strategically inconsistent decisions. Therefore, it is essential for educators, scientists and politicians from all over the world to combine forces in their search for better solutions.

Today Ukraine is not alone in its aspiration to change approaches to the functioning of a higher-education system that is mostly seen from the perspective of knowledge acquisition. The main aim of changing approaches in the sphere of higher education is the improvement of higher education institutions, where the competencies necessary for contemporary life and socio-economic development that are also the basis for personal growth and development, are formed. The traditional role of universities as the centres of enlightenment and science is enhanced by the work they can do aiding development and accumulation of human and social capital, since today universities have become not only the centres of intellectual authority and virtue, but also the centres of adherence to universal human values, as well as sociocultural and national values in their policy and practice (Klos, Hayduk, & Pavlysh, 2019).

Further, in the current climate, higher-education institutions are forced to prepare students to deal with unprecedentedly rapid changes, to use the latest technologies, entering another kind of interrelation with the world, to understand and appraise situations from different points of view, acting responsibly in respectful cooperation aimed at achieving collective wellbeing. By changing cognitive, emotional, and social habits, education can help people, organizations and the whole system to survive and even thrive during unforeseen events. Education can provide flexibility, intelligence, and operational responsiveness to communities and institutions, without which it is impossible to achieve success in these times of social and economic changes.

The work of Yudina & Danylova (2018) has shown that many youth are reluctant to put their time, resources and efforts into receiving an education if they think that it does not meet the needs of the age. The greatest challenge for education in the current climate is to increase the learning motivation of students, to strengthen the certitude of the fact that they will be able to achieve success if they invest the effort, that academic success, as well as success in life, is the result of hard work (Yudina & Danylova, 2018). As of yet, these pedagogical considerations are the weakest link in the chain of the higher-education system of Ukraine. The learning environment, living conditions, the organization of learning activity and study load are intimately connected with the mental health of students. The signs of mental health of students are revealed through their activity, observational skills, adaptation to learning activity conditions, emotional stability, and their ability to acquire and analyse information (Yudina & Danylova, 2018).

It is now obvious that direct and indirect psychological and social consequences of the Coronavirus 2019 pandemic (COVID-19) are wide-spread and may influence psychological

health now and in the future (Holmes, et al., 2020). Taking into account these factors, conducting research gives us an opportunity to obtain a deeper understanding of the social and psychological consequences of the COVID pandemic, and it is our hope that this knowledge will help us to prepare for future periods of infection prevention reinforcement without educational disempowerment.

Study: Impact of Covid-19 on Educational Institutions

This section describes the background literature and purpose leading to the study described in this article.

Literature Review

Scientific research analysis in the field of counteracting the COVID-19 pandemic shows the rapid dynamics of research since the beginning of 2020. Several main directions of research in the field of reforming education systems and higher education institutions can be identified: online teaching (Bao, 2020; Murphy, 2020); education system management (Wang, et al., 2020); pandemic control measures (Ferretti, et al., 2020); work of medical personnel during COVID-19 (Hayduk, et al., 2020; Klos, & Nazar, 2019), etc. Mental health in the context of COVID-19 is gaining traction as a research subject. As to protecting mental health of the population in the era of COVID-19, scientists and practitioners have so far focused on the following: challenges that COVID-19 has created for public mental healthcare systems (Campion, et al., 2020); psychological influence of quarantine over people and how to reduce it and level up (Brooks, et al., 2020); resocialization of people after quarantine isolation and self-isolation (Ding, & Kalashnyk, 2020); negative effects of COVID-19 on mental health of different groups of people (Izaguirre-Torres, & Siche, 2020); psycho-social effects of COVID-19 (Dubey, et al., 2020; Dramnescu, 2020), etc. The cited literature provides examples of these different foci.

Adding to this literature base, this article describes a study which focuses attention upon possible strategies for reforming education systems so as to preserve both mental and physical health of the community within the higher-education institution.

Purpose

As educators in different universities, we have noticed many shifts in energy and mood in ourselves and our students during the tsunami of changes brought on by COVID-19. As the way we deliver education pivots and pivots again, rather than just weather these changes, this research seeks to identify just what those changes are, how they are being addressed and the impact of them. This research is designed to attract the attention not only of the decision-makers but also of society in general to the importance of studying mental health in the higher-education system. It is also intended to highlight these issues as a part of educational policy in the process of adaptation to new living conditions during and after the quarantine period. To achieve this purpose, our research envisages the following tasks:

- 1) to identify the factors that affect the change of quality of providing educational services in the pandemic conditions to the greatest extent;
- 2) to evaluate the changes in the social life and the social relationships of students in the organizational context, as well as to analyse the consequences of these changes on the basis of the studies conducted by us;
- 3) to outline approaches to enhancing the general sustainability of higher-education systems and, more specifically, their adaptation to new medical and social challenges, which will promote increased efficiency of managerial decisions;
- 4) to offer organizational ways of softening the effects of the pandemic through reducing psychological stress both for educators and for students and preserving the group atmosphere.

Methodology

Research Design

This study was conceived out of the notion that it is vital to use interdisciplinary approaches to identify and address, in any comprehensive way, the challenges posed by the introduction of quarantine during the COVID-19 pandemic to both the education system and to health and social care (Klos, 2013; Klos, 2015). A bio-psychosocial approach is necessary to understand the core mental, physical, and spiritual components of human responses to such challenges (Klow, 2015a).

Research hypothesis: In the context of the COVID-19 pandemic, the education system has responded to changes that have affected students' health both negatively and positively, led to significant changes in student behavior, and are likely to have long-term consequences for their health and well-being.

Derived hypotheses:

The health of students during quarantine has changed, especially in parts of the mental and social components which are the most sensitive to transformations in the education system. Further, in the conditions of quarantine, in specific, and the pandemic in general the education system has undergone emergency restructuring but has not been able to fully take into account the consequences of these changes for the mental health of students. Despite being seen as centres of science, education, and intellectual growth, universities quickly met the technical and technological needs of quarantine education but have been unprepared to meet the associated challenges to the mental health of students

Research Tool: Survey

A survey was developed and distributed as an online questionnaire and administrated in Ukrainian. The link to the online survey was shared on the e-resources of 15 universities in Ukraine. The data were collected during the quarantine period in Ukraine of April-June 2020.

The following topical subsections of the survey were produced and administered by the authors:

- 1) Demographic, social, and work characteristics including standard questions on age, living situation, employment status.
- 2) Participant compliance to established societal and institutional COVID-19 measures/recommendations (staying at home as much as possible, maintaining distance when meeting others, use of mask and/or gloves in public places, avoid meeting with friends and family, wash hands frequently, avoid touching eyes, nose and mouth).
- 3) Social habits (use of social media, online and offline interpersonal communication, engagement in volunteering activities) of the participants and how these have been affected by the COVID-19 situation.
- 4) In addition to these questionnaires a "student worry" scale was used to measure the degree of worry of the participants about: financial concerns, academic demands, accommodation, health worries, job prospects, world affairs, personal relationships, religious matters, and environmental matters (Davey, et al., 1992).

The data analysis was executed in Statistical Package for the Social Sciences (SPSS). This study procedure was in accordance with the Ukrainian legislation and APA ethical principles regarding research with human participants. The survey was conducted in online format (no clinical intervention was performed; no contact between researchers and participants). The participants were informed that their participation in the research was voluntary, confidential and anonymous; and they gave their consent by choosing to proceed past the welcome page of the online survey.

Survey Sample: Participants

320 randomly selected self-referred students completed an online survey. Geographically, students were from different universities of Ukraine (including North, South, West and Central regions of Ukraine), 98.9% state universities, 1.1% private university. The study participants identified that they were studying the following subjects: psychology, social work, education, journalism, management, law, philology, aviation, veterinary medicine, history, law. While it is common for young people to start university in Ukraine as early as 17 years of age, participants in this study averaged 20.66 years (SD = 4.55). As for gender representation, 88.5% identified as women and 11.5% were male. The participants identified their employment status as 69.5% not employed, 12.1% employed part-time, 18.4% full time employed. A majority of student participants lived with their parents (59.8%); 10.9%, lived alone; 4% shared a flat, dorm (22.4%) and other (2.9%).

Results and Discussion

Approaches to Increase Higher-Education System Sustainability at Large and Its Adaptation to New Medical and Social Challenges.

The analysis of global experience has shown that the most successful educational systems set themselves rather ambitious goals precisely defining what student should know and be able to do, and what milestones are available for educators to achieve the desired results. The demand for knowledge and competencies of the highest degree is both economic and social, and this is reflected directly in the development of a country. Highly educated adults are more likely to earn more, to trust more and to take part in political life more actively, to have a better state of health and to undertake volunteer activities more actively as compared to adults who are less educated (Schleicher, 2018).. Adults with higher education have a better state of health, and their employment level is higher than that of the adults with higher secondary education alone by about 9%. On average, they earn 57% more (OECD, 2020). It is essential also to acknowledge that there are factors which lower the activity of educated people in their job search. The main reasons for lower activity amongst women in applying for jobs is their responsibility for childcare, while health and other factors are more common among men (OECD, 2019).

In the past few decades, a considerable rise in the number of educational establishments has been observed in almost all countries. In Ukraine, a sizeable stratum of the active population is employed in the higher-education sector. Thus, the quantity of higher-education institutions in the early 2019-2020 academic year was comprised of 619 units, where 1,439.7 thousand students were studying, which constituted 8.66% of the employed population by the nature of business in 2018 (*State Statistics Service of Ukraine, 2020*). The main age demographic of the students of higher-education institutions is 17-23 years old (Fig.1). At this age, the groundwork for a person's worldview is laid most actively, responsibility is shaped, and life priorities are identified. This is the period when trust/distrust of governmental structures is revealed consciously, which incarnate the ability of a state at large, and the efficiency of the system of education in particular.

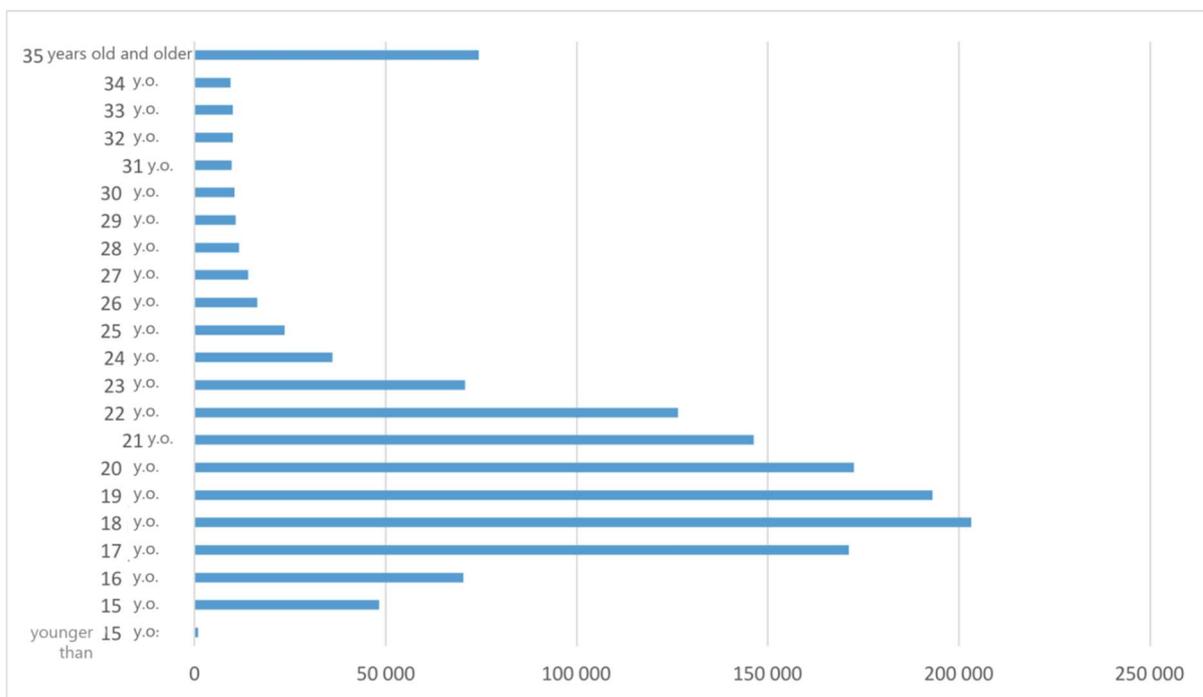


Fig.1. The overall number of students in the higher-education institutions of Ukraine by age composition (State Statistics Service of Ukraine, 2020)

International studies show that a great percentage of higher-education establishments count on the support of government for survival (Marinoni, et al., 2020). Accordingly, almost a half (48%) of respondents pointed out that their government / Ministry of Education would support their institution during COVID-19 pandemic, signifying a rather high level of trust. The most common type of support is aid, linked to the end of academic year, although only 13% of higher-education establishments hope for financial aid in connection with expected (and unforeseen) loss of income (Marinoni, et al., 2020).

Thus, governments may help strengthen the professional autonomy of institutions, to build a culture of cooperation and an environment of trust, where good ideas will be supported and disseminated. But we know very little about how to build and support trust in the education sector or how to renew it, should there be such a necessity. What is precisely known is that trust cannot be required on the legislative level or spelt out in rules; therefore, it is so difficult to let it into traditional administrative arrangements. Trust is always free-will. It can be fostered only in conditions of healthy relationships and positive transparency. In times when management and control systems are weakening, building trust is the best way of supporting and developing modern education systems (Zepeda, S. J. 2013).

In contrast, in our experience, the loss of control over the activities of employees and students in distance learning can prompt higher education administrations to attempt to tighten the reins through the introduction of new control efforts in the form of numerous reports, video recording of workflow, etc., which is an additional stressor based on distrust. Not only is more time and energy involved in complying with the additional reporting mechanisms, it is necessary to take into account the technological stress provoked by the need to use new technologies of virtual learning by students and educators.

Building trust and increased awareness of others' problems is promoted by the regular flow of communication if an atmosphere necessary for the search for compromise has been created. The chances for striking a compromise during the elaboration of policy will rise if to engage different interested parties from the very beginning, to be receptive to the opinion of

educators, who are hands-on implementers of this policy, as well as to constantly monitor the needs of students (Henard, F. & Roseveare, D., 2012).

For any higher-education institution, support is an important element both for creating a positive sense of unity, and for promoting staff adaptation to new conditions. The strategies for supporting staff and students are an everyday part of building a mentally healthy institution –one where both personnel and students positively interact to achieve goals. It would be ideal to create an atmosphere, favouring smooth transitions, positive non-formal meetings and social interaction; facilitating social support; providing opportunities for off-the-shelf access to information and to study efficient functioning of educational culture, while engaging in building solutions. Clearly, in order to turn such an ambitious scenario into reality, it is necessary to unite efforts of politicians, decision-makers, administration of higher education institutions, educators themselves, students and the community at large (Henard, F & Roseveare, D., 2012).

The Ministries of Education are at the forefront of the most noticeable changes in state policies and they can also help with financing and other stimuli that will raise the demand for ideas that really work. But changes in society considerably outpace the ability of current management systems to react to them. And when the speed of changes becomes exceptionally high, a slow adaptation makes systems of education seem patriarchal and divorced from reality. The top-down management model does not work any longer because of the levels of administrative arrangements. Laws, resolutions, structures and institutions, which are usually the focus of attention of management authorities in the process of changing approaches to the system of education, are only the tip of the iceberg. And it is because of this much larger part, invisible to the majority, that it is so difficult to change systems of education. This invisible part is comprised of interests, beliefs, motivation and fears of persons, affected by the changes. Politics rarely manage to conduct an educational reform successfully if the community does not participate in identifying what is worth changing, and if there is no shared understanding and common awareness of changes; if they do not focus on the resources, and capacity development, and do not create a proper political climate. Campus sustainability must involve all stake holders: students, administrators, educators and community (Brinkhurst, M.; Rose, P.; Maurice, G.; & Ackerman, J. D., 2011). In fact, these arguments support the view that bottom-up decisions at the level of higher education institutions to transform the format of educational activities in a pandemic will be more effective, as universities have the opportunity to provide feedback to students, teachers, the community and other stakeholders in the education system.

The quarantine period highlighted the need for new qualities of education, in particular, the capabilities of innovation, flexibility, constant competence-raising and self-improvement of educators and students, as well as improvement of technological support.

One of the main challenges that bodies taking administrative decisions face in the conditions of increasing IT penetration into society, is maintaining the quality of teaching and providing for the professional development of all educators. The future lies in combining artificial intelligence of computers with human cognitive, social, and emotional skills and values. Imagination, awareness and a sense of responsibility will give us an opportunity to make use of mass digitization and to make a difference in this world. Indeed, following intelligence, emotional intelligence and conscientiousness, have been shown to be uppermost factors in successful performance in higher education (MacCann, 2020). Thus, in the education sector, it is necessary to experiment with alternative policies and practices from an ethical standpoint, since this touches on the present and the future of the rising generation.

Defining Factors Most Affecting Change in the Quality of Educational Service Provision in Pandemic Conditions

In Ukraine, the concept of “higher education quality” is defined by a set of measures that characterize various aspects of education in higher-education institutions. This social category defines the performance of the educational process, and its compliance with the needs and expectations of society (various social groups). It is important to consider the quality of higher education from a holistic perspective from two different points of view:

- 1) in the context of absolute value – from the standpoint of an educational establishment, when it is used for promoting development and strengthening the image of the higher-education institution, and mostly functions as a means through which the compliance of educational service to the state standards is established; and
- 2) in the context of relative value – from the standpoint of the service consumer, which is more considered as compliance to the desires and needs of educational service consumers, since the views of consumers and those of educational service providers often do not coincide.

Within the framework of our study, we focused on the relative value of this category (the second point of view), since we consider that this aspect has undergone drastic changes during the pandemic spread and requires detailed analysis. Based on the Ukrainian experience of reforming the education sector, we observe that politicians from education have implemented one stage of educational reform after another without having assessed the impact of the changes, taking care of the quality of services pro forma, and without being responsible for this to the community. But careful attention of society to the measures introduced in the educational sector and the social distress of the shift of the populations’ focus to social and medical, as well as to psychological aspects of the educational process was not observed before.

Analysing the aspects of health, either physical, or mental, and its effect on the quality of education, one inadvertently performs a comparative analysis of the approaches used by the two systems (health management and education system) to a service consumer. On the one hand, in health management, when a patient feels well and sticks to the recommendations of healthcare providers concerning a healthy lifestyle, then the management performs only “*supporting*” functions with the aim of prophylaxis of diseases or correcting the activities of patient in case of need (Boychuk, 2018). However, when a patient is sick, health workers try to scrutinize the most effective techniques, which are recommended for implementation after a series of studies, and field-proven results, that help to overcome diseases. They also perform a diagnosis, collect the patient’s history, decide which treatment will be most suitable and analyse a prescribed treatment efficacy over time.

In the education sector, traditionally, students have been all taught the same way; that is, they are given the same remedies, and a diagnosis is made only at the end of the academic year, when the treatment will no longer be efficient. And when many years hence, we get a poor result, we blame it on the “patients” and their low level of motivation or qualification. In view of this, we most often find a way to pay for the most expensive treatment when we know that failure to do it may threaten our life and wellbeing, but too often are ready to accept serious flaws of educational services, knowing that their imperfections will be obvious only in many years. Thus, the money spent on quality education and medicine may significantly raise the productivity of a person.

A successful student is like a “*healthy patient*” in the education sector trying to do their best to evolve their main capabilities, necessary for their learning and development. Therefore, from our point of view, the first step in the policy for systems in higher-education institutions should be shaping a new attitude of students towards higher-education institutions and their own achievements. A similar experience has been used in secondary-level education (in

schools) of Singapore where students believe that they will succeed if they make a conscious effort, and their teacher helps them to achieve that success (*OECD*, 2010).

Based on the analysis of previous emergencies, there is an assumption that the influence of the pandemic on education will be the most detrimental in the countries with already poor learning outcomes, high level of abandoned schooling, and low stress tolerance (The World Bank, 2020). Therefore, educational systems of many countries, including Ukraine, require heightened attention. Similar to the reaction of preserving health as a response to pandemic, the response of preserving quality educational services in pandemic conditions should also be efficient and requires the planning of necessary substantiated stages.

A holistic analysis of the activity of higher-education institutions highlights the necessity of considering the integration and interrelationship of both mental health and education for achieving goals. In this way, it is necessary to pay more attention to the main factors leading to the challenges to student adjustment and development during learning, and later on even to an emotional draining, which has a negative effect on their health, when it arises.

For the purposes of the discussion, these factors may be subdivided into the following groups:

- 1) factors related to the learning process
- 2) biological and physiological factors
- 3) psychological factors and
- 4) social factors.

The analysis of various sources of information, reflecting the peculiarities of functioning of the Ukrainian system of education reveals that a lot of them belong to the first group. In particular, they are the following: a heavy study load; appearance of new forms and methods of teaching; sophisticated language of scientific and lecture material (a student may be unprepared to acquire information in such a form); the necessity of fast uptake of content in a compressed time frame; a lack of information, and its inconsistency; excessive versatility of information and its monotone presentation; the absence of electronic textbooks for students' preparation or boring textbooks; theory dominating over practice; undefined requirements for assessing student's competencies. These factors are often linked to educational policy and the lack of stimuli and resources for codification of professional knowledge and practices. In many countries, educators do not have any time free from teaching to create new knowledge. Investments into knowledge improvement and perfecting the mechanisms for conveying this knowledge to students should become the priority (Boyчук, 2017).

Biological and physiological factors that decrease the quality of the way educational services are received comprise the following: low ability to study on one's own, or to control individual peculiarities of cognitive activity; insecurity in one's own knowledge; emotional stress due to possible misunderstandings with lecturers; poor attention, memory and thinking, and; poor attention focus (Redkina, 2020). The lack of sensible nutrition, irregular meals, and the intake of excessive quantity of substances, activating CNS, for example, caffeine, that lead to decreased performance capability and rapid fatigability, matter much.

In contemporary Ukraine, there is a critical situation with the state of health of youth. Almost 90% of children and students have health abnormalities; more than 50% have unsatisfactory physical training; 61% of youth aged 16-19 years old have low and lower than average level of physical health, and; 67.2% have the same problems at the age of 20-29 years of age. Within only the last five years, the number of secondary- and higher-education students referred to special medical services due to their poor health increased by 41% (Redkina, 2020). These physical health challenges inevitably affect the general tendencies in the level of young Ukrainians' mental health.

According to the results of our empirical research, and as reported by the participants, psychological factors are mostly linked to a reluctance to study or a belief that the youth has

made an unfortunate choice of future profession. Contributing factors include the lack of skills to work unsupervised and lack of experience in organizing their day regimen; the sense of helplessness, inability to solve own problems; irritability, tantrum, petulance, fits of aggression and affective states; bad mood, sorrow, anxiety, depression; loss of self-efficacy, lowered self-attitude, and negative prognosis of arising situations.

Our research showed that social factors, reported by study participants, are determined by the conditions of life without parents (for non-residents); inability to correctly use limited financial resources; problems due to home-sharing with other students; conflicts within a study group; temporary isolation from communication with friends; the sense of lack of control over events; problems in personal life; habits of smoking and alcohol drinking; the imbalance of social contacts, and problems related to communication.

The COVID-19 pandemic is having a profound effect on all aspects of providing quality educational services and intensifies the negative impact of these factors. Therefore, it is now essential to build educational policy that will enable an individualized approach to each student requiring help in using educational services. The possibility of singling out a separate block of factors as a prevailing one, and of searching for ways to minimize these factors may serve as a “remedy for curing the patient” in the system of education. The tools for solving this problem, in our opinion, belong to higher education institutions that have the ability to have direct contact with educational service providers and can implement socio-psychological technologies for creating a favourable educational environment.

Right after the quarantine was announced by the government, in Ukraine (*The Cabinet of Ministers of Ukraine*, 2020) the closure of physical and social contacts was introduced to prevent the spread of Coronavirus infection and the hazardous consequences of its influence on the population and the country. During this phase of the COVID-19 pandemic, all students left their dormitory accommodations and instruction buildings and went home: during quarantine, Ukrainian higher-education institutions had the right to provide only distance education services according to the government’s imperative. In view of this, it is our belief that the study of the changes in the behaviour of students, in their social life and development of social relationships, can be the rationale for revising and correcting the course of both state education policy and policy on the level of higher-education institutions, as well as the basis for escalation of measures to help shape and build preventive behaviour.

Assessing Changes and Analyzing Consequences in Social Life and Social Relationships of Students

The promotion of social solidarity often focuses on levels of civic and social involvement and is a priority trend in the policies of many developed countries. Education can play an important role in ensuring social solidarity, favouring the development of social and emotional skills, strengthening social ties and protecting people from isolation. Social networks for adults consist of their families, friends, colleagues and the community, in which they live at large. Thus, social interaction is formed based on our social context and socio-economic status and is aimed at benefiting from positive social inclusion, which is reflected in health improvement (*VicHealth*, 2010; Flaherty et al, 2020).

In Ukrainian society, the role of social networks is growing significantly, even though an increasing percentage of our personal interactions take place online. The term, “*friend*” now has a different meaning in the virtual world, when face-to-face interaction is not a necessary precondition of friendship. We live in a different social reality caused by the crisis. The term “*social distancing*” is now frequently used, even in the educational environment. It is a term which is also now identified with quarantine, but it had a different connotation before the COVID-19 pandemic outbreak. Quarantine is the isolation and restriction of the movement of people, who may have been infected with a dangerous virus, to minimize the risk of infecting other people (*CDCCP*, 2020). Social distancing is more commonly associated with “*social*

indifference" or *"social ignorance"*, which is rooted in the *"I-am-the-first-and-most-important"* attitude, and scholars believe that it has long been a cultural norm (Turchynovskyy, 2020).

Changes in student behaviour are marked by strengthening such basic activities as hand washing, avoiding touching the face, using a mask, and physically distancing oneself. Such demands are necessary to control the pandemic and people are required to know what to do and, most importantly, to be motivated to do so. This changes the skills and the ability to perceive a changed behaviour (Michie, et al., 2020). The exchange of reliable information is a key factor in achieving efficacy and avoiding unintended negative consequences. It is argued that the more people are concerned about the consequences of the pandemic, the more likely they are to follow advice (Rubin, et al., 2010). The skills of analysing and envisaging are important as they help people to act responsibly, understanding and believing that the course of events depends on us. This is how the ability to behave actively is shaped.

The results of our study allow us to assert a high level of motivation of the students of higher-education institutions in maintaining their health (Fig. 2) through the use of such physical measures as frequent hand washing and wearing a mask. However, the lowest value (up to 60% of students surveyed) indicates a willingness to physically distance themselves avoiding meetings with friends and relatives.

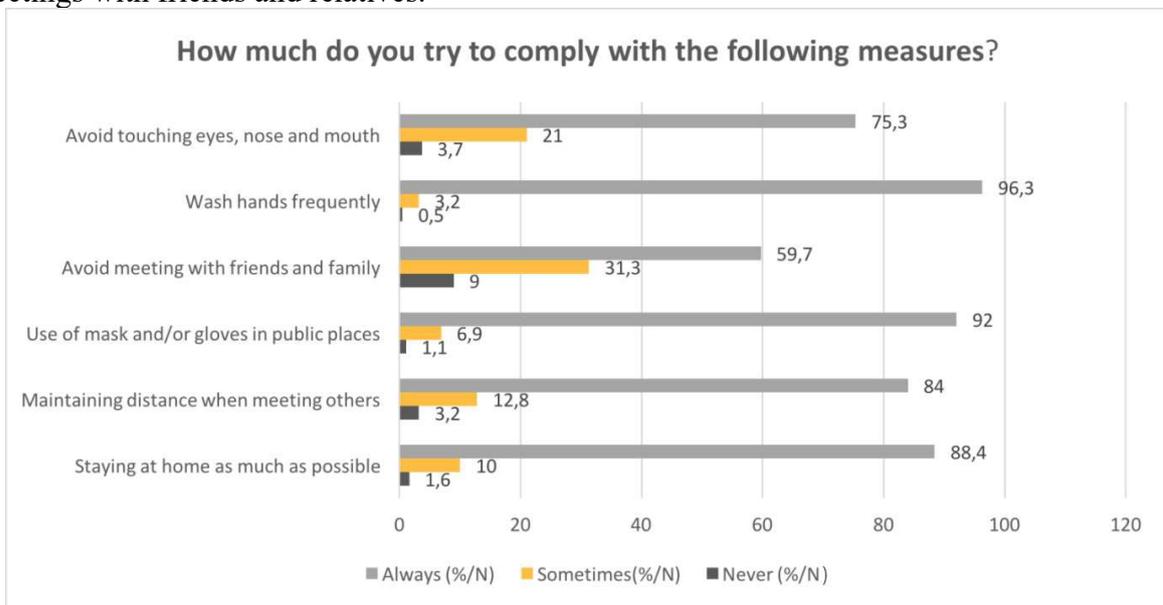


Fig.2. Students' compliance to COVID-imposed new measures

While being drawn together by the shared experience of the pandemic, the pandemic underscored our common personal vulnerability to the virus and the weaknesses of our health systems. Physical distancing, which is one of several health measures, helping to prevent the spread of infectious disease, is used in the system of education, but simultaneously has a significant psychological impact (Brooks, et al., 2020). The growing and ongoing concern about the pandemic, felt by society, may aggravate suffering, increasing the likelihood of exacerbating existing mental health problems. Anxiety can be fuelled by uncertainty and fear of the risk of hurting oneself or others. For example, symptoms of obsessive-compulsive disorder may be associated with the fear of infection and severe hand washing (Abramowitz, 2017). In contrast, improvement of confidence and awareness of people about what they need to do favours healthy behaviours and can help people deal with a psychological crash.

In the pre-quarantine period, feelings of satisfaction and security were greater, visions of the future were clearer; now the future of education is uncertain. Many of us, who work in higher education, spend long hours trying to assess the impact of the pandemic and its consequences for universities, as well as what assumptions should guide our decisions in the near and

distant future. As news outlets worldwide harken a "new reality" is already here, linked to our social distancing, we realize that the new reality must change the usual way of running universities and providing educational services for good.

These statements are echoed by the results of our study, noting particular changes in satisfaction of quality of life (Fig. 3): a significant percentage of surveyed students (42%) claim a decrease in satisfaction with the quality of their lives.

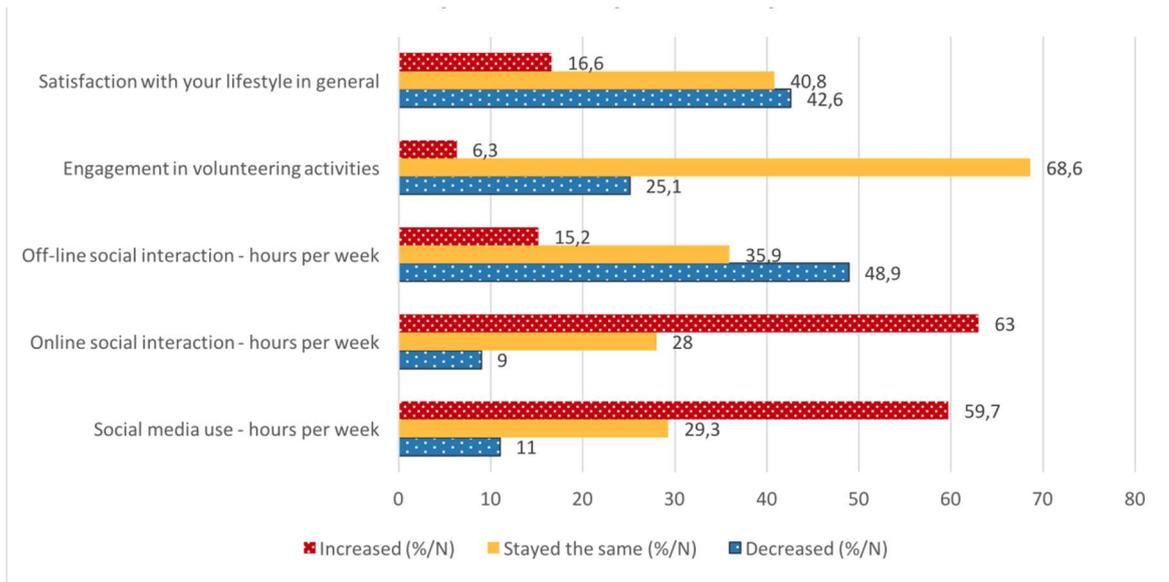


Fig.3. COVID-related change in personal habits

We do not yet know the long-term effects of such social isolation on the mental health of both students and educators. Although anxieties and uncertainties about the pandemic are common, they can cause excessive suffering and deterioration of social and professional functioning in some persons (Brooks, et al., 2020). Throughout society, a feeling of loss can result from the loss of direct social contact and can also be the loss of loved ones, job loss, educational opportunities, recreation, freedoms, and support. The available data from our study (Fig. 3) suggest that some measures taken to control the pandemic may have a disproportionate influence on those who are most vulnerable. Self-isolation in our private spaces has taught us that, in times of uncertainty, the genuineness of our interpersonal relationships remains a fixed point of stability and hope. Researching the priorities around COVID-19, we are required to take a comprehensive approach, unfolding multidimensional perspectives.

In Ukraine, according to statistics, 46.3% of students study at the public expense. However, 53.5% of students study at their own expense, so a large number of students combine study and work. There are various reasons for students to work while studying: some try to defray their own living expenses; others work to gain experience. In any case, work while studying requires a high level of self-organization and responsibility from students. In fact, financial issues and job prospects are the most common problems that cause much concern to students.

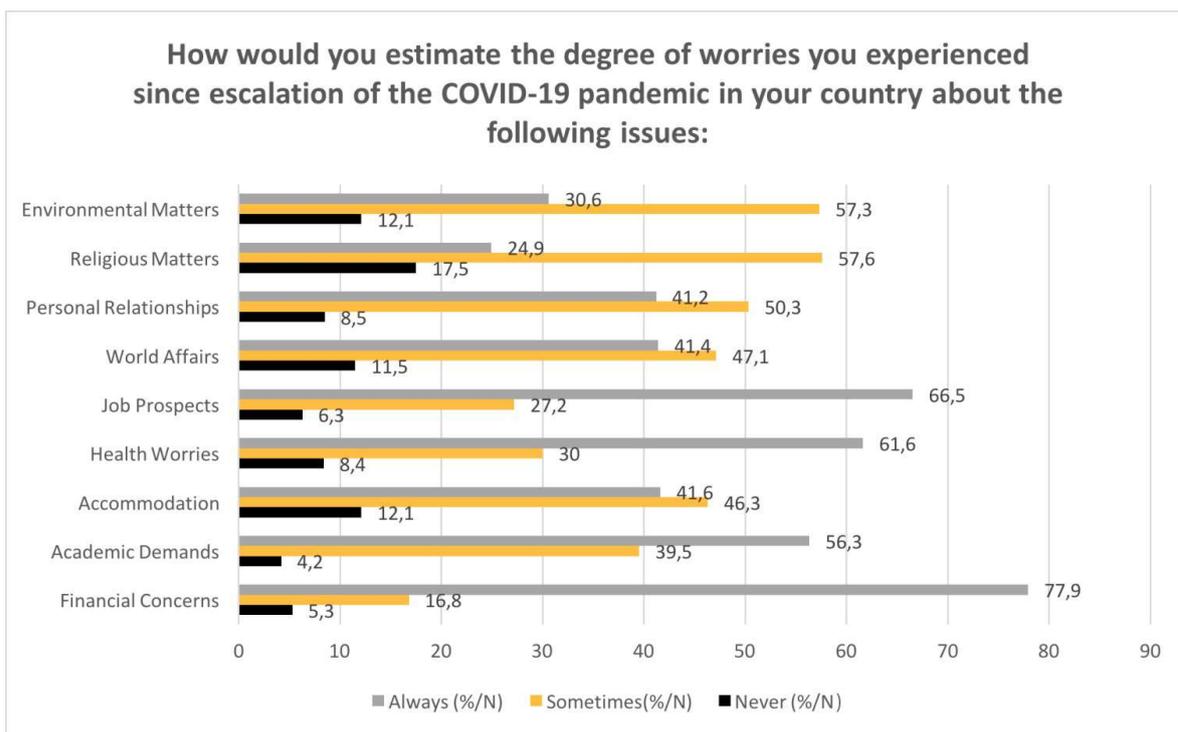


Fig.4. Ranked sources of worries in the study respondents

A large scope of scientific literature, mainly from western countries, shows that social disadvantage, especially lack of material resources, lower income, and financial stress are associated with general mental disorders (Weich, & Lewis, 1998; Kahn, et al., 2000). Thus, the question arises as to whether other health measures, that prevent the need for "quarantine" and may be more favourable, exist. Future research is needed to establish the effectiveness of such measures.

Ways to Mitigate Pandemic Impacts in the Education Sector Organizational Context

It is now clear that the world will not be the same as it was before the pandemic. On the one hand, we should accept this; on the other hand, we realize that this can be a benefit. People begin to view their actions differently, to compartmentalize differently, and start to understand the importance of interdependence and cooperation.

Taking this fact into account, it is currently impossible to do without certain assumptions and discussions of scenarios concerning the consequences of crisis and their impact on the education system. We believe a key factor affecting education will be the duration of quarantine measures and isolation. It is not known how long the COVID-19 pandemic will last, neither in the world, nor in Ukraine; that is why it is worth thinking through short, medium, and long-term measures.

In higher education systems in which we have been involved, short-term measures, implemented during the period of isolation, have been mostly aimed at the adaptation of learning processes. New obligations, for which the majority turned out not to be ready, were imposed both on educators and on students; that is why, during the quarantine, "quarantine burnout" as described by Mheidly, Fares & Fares (2020) was observed in both groups – not everyone was prepared for distance education. Thus, these measures are adaptive and organizational.

The second stage, for which we should prepare even today, is directed toward mitigating the impactful consequences of isolation. We will have to learn and to teach the new rules of social interaction, while still observing "social" distance to students. All this places a particular emphasis on creating conditions, promoting the strengthening of a positive attitude

and behaviour modification (for example, increasing the motivation and the ability to achieve positive goals, to offset negative impacts and to bridge over difficulties). With this aim in mind, higher-education institutions should strengthen the measures directed at the preservation and improvement of health, especially mental health, both for students, and educators.

In order to help young people and their education systems to prevent the problems of deteriorating quality of education caused by ill health, and to solve those which are inevitable, it is essential to take a holistic approach. The freedom of educators in the choice of approaches and methodology does not presuppose that they should do things on their own, they can work as a team with various experts, in particular, those of the healthcare and social sectors. The increase in the share of the sub-disciplines of psychology in the higher-education system will lay the groundwork for creating a healthy microclimate in an educational environment, which will favour gains in the mental health of students.

From the standpoint of health improvement and preventive treatment, the interference in mental health should be concerned with risk factors, protective factors, and the promotion of knowledge and skills development in order to foster social and emotional development, healthy lifestyle and a better general physical and mental state. It is advisable to do this through programmes for promoting mental health literacy (Schleicher, 2018), aimed, in particular, at the students from risk groups (with limited physical capacities, from rural districts, and/or with poor educational grounding).

Study Limitations and Thoughts for Future Work

Our study is mainly based on examining the impact of the epidemic on students. But there are educators who comprise the mechanism responsible for operating all of the structural elements of the educational process. Teaching employees, just like students, need support to increase their protective capabilities, lower risks, and promote well-being. Every higher-education institution should put efforts into fostering staff sustainability, and creating a climate, favouring mutual support, matter of care and the sense of solidarity if they try to rise to a challenge actively and efficiently. Accordingly, the impact of the epidemic on the health and professional activities of teachers will be the focus of the following studies.

Conclusion

Countries attempt to react to economic and social transformations, activating various mechanisms for searching fast, well substantiated and efficient means of solving immediate problems caused by COVID-19. The more the challenges for a society grow, the more valuable the intellectual capital, that undoubtedly may be considered the greatest possession of today's world, becomes. Knowledge and skills, development and transmission of which is the primary mission of higher education, constitute the basis of this capital. In view of this, the significance of higher education as a part of the strategy for getting out of crisis is invaluable, since education has the power of transforming the lives of separate individuals, as well as that of society at large.

In this time of economic instability, which has coincided with the period of renewal of the higher-education system in Ukraine, top-level managers and the heads of higher-education institutions should put considerable time and effort into studying and discussing the best ways to tackle head-on the new reality. Clear policies are important tools that can help overcome crises such as the COVID-19 pandemic and achieve specific goals in the field of education. They should be based on a set of decisions, plans and actions to see the future, set priorities, reach consensus on the activities of different groups, set goals and benchmarks in the short and medium term, taking into account health issues. It is necessary to change approaches to management, to shift the emphasis in education policy per se, and to rethink the planning and programming for achieving goals in the sphere of education and preserving physical and mental health. And fulfilling these conditions would give us certitude to claim

that the challenges in the system of education can be successfully overcome. Moreover, it is possible to use this opportunity for improving the education system per se. This, in turn, will have a positive effect on all the aspects and spheres of social life.

Modern living conditions encourage and force decision-makers to adhere to health policy in the system of higher education and to seek new management approaches in the implementation of educational activities. The management of health problems in the high education system requires a different strategy and this process should be based on the latest and most relevant information research. The education system cannot respond to this situation only with administrative orders - the existing experience will help to change it for the better. Therefore, there is an urgent need for research to decide how to reduce the psychological and social consequences of a pandemic and the impact of negative reports around COVID-19. To address this challenge requires integration between disciplines and industries, the development of multidisciplinary teams. One of the most effective ways to maintain both the physical and mental health of teachers and students, along with clear policy, is to create a focused holistic health unit within higher-education institutions. This can also help to prevent and combat stigma and discrimination, including those affected by COVID-19, re-socialize people after prolonged self-isolation or observation to return them to a full and adequate social life, and thus achieve educational goals.

References

- Abramowitz, J. S., McKay, D., & Storch, E. A. (Eds.). (2017). *The Wiley handbook of obsessive compulsive disorders*. John Wiley & Sons. DOI:10.1002/9781118890233
- Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, 2(2), 113-115.
- Boychuk, Yu. D. (Ed.) (2017). General theory of health and healthcare: a collective monograph, Kharkiv. Бойчук, Ю.Д. (2017). Загальна теорія здоров'я та здоров'язбереження : колективна монографія, Харків.
- Boychuk, Yu. D. (Ed.) (2018). Modern health-saving technologies: monograph (2018)/ Бойчук, Ю.Д. (2018). Сучасні здоров'язберезувальні технології : монографія, Харків.
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, 395: 912–20. <https://doi.org/10.1016/>
- Brinkhurst, M.; Rose, P.; Maurice, G. & Ackerman, J. D. (2012). Achieving campus sustainability: topdown, bottom-up, or neither? *International Journal of Sustainability in Higher Education*, 12 (4), pp.338-354. DOI: 10.1108/14676371111168369.
- Centers for Disease Control and Prevention (2020). *Quarantine and isolation*. <https://www.cdc.gov/quarantine/index.html>.
- Campion, J., Javed, A., Sartorius, N., & Marmot, M. (2020). Addressing the public mental health challenge of COVID-19. *The Lancet. Psychiatry*, 7(8): 657–659. doi: [10.1016/S2215-0366\(20\)30240-6](https://doi.org/10.1016/S2215-0366(20)30240-6)
- Davey, G. C., Hampton, J., Farrell, J., & Davidson, S. (1992). Some characteristics of worrying: Evidence for worrying and anxiety as separate constructs. *Personality and Individual Differences*, 13(2), 133-147.

- Ding, S., & Kalashnyk, L. (2020). Resocialization and Readaptation as a Social Need of Post-Corona Period. *Postmodern Openings*, 11(1Sup2), 12-19. <https://doi.org/10.18662/po/11.1sup2/135>
- Dramnescu, M. (2020). Mental Health and Ethical Issues in Cultural and Organizational Change. *Mental Health: Global Challenges Journal*, 3(2), 56 - 64. <https://doi.org/10.32437/mhgcj.v4i2.97>
- Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., ... & Lavie, C. J. (2020). Psychosocial impact of COVID-19. *Diabetes & Metabolic Syndrome*, 14(5): 779–788. doi: [10.1016/j.dsx.2020.05.035](https://doi.org/10.1016/j.dsx.2020.05.035)
- Izaguirre-Torres, D., & Siche, R. (2020). Covid-19 disease will cause a global catastrophe in terms of mental health: A hypothesis. *Medical Hypotheses*, 143: 109846. doi: [10.1016/j.mehy.2020.109846](https://doi.org/10.1016/j.mehy.2020.109846)
- Ferretti, L., Wymant, C., Kendall, M., Zhao, L., Nurtay, A., Abeler-Dörner, L., ... & Fraser, C. (2020). Quantifying SARS-CoV-2 transmission suggests epidemic control with digital contact tracing. *Science*, 368 (6491). DOI: [10.1126/science.abb6936](https://doi.org/10.1126/science.abb6936)
- Flaherty, M., Sikorski, E., Klos, L., Hayduk, N., Vus, V. (2020) Peacework and mental health: from individual pathology to community responsibility. *Intervention Journal of Mental Health and Psychosocial Support in Conflict Affected Areas*, 18 (1): 28-36 DOI: https://doi.org/10.4103/INTV.INTV_59_18
- Hayduk, N., Klos, L., Klymanska, L., & Stavkova, S. (2020). The Organizing of Community Health Clinic of Lviv Polytechnic. *Journal of Organisational Studies and Innovation*, 7 (1), 1-16. <http://www.mbacademy.org.uk/index.php/josi-issues>
- Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., ... & Ford, T. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry*, 7: 547–60 URL : [https://doi.org/10.1016/S2215-0366\(20\)30168-1](https://doi.org/10.1016/S2215-0366(20)30168-1)
- Henard, F., & Roseveare, D. (2012). *Fostering quality teaching in higher education: Policies and practices*. Institutional Management in Higher Education: OECD.
- Kahn, R. S., Wise, P. H., Kennedy, B. P., & Kawachi, I. (2000). State income inequality, household income, and maternal mental and physical health: cross sectional national survey. *Bmj Clinical Research*, 321(7272), 1311-1315
- Klos, L. (2013). Approaching Diversity Issues from the Health Perspective. *Diversity and Respect: A Problem of Perception in the Global Agenda for Social Work. Internationale Sozialarbeit*, 9, 83-96
- Klos, L., Hayduk, N., & Pavlysh, V. (2019). From the experience of shaping inclusive education services (on the example of Lviv Polytechnic National University). *Professional Education*, 3, 62-65. Клос, Л., Гайдук, Н., Павлиш, В. (2019). 3 досвіду формування послуг інклюзивної освіти (за прикладом Національного університету «Львівська політехніка»). Професійна освіта, 3, 62-65.
- Klos, L., & Nazar, N. (2019). Integrated social services based on preservation and promotion of community health: an analysis of the state and prospects of development. *Mental Health: Global Challenges Journal*, 2 (3), 59-69. [https://doi.org/10.32437/MHGCJ-2019\(0\).68](https://doi.org/10.32437/MHGCJ-2019(0).68)
- Klos, L. (2015a). Technologies of health care in the social sphere. Lviv: Lviv Polytechnic.

- Klos, L. (2015b). The theoretical basis of the future social worker training for health promotion activities. *Theoretical and Applied Sciences in the USA: 2nd International Scientific Conference, New York, 6 February* (pp. 96-102). New York: Cibunet Publishing.
- MacCann; Xiang, Y.; Brown, L. ; Bucich, M.; Double, K.; Minbashian, A.; (2020). Emotional intelligence predicts academic performance: A meta-analysis. *Psychological Bulletin*, 146(2). 150-186.
- Marinoni, G., Van't Land, H., & Jensen, T. (2020). *The Impact of COVID-19 on Higher Education Around the World IAU Global Survey Report*. Published by the International Association of Universities, Paris.
- Mheidly, N.; Fares, M. Y. & Fares J. (2020). Coping with stress and burnout associated with telecommunication and online learning. *Frontiers in Public Health*. 8:57496
<https://doi.org/10.3389/fpubh.2020.574969>
- Michie, S., West, R., Amlot, R., & Rubin, J. (2020). Slowing down the COVID-19 outbreak: changing behaviour by understanding it. *BMJ*.
URL: <https://blogs.bmj.com/bmj/2020/03/11/slowing-down-the-covid-19-outbreak-changing-behaviour-by-understanding-it/>
- Murphy, M. P. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 41 (3), 492-505 URL : <https://doi.org/10.1080/13523260.2020.1761749>
- OECD (2010). *PISA 2009 Results: What Makes a School Successful? – Resources, Policies and Practices (Volume IV)* <http://dx.doi.org/10.1787/9789264091559-en>
- OECD (2019). *Society at a Glance 2019: OECD Social Indicators*, OECD Publishing, Paris.
https://doi.org/10.1787/soc_glance-2019-en
- OECD (2020). *Education at a Glance 2020: OECD Indicators*, OECD Publishing, Paris,
<https://doi.org/10.1787/69096873-en>
- Redkina, M. (2020). Methods for determining the individual motor activity of students in the process of physical education (Dissertation for Pedagogical Sciences). National Drahomanov Pedagogical University, Kyiv. Редькіна, М. (2020).
- Rubin, G. J., Potts, H. W. W., & Michie, S. (2010). The impact of communications about swine flu (influenza A H1N1v) on public responses to the outbreak: results from 36 national telephone surveys in the UK. *Health Technology Assessment*, 14(34), 183-266.
- Schleicher, A. (2018). *The best class in the world: how to create a 21st century education system*. Lviv: Chronicle.
- Shtompka, P. (2020). *Sociology. Analysis of society*. Lviv: Color PRO.
- The World Bank (2020). *World Bank Education and COVID-19*. URL : <https://www.worldbank.org/en/data/interactive/2020/03/24/world-bank-education-and-covid-19>.
- Turchynovskyy, V. (2020). *Post-coronavirus: The courage to build a "village of education"*. URL : <https://keough.nd.edu/post-coronavirus-the-courage-to-build-a-village-of-education/>
- Ukraine. State Statistics Service (2020). The average number of full-time employees by type of economic activity in 2020. URL : <http://www.ukrstat.gov.ua>.
- Ukraine. The Cabinet of Ministers. Resolution №211 (2020). *On preventing the spread of Coronavirus COVID-19 on the territory of Ukraine*. URL :

<https://www.kmu.gov.ua/npas/pro-zapobigannya-poshim110320rennyu-na-teritoriyi-ukrayini-koronavirusu-covid->

VicHealth (2010). *Opportunities for social connection. A determinant of mental health and wellbeing. Summary of learnings and implications*

http://www.vichealth.vic.gov.au/~media/ResourceCentre/PublicationsandResources/Social%20connection/opportunities_for_Social_Connection_Summary_Nov10.ashx.

Wang, C., Cheng, Z., Yue, X. G., & McAleer, M. (2020). Risk management of COVID-19 by universities in China. *Journal of Risk and Financial Management*, 13 (2), 36. <https://doi.org/10.3390/jrfm13020036>

Weich, S., & Lewis, G. (1998). Poverty, unemployment, and common mental disorders: population based cohort study. *Bmj Clinical Research*, 317(7151), 115-119.

Yudina, V., & Danylova, T. (2018). Mental health problems and the ways of solving them through the eyes of Ukrainian high school students. *Mental Health: Global Challenges Journal*, 1(1), 87–88. DOI: <https://doi.org/10.32437/mhgcj.v1i1.38>

Zepeda, S. J. (2013/2004). *Instructional leadership for school improvement*. New York: Routledge.