

## **WP2A1 Research on the attitudes of students and teachers on well-being and mental health**

Project 2022-1-BG01-KA220-SCH-000085347

Healthy at school. Supporting the well-being and mental health of  
students and teachers / HAS,

Erasmus+





Title „Research on the attitudes of students and teachers on well-being and mental health“

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## I. Project information

This document is part of Project 2022-1-BG01-KA220-SCH-000085347 „Healthy at school. Supporting the well-being and mental health of students and teachers/ HAS “, Erasmus+ program, with the financial support of the European Commission.

Project period: 01/11/2022 - 31/10/2024 (24 months)

Leading organization: Association of Psychologists in Bulgaria, Varna, Bulgaria

Partner organizations: Hristo Botev School, Bulgaria; IMS Private School, Cyprus; and WYKSZA SZKOŁA BIZNESU I NAUK O ZDROWIU (WSBINOZ), Poland.

The mission of the project is to modernize and strengthen the capacity of the education and training system to address the main challenges in today's world, to improve mental and physical health and well-being (incl. of teachers/trainers and students/trainees), to promote social, civic, and intercultural competencies, and intercultural dialogue. This mission is achieved through the development of the products in accordance with the individual needs of both trainees and trainers, and partner schools at the organizational level.

The project's aim is also to help deal with the unfavorable learning conditions caused by the difficulties in online learning, social distancing, and immobility. It focuses on the improvement of basic skills as a prerequisite for the prevention of early school leaving, incl. from vulnerable groups.

The main project objectives are:

- Increasing the knowledge of mental health, safety and management of psychosocial risks;
- Overcoming the consequences of social isolation and immobility;
- Overcoming and preventing stress and difficulties in online/distance learning and teaching;
- Increasing students' motivation to learn;
- Improving the mental health and wellbeing of teachers and students;
- Increasing the motivation for teaching and career development of teachers;
- Providing opportunities for career and personal development, increasing the professional capacity and basic skills of teachers and other educational staff;

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- Greater effectiveness of activities for vulnerable groups in the field of inclusion and diversity education;
- Creating mutual assistance and intervention groups;
- Promoting common values, civic engagement and participation.

## II. Introduction

The current product WP2A1 “Research on the attitudes of students and teachers on well-being and mental health” has been developed as a result of cooperation in the educational field by experts from Bulgaria, Poland and Cyprus within the project 2022-1-BG01-KA220-SCH-000085347 “Healthy at school. Supporting the well-being and mental health of students and teachers” / HAS, funded by the Erasmus + program under Key Action 2, School Sector.

The results obtained from the research will be presented and discussed during another project activity – WP2A2 Events, round tables, and workshops with experts. The main target group of the activity are consortium partners (later mentors), students and teachers, specialists, and other stakeholders. Moreover, the WP2A1 Research will serve as a basis for the development of another project product WP2A3 “Methodology for supporting the well-being and mental health of students and teachers” which will include important tools, modules and programs on the topic. The product will also serve as a basis for the development of products WP3A1 Needs research and assessment of the strengths of HR in educational organizations, WP3A2 Strategy for planning the professional development of employees in accordance with individual needs and WP3A3 Training program for staff in educational organizations. How to increase the capacity of staff.

The **need** for the development of the WP2A1 Research is determined because such detailed study is still missing in the partner countries – Bulgaria, Poland and Cyprus, which served as a motivator for us to develop this product within the framework of the project. Due to the COVID-19 pandemic and distance / online learning period being relatively recent, existing research which focuses on the attitudes of teachers, students and training organizations on well-being and mental health and the consequences of distance teaching is still limited and insufficient. There is a substantial need for conducting such research because the lack of adequate studies on these topics in the partner countries can contribute to the under preparation of both students and teachers as regards distance learning and teaching if it happens again in the future.

The main **target groups** which will benefit from the WP2A1 Research in terms of increased knowledge about the consequences of distance learning, are:

- students aged 7-20;
- teachers from schools and universities and other educational centers;

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- Non-teaching school/university staff;
- other staff: experts, counselors, pedagogical advisers, psychologists;
- experts who are working with students, parents, and teachers.
- Government and non-government organizations, schools and universities, institutions, social partners, municipalities, policymakers, youth, and sports organizations, companies, etc.

The identified main **aims/goals** of the WP2A1 “Research on the attitudes of students and teachers on well-being and mental health” are:

- To study the attitude of students, teachers and training organizations towards well-being and mental health (through a survey including questionnaires developed specifically for the three target groups);
- To assess the negative consequences of distance learning / teaching for students, teachers and training organizations;
- To provide an analysis of the consequences as well as important information for their overcoming and prevention.
- To provide a complex up-to-date report focused on social, economic, political, technological, regulatory/legal, and environmental factors.

In addition to the main goals, the WP2A1 Research has the following **task** - to catch up with global innovation trends through a multilevel analysis structure at the following levels:

- macrolevel sector analysis (vertical approach);
- mesolevel: focus on institutions (organizations);
- microlevel: employees and students.

Based on an initial research on the subject by experts from the partner organizations on the needs of the target groups and the negative impact of e-distance learning on the mental health and well-being of students and teachers internationally, included in the structure of the present study in the form of preliminary office study (see [III](#) and [IV](#)) and following the objectives of Research WP2A1 described above, **two main research hypotheses were outlined**:

- Hypothesis 1: During the period of online/distance learning, students and teachers experienced a deterioration in their mental and physical health and overall well-being.





- Hypothesis 2: During the period of online/distance learning, students and teachers experienced decreased levels of scholastic/professional performance, respectively.

To evaluate the two hypotheses, we used questionnaires aimed at the two target groups, students and teachers, as well as at educational organizations. Through the questionnaires, we examined the presence of change/deterioration during the period of the online education in a number of factors that directly affect the health, well-being and working capacity of the studied groups.

To evaluate the first hypothesis, we included questions aimed at the feeling of social isolation, stress, anxiety and irritability, self-esteem, as well as motor activity, healthy eating, etc. To evaluate the second research hypothesis, which concerns school and professional work ability, we investigated the change during the online learning period in motivation and job satisfaction, communication in the learning process, level of attention and academic performance of students, as well as other factors determining the work ability of the target groups.

### III. Methodology, structure and stages of the research

#### 1. Research process and stages

The methodology of Research WP2A1 combines two main approaches: a desk study and a questionnaire survey, which involves the application of three separate questionnaires aimed at students, teachers and educational organizations. This approach helps us outline the structure and stages of the WP2A1 study, distinguishing two distinct phases, namely:

- **Desk research**

This is a method that explores data from already existing documents/materials and past research (secondary data) to gather information on a specific topic. In this case, the focus of the desk research carried by all partner organizations from Bulgaria, Cyprus and Poland is aimed at:

- 1) [The negative impact of distance learning on the mental health and well-being of students](#), including social factors, physical health factors, mental health factors; reduced concentration, motivation and achievements in school, and
- 2) [The negative impact of distance learning on the mental health and well-being of teachers](#), including burnout and stress; social isolation; ineffective communication; time management problems; impact on self-esteem, motivation and work ability.

The stage of desk research and analysis of the results of already conducted global research on the topic of online education during the COVID-19 pandemic and the impact on learners and educators is key. It provides the basis for the formulation of the research hypotheses, supports the development of the model for conducting the empirical research and the choice of tools for collecting empirical information among the target groups. It was based on the joint review, within the desk study, that the partners outlined the two research hypotheses and determined the specific scope and structure of the questionnaires, which were subsequently applied to each of the three target groups, respectively - students, teachers/trainers and training/educational institutions.

Thus, the questions included in the student survey explore topics such as students' emotions and their attitudes before, during and after the COVID-19 pandemic, experienced stress, level of attention during online classes, school grades, social isolation, levels of physical activity and

nutrition, motivation to learn, relationships with teachers and classmates, health concerns, and more.

On the other hand, the questionnaire for teachers focused on teachers/trainers' emotions and their attitudes before, during and after the COVID-19 pandemic and distance/online learning, experienced stress and professional burnout, social isolation, levels of physical activity, health concerns, communication with students and colleagues, time management, self-esteem, motivation for professional development, quality of life and other important areas.

The questionnaire for educational organizations investigates experienced stress and professional burnout by employees/teachers/trainers in the organization during the distance learning period; experienced stress by students/learners during distance learning; experienced anxiety of teachers/trainers, problems in communication and relationships between the two groups; motivation for professional development and learning; time management in distance learning; academic results; attention and desire to learn of students/learners during distance learning and others.

- **Survey research**, including questionnaires to students, teachers and training organizations:

Survey research is “the collection of information from a sample of individuals through their responses to questions” (Ponto, 2015). This stage uses quantitative research strategies (e.g., questionnaires with closed-ended questions) and qualitative research strategies (e.g., open-ended questions). This phase includes the development and application of three separate questionnaires (for students, teachers and training organizations) with the aim to assess the attitudes of the target groups toward well-being and mental health and the consequences of distance learning. The questionnaires have both a paper version in English, Greek, Bulgarian, and Polish (the languages of the partnership) and an online form (Google Forms) in English.

This stage includes the development and distribution of the following three questionnaires:

- **Questionnaire to assess students' attitudes** towards well-being and mental health and the consequences of distance learning (see Appendix 1: [Questionnaire for assessing the attitude of students on well-being and mental health and the consequences of distance learning](#);

- **Questionnaire to assess teachers' attitudes** towards well-being and mental health and the consequences of distance learning, see Appendix 2: [Questionnaire for assessing the attitude of teachers on well-being and mental health and the consequences of distance learning](#);
- **Questionnaire for non-partnership organizations** (such as training organisations, youth organisations, educational organisations, etc.) (see Appendix 3: [Questionnaire for organizations outside the partnership for assessing the implications for students and teachers of distance learning](#)).

All questionnaires include closed-ended questions (Yes/No) as well as one open-ended question at the end of each questionnaire to collect additional comments and opinions.

## 2. Description of target groups

In the field of statistics, the definition of a sample is “a subset of a population that is used to represent the entire group as a whole” (Cherry, 2022). In psychology and social sciences research, it is impractical and often impossible to survey every member of a particular population simply because the number of individuals is simply too large. In this case, different types of sampling can be used depending on what phenomenon is being studied and what resources are currently available to the researchers who are collecting the data and analyzing the results afterwards.

When studying human attitudes and behaviors, researchers cannot obtain data from every single person on the planet – they have to choose a small sample of people which represents the larger group (in the case of this study, samples from three separate groups were chosen - of teachers / educators, students, and training / educational organizations outside the partnership). The type of sampling was carefully selected to ensure that the sample represents the larger group accurately and that it reflects its most important and relevant characteristics. If the type of sampling is chosen correctly, the obtained results from the study can effectively provide information on the group as a whole via statistical analysis (Cherry, 2022).

As mentioned above, there are different sampling methods in psychology and social science research (which are grouped in two main types - probability and nonprobability samples). For the purposes of the current study, we used convenience sampling which is a type of

nonprobability sampling. This involves selecting participants who are convenient and available to the researchers who collect the data and analyze the results afterwards. In our case, the convenience samples and the target groups of our study are: teachers / educators and students from the three educational organizations participating in the project “Healthy at School / HAS” – “Hristo Botev” Primary School (Bulgaria), WYZSZA SZKOLA BIZNESU I NAUK O ZDROWIU - WSBINOZ (Poland) and IMS Private School (Cyprus), and the training / educational organizations outside the partnership who the partners are in contact with.

Studies that are relying on volunteers are also examples of convenience samples (for instance, a psychological study conducted via the university psychology department). For the purposes of this research, participants voluntarily agreed to participate in the study without any compensation whatsoever offered by us.

Although convenient, this type of sampling has several problems. First of all, volunteer participants could differ from non-volunteers on certain variables, which makes it much harder to generalize the results to the larger population, and are thus less representative of it (Valliant & Dever, 2011).

For the study, we took into account the possibility of a sampling error (which is defined as “a statistical error that occurs when a sample does not represent the entire population of data”). As samples typically cannot include every single individual in the population (it is impossible to do so, in addition to being extremely costly and time-consuming), this type of error can occur and have a negative impact on the results of the research.

To find an effective solution to this problem for the current research, we took into account the following principle – “the larger the sample size, the smaller level of sampling error” (Lin, 2018). This is the rule that we respected for the study in which we included 150 students (50 from each educational organization), 150 teachers / educators (50 from each educational organization) and 30 training / educational organizations outside the partnership (10 for each partner). This ensures that the sample is big enough to accurately capture the characteristics of the larger group. However, the only way to completely eliminate the possibility of a sampling error is to collect data from the entire population which in this case, is not feasible. For our study, we strived to minimize sampling error by using a large enough sample size.

For the purpose of carrying out the research on the attitudes of students and teachers on well-being and mental health and the consequences of distance learning, we included the following direct target groups:

- **Students aged 7 – 20-year-old** from the three educational institutions in the partner countries - Bulgaria (“Hristo Botev” Primary School), Poland (WYZSZA SZKOLA BIZNESU I NAUK O ZDROWIU - WSBINOZ), and Cyprus (IMS Private School) who participated voluntarily in the study and filled out a questionnaire aimed at students to assess their attitudes towards well-being and mental health and the consequences of distance learning. They were selected at random without taking into account discriminatory and protected factors such as gender, sex, sexual orientation, gender identity, religious beliefs, ethnical background, origin, race, political beliefs, socioeconomic status (SES), presence of a disability, be it physical or mental, and other characteristics.

For the objectives of the current study, the students were asked to provide information about their age, gender, and the city and country they are from - however, they would not write down their names and remained fully anonymous for their protection and according to the requirements of the General Data Protection Regulation (GDPR). We observed the principle of data minimization and collected and processed only as much data as absolutely necessary for the purposes specified.

Students completed the questionnaire designed for this specific target group: [Questionnaire for assessing the attitudes of Students on wellbeing and mental health and the consequences of distance learning](#) (Appendix 1)

- **Teachers / educators / trainers** (regardless of their age and years of experience in the field of education and /or training) from the three educational institutions in the partner countries Bulgaria, Poland, and Cyprus (from the abovementioned organizations) who participated in the study and filled out a questionnaire aimed at teachers/educators to assess their attitudes towards well-being and mental health and the consequences of distance learning. They were selected randomly without taking into account discriminatory factors such as age, gender, sex, sexual orientation, gender identity, religious beliefs, ethnical background, origin, race, political beliefs, socioeconomic

status (SES), presence of a disability, be it physical or mental, and other protected characteristics.

For the purposes of the study, the teachers were asked to provide information about their age, gender, and the city and country they are from. However, they would not write down their names and remained fully anonymous for their protection and according to the requirements of the General Data Protection Regulation (GDPR). We observed the principle of data minimization and collected and processed only as much data as absolutely necessary for the purposes specified.

Teachers completed the questionnaire designed for this specific target group: [Questionnaire for assessing the attitudes of Teachers on wellbeing and mental health and the consequences of distance teaching](#) (Appendix 2)

- **Training/educational organizations outside the partnership** (which includes training organizations, youth organizations, educational organizations and other types). A representative from each of the organizations that provides educational and / or training services (that is not a partner in project “Healthy at school / HAS”) filled out a questionnaire aimed at organizations to assess the consequences of e-distance learning for their students / trainees and teachers / trainers/ educators. They were selected by the project partners themselves as they were able to use their networks and contacts with the organizations that were willing to get involved in the study and have identified the relevant problems, difficulties or consequences for students / trainees and teachers / trainers/ educators from the distance education. The representatives who filled in the questionnaire provided the following information: name of the organization they are representing; city and country; email address and website of the organization. However, they would not write down their personal names and remained fully anonymous for their protection and according to the requirements of the General Data Protection Regulation (GDPR). We observed the principle of data minimization and collected and processed only as much data as absolutely necessary for the purposes specified.

The representatives of training organizations completed the questionnaire developed for this specific target group: [Questionnaire for Training organizations outside the](#)

[partnership assessing the consequences for students and teachers from distance education](#) (Appendix 3).

Indirect target groups who will have access and will benefit from the Research on the attitudes of students and teachers on well-being and mental health, are: Government and non-government organizations, schools and universities, institutions, social partners, municipalities, policymakers, youth, and sports organizations, companies, and other.

### 3. Structure of the survey and methodology

#### 1. Research planning:

- Defining the objectives: We have defined what we want to learn from the study and what data we need to achieve the objectives.
- Identifying the target audience: We have chosen the target groups and the most appropriate ways to reach them.
- Choice of methodology: We determined the structure and content of each of the three questionnaires and the format of distribution (online and paper).
- Questionnaire design: We designed the textual and semantic layout of the questionnaires so that they are clear and relevant to the target groups and correspond to the research objectives.

#### 2. Preparation and testing of the questionnaires:

- Question Verification: We have made sure that the questions are clear and understandable to our target audience.
- Testing the questionnaires: We conducted a pilot study with a small group to assess the comprehensibility and effectiveness of the questionnaires.

#### 3. Conducting the survey:

- Distribution of Questionnaires: We sent the questionnaires to the target groups using the appropriate communication channels (email, social media, website, etc.).
- Data Collection: We tracked and collected participant responses to our questionnaires.

#### 4. Data Analysis:

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- Data processing: We converted the collected information into structured data for easy comparison and analysis.
- Statistical analysis: We used appropriate methods for processing and visualizing the statistical data to draw more detailed and meaningful conclusions.

#### 5. Interpretation of results:

- Analyzing the findings: We evaluated the results of the study and interpreted their significance for the study objectives and research hypotheses.
- Report preparation: We prepared a report that summarizes the findings and makes recommendations or conclusions based on the results.

#### 6. Presentation and communication of results:

- Communicating the findings: We presented the results to stakeholders in an appropriate and understandable way – presentations, reports, graphs, etc.

### **4. Stages and components in creation of questionnaires**

After distributing the questionnaires, the data and results are then analyzed statistically to draw relevant conclusions to the topic being studied. This type of research allows for a variety of methods to recruit participants, collect data, and use various methods of instrumentation. Survey research can use quantitative research strategies (e.g., using questionnaires with numerically rated items), qualitative research strategies (e.g., using open-ended questions), or both strategies (i.e., mixed methods). As they are often used to describe and explore human behavior, surveys are therefore frequently used in social and psychological research.

As mentioned above, psychology researchers can conduct research in a variety of ways, but we have chosen the survey method as it is one of the most reliable and effective research methods. We have developed both a paper version of the questionnaires in English, and in Greek, Bulgarian, and Polish (the languages of the partnership) and an online form (Google Forms) in English.

Online surveys are one of the most popular research methods nowadays (Singh & Sagar, 2021). They are a faster method for collecting data, are not costly and time-consuming, and the answers tend to be very accurate. The current survey consists of short questions which seek to collect as

much information as possible but also to motivate participants in the study to respond to all of them and not skip any questions. However, there have been several concerns raised about the findings obtained from online survey studies, such as possible bias introduced in results by the online survey, inadequately described online survey methodology, and other (Andrade et al., 2020; Sagar et al., 2020).

To address these issues, we have created paper versions of the questionnaires (i.e., face-to-face gathering of data). Researchers distributed the questionnaires face-to-face to participants who were then asked to fill them in. The response rate for this method is generally the highest of all methods.

As regards the methodology applied, survey research is a quantitative method for collecting data from respondents by asking multiple questions. This type of research involves the recruitment of participants, collection of data, and statistical analysis of the results afterwards. However, researchers can combine both qualitative and quantitative methods depending on the topic of the study and what they are trying to achieve.

The current research adopts a cross-sectional approach – a type of observational research design. To implement this approach, researchers collect data from a target group at a particular time interval (Cherry, 2022). This method is implemented in many sectors (such as retail, education, healthcare, small and medium enterprises, businesses, and other sectors). It is a quick way for researchers to collect information in a relatively short period. Studies adopt a cross-sectional research method where descriptive analysis of a subject is required. Typically, in cross-sectional research, you observe variables (attributes of an object of study) without influencing them.

In order to choose appropriate tests and interpret the results of the study correctly, the types of variables need to be carefully identified. For this study we have categorical variables. Categorical variables represent groupings of some kind. They are sometimes recorded as numbers, but the numbers represent categories rather than actual amounts of things. There are three types of categorical variables: binary, nominal, and ordinal variables (Bevans, 2022). The categorical variables in the present research are binary variables (also known as dichotomous variables) which represent yes or no outcomes.

For the purposes of the current study which focuses on the attitudes toward well-being and mental health and the consequences of distance learning, we have developed and distributed the following three questionnaires:

- 1) [Questionnaire for assessing the attitudes of students on well-being and mental health and the consequences of distance learning](#) (Appendix 1);
- 2) [Questionnaire for assessing the attitudes of teachers on well-being and mental health and the consequences of distance learning](#) (Appendix 2);
- 3) [Questionnaire for organizations outside the partnership, such as training organizations, youth organizations, educational organizations and other](#) (Appendix 3).

All questionnaires included closed-ended questions (Yes / No) as well as one open-ended question at the end of each questionnaire for additional comments and opinions.

The right choice of the types of survey questions is very important in order to get unbiased results from the respondents. Open-ended questions include lines for comments, while closed-ended questions can be yes or no, multiple choice, rating scale, and other types of questions. What type of information is collected depends largely on the structure of the survey and of the types of questions which are chosen.

Open-ended questions can give the opportunity to respondents to answer in their own words, however they can. They are in a free response format that seeks to determine what the respondent actually thinks about the issue that is being studied. Such types of questions assess attitudes (which is the case of the current study), feelings, emotions, memories, opinions, comments, recommendations, and other information which can be viewed as subjective. However, there can be some disadvantages and negative sides to using open-ended questions such as the following:

- The respondents might find it difficult to express their true feelings and attitudes on the topic being studied (some of these respondents tend to skip the question altogether);
- Open-ended questions generally take more time and effort on the part of the respondent and can be more difficult for the researcher to analyze afterwards.

Closed-ended questions, on the other hand, can be multiple choice (one answer or multiple answers). They have already determined several answers and leave little choice for the

respondent. The questionnaires developed for the current study contain dichotomous questions (Yes / No) which allow respondents to choose only one or the other.

In addition to the right choice of question types, the question sequence is also very important for a good survey design (especially, for stimulating the memory of respondents about their different past experiences). The sequence should motivate the respondents to answer all of the questions which are included in the survey. It also plays a vital role in engaging respondents and making the topic interesting to them. In the current survey, there were no included sensitive questions, that might hinder the results or make the respondents feel negative emotions such as anxiety, nervousness, frustration, or stress.

The questions included in the survey are very easy for participants to fully understand and answer, and can provoke their interest in the topic. A positive side is that the questionnaires are relatively short to fill in and this avoids complications. Trying to include too much information or too many questions on a single page or even on a few pages might cause respondents to find it difficult to provide accurate answers, and as a result to give up entirely on fulfilling the questionnaire.

The three questionnaires developed for the current study are visually appealing and user-friendly. The font used (Times New Roman 14) is large enough for all participants to read and understand. Appropriate spacing (1,5) is used in order to not make the questions look too cluttered. Similar questions are grouped together to make it easier for participants to answer them. Demographic questions are put on top to gain the attention of respondents.

The appropriate structure and textual layout, as well as the option to fill in both electronic and paper formats, make the questionnaires relevant and accessible to participants with fewer opportunities and are consistent with the overall design of the project, based on important principles such as diversity and inclusion.

## 5. Structure of the questionnaires

The Questionnaire for Teachers / Educators consists of separate lines for age, gender, city and country, 19 closed-ended questions (Yes / No), and 1 open-ended question (“Please share if you have additional comments related to distance learning and the impact of the COVID pandemic on you and your close ones”). The questions focus on the following aspects: the emotions of

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teachers / educators and their attitudes before, during and after the COVID-19 pandemic and distance / online teaching, stress and professional burnout experienced, social isolation, levels of physical activity, anxiety (including concerns about their physical health), communication with students and colleagues, time management, self-esteem issues, motivation for professional development, quality of life, and other important areas.

The Questionnaire for Students consists of separate lines for age, gender, city and country, 14 closed-ended questions (Yes / No) and one open-ended question (“Please share if you have any additional comments related to distance learning and the impact of the COVID pandemic on you and your close ones”). The questions focus on the following aspects: the emotions of students and their attitudes before, during and after the COVID-19 pandemic and distance /online learning, experienced stress levels, attention during online classes, nervousness, grades / academic performance, social isolation, levels of physical activity, eating habits, desire and motivation to study and learn, relationship with their teachers and classmates, anxiety about health (including physical health), anxiety about grades, and other important areas.

The Questionnaire for Organizations outside the partnership (such as training organizations, youth organizations, educational organizations and other) consists of separate lines for the name of the organization, city and country, email and website of the organization, 11 closed-ended questions (Yes / No format) and one open-ended question (“Please share if you have additional comments related to the impact of distance education and the consequences for students/trainees and teachers / trainers.”). The questions focus on the following aspects: experienced stress and professional burnout by employees / teachers / trainers in the organization during the period of distance teaching; experienced stress by students / trainees during distance learning; experienced anxiety of teachers / trainers, communication problems and relationship between teachers / trainers and students / trainees during distance learning; motivation for professional development in teachers / trainers; communication between teachers / trainers during distance teaching; time management during distance teaching; grades of students / trainees during distance learning; attention span of students / trainees during online classes, desire to learn and study in students / trainees during distance learning and other.

All questionnaires include relevant information on the project “Healthy at school / HAS” in the header containing the number and name of the project, and the name of the Erasmus+



programme to acknowledge the funding. In addition to this, the logo of the European Commission and the “Funded by the European Union” logo were included (as per the Erasmus+ programme requirements for visibility and dissemination). In the footer, the obligatory text was included: “Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them”.

## **IV. Well-being and mental health in school – nature and importance**

According to the World Health Organization (2022) mental health is defined as the “state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community”. It is just as important as physical health and serves as a basis to good decision making, building strong relationships with other people and having a positive impact on the world in general. It is a basic human right and is crucial to personal, community and socio-economic development.

In essence, mental health is all about how people think, feel, and behave. Taking good care of one’s mental health can preserve a person’s ability to enjoy life, to create a balance between different life activities and to achieve psychological resilience (defined by the American Psychological Association as “the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands”).

Positive psychology models (Joseph, 2015; Keyes, 2002) posit that mental health is much more than just the absence of mental illnesses. In fact, it exists on a complex continuum/spectrum, which manifests differently from one individual to another, with the following stages: thriving, surviving, struggling and crisis. On one end of the spectrum is perfect mental health (if one can say that such even exists), while on the other is mental illness that severely restricts the ability to function in everyday life. In reality, very few people are at the extreme ends of the continuum. An important takeaway of the concept of the mental health spectrum is that human minds are always moving and all people have the potential to evolve and improve their mental well-being. Mental health disorders, on the other hand, are associated with significant distress, impairment in everyday functioning, and/or risk of self-harm (which in some cases can be fatal). Logically, people with mental health conditions are far more likely to experience lower levels of mental well-being. There are many determinants of mental health – individual, social and structural that combine and shift the position on the mental health continuum/spectrum. Individual psychological and biological factors such as coping skills, and genetics can make people more vulnerable to mental health problems. Unfavorable social, economic, family, and

environmental conditions – including domestic violence, socioeconomic inequality (i.e., the unequal distribution of income and opportunity between different groups in society) and other, also increase people’s risk of experiencing mental health conditions.

As regards the concept of well-being, it is a slightly different notion than mental health, and it represents a complex combination of a person's physical, mental, emotional and social health factors. It is strongly linked to happiness and life satisfaction which are distinct constructs — happiness is a momentary emotion that arises spontaneously, whilst life satisfaction is a long-term feeling based on achieving one’s lifetime goals. In short, well-being comprises of how one feels about themselves and their life (Diener, 2009).

There is no single definition of well-being, but at minimum, it includes the presence of positive emotions and moods (e.g., contentment, happiness, joy and others), the absence of negative emotions (e.g., depression, anxiety, anger), satisfaction with life, fulfillment and general positive functioning (Ryff & Keyes, 1995). In short, well-being can be described as judging life positively and feeling good. Physical well-being (in other words, feeling very healthy and full of energy) is also viewed as a critical factor to overall well-being. Researchers from different disciplines, including psychology (Diener, 2009) have examined different aspects of well-being that include the following:

- Physical well-being (the ability to maintain a healthy quality of life and getting the most out of daily activities without undue fatigue or physical stress);
- Economic well-being (to have the most basic survival needs met, and have sustainable income and assets);
- Social well-being (building and maintaining healthy relationships and having meaningful interactions with others);
- Development and activity;
- Emotional well-being (the ability to handle life stresses and adapt to change and challenging times);
- Psychological well-being (the combination of feeling good and functioning effectively);
- Life satisfaction (the degree to which a person positively evaluates the overall quality of their life in general);
- Domain specific satisfaction (an enduring appreciation of a particular life aspect);





- Engaging activities and work.

During the COVID-19 pandemic, a large number of people experienced decreased aspects of well-being and a significant rise in mental health problems (for example, anxiety and depressive disorders, and post-traumatic stress disorder - PTSD) some of which persist to this day even after the end of the health crisis — WHO declared an end to the COVID-19 global health emergency in May 2023. Especially vulnerable groups were of course the healthcare professionals (such as doctors and nurses), but also educational staff (such as teachers, psychologists, advisors, counselors, trainers, and other) and students who also had to deal with the negative impact of distance learning.

## **V. Negative impact of distance learning on the mental health and well-being of students**

### **1. Social isolation**

Distance learning (during the COVID-19 pandemic) has had an enormous impact on the social aspect of students' life which in turn has negatively affected their mental health and well-being. Although distance learning provides flexibility when considering time and place in education, and is a cost-effective method, it greatly diminishes the social interaction between students and educators and among students themselves (Teng et al., 2020). This lack of interaction that occurs in distance learning affects both students' social life and psychology. In their research, Teng et al. (2020) have found that students who use distance learning without any interaction with the others tend to develop an antisocial behavior which leads to loneliness.

Not only that, but the lack of live presence of an educator also affected the way students learn. The trainer in learning activities is essential for things like "degree of feeling, perception, and reaction of being connected." While students can get all of these from face-to-face learning, distance learning limits them all, especially when the classes are in the asynchronous sessions (Gray & DiLoreto, 2016).

The small amount of interaction between students and educators, or among students themselves in distance learning, also affects the character development of students. The character development of students is affected by these changes in the environment, in particular their social skill, because adolescents need friends to develop their character.

It should be noted that there are various ways to classify types of distance learning. Generally, distance learning can be divided into two types: "synchronous" and "asynchronous". Synchronous distance-learning requires students and educators to be online at the same time to do the learning activity, while asynchronous distance-learning provides more flexibility in learning activity for both students and teachers (Subramanian, 2016).

Furthermore, the advantages of distance learning should be considered. According to Subramanian (2016), distance learning can support the accomplishment of objectives in the shortest time with the least effort from both the students and teachers. That way, both students and teachers can develop their skills in the meantime.

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Distance learning can also be a good solution of bullying that mostly occurs at school or university. Bullying is an aggressive behavior, intentional acts carried by a group or individual repeatedly and overtime against helpless victims. Bullying is not always in a physical form (e.g., hitting, kicking, damaging a victim's property), but is also in the form of verbal attacks and relational/social aggression (e.g., social exclusion, fake rumor spreading) up to the most recent forms of attack that occur through the Internet - cyberbullying. Bullying sometimes involves an imbalance of power (Menesini & Salmivalli, 2017).

According to Sadeghi (2019), distance learning also provides flexibility to learn, whereas in the traditional setting students are asked to follow the curriculum. Sadeghi also states that the flexibility of distance learning provides the chance for older students to earn while learning. However, distance learning has its disadvantages despite having so many advantages. Distance learning as an alternative way to traditional learning causes the students to have less social interaction and/or relation. It might also be less effective when it comes to clarification, offering explanations, and interpretations where it usually is much more comfortable in traditional face to face encounters between students and educators (Angelaki & Mavroidis, 2013). On the education side, distance learning does not provide any control of activities like cheating on a test.

Last but not the least, social skills in distance learning might be affected negatively (Subramanian, 2016). According to Sadeghi (2019), during distance learning there are also higher chances of distraction of students. With no one around learners who can help them and remind them about assignments, the chances of getting distracted are higher.

The impact on social skills and social life of students is worrying because the lack of live interaction in distance learning tends to induce antisocial behavior in adolescents. Poor parental discipline and monitoring during distance learning also decrease the chance of adolescents to develop their social skills (Subramanian, 2016).

In addition to the lack of development of communication skills during distance learning, there is also the fact that humans are social creatures which need to interact with others. While distance learning provides a high quality of education, it also could put students, especially adolescents, to loneliness. Loneliness is one of the main factors that can lead to various mental disorders and various physical disorders (Mushtaq et al., 2014).

Being lonely is also one of the social factors that affect the risk of suicide. Suicidal behavior could be prevented in many ways, like being at school and through community-based interventions. An example of prevention of suicidal behavior is The Good Behavior Game, where the trainer teaches the classroom intervention of suicidal behavior and SOS program, which gives students awareness about the relationship between mental disorders and suicide where educators encourage students to seek appropriate help when they are feeling depressed (Turecki & Brent, 2017).

It should be noted that there are various ways to classify types of distance learning. Generally, distance learning can be divided into two types: "synchronous" and "asynchronous". Synchronous distance-learning requires students and educators to be online at the same time to do the learning activity, while asynchronous distance-learning provides more flexibility in learning activity for both students and teachers (Subramanian, 2016).

Even though distance learning specializes in the flexibility of time and place, it is proved to affect the psychology and social life of students negatively. Additionally, the synchronous system of distance learning can be a solution on the lack of interaction between students and their educators. It is also proved that the communication between them affects the quality of students' academic performance.

The asynchronous system of distance learning is one of the biggest factors when it comes to the lack of social interaction. It is because in the asynchronous system, students do not have to be at the same time and place to do the learning activity. To prevent the lack of interaction in asynchronous system, interactivity needs to be increased. In that way, students would feel like they are not alone and this will make the learning activity less boring.

Even though the synchronous system can be an alternative way to fix the lack of interaction, a real-life interaction is still needed, especially for adolescents. A group-based activity can be a solution to improve the social life of students. This group-based activity can be an "ice-breaking" activity where students can interact with other learners. This group-based activity does not need to be focused on education.

According to the results from another study conducted by Mawee, Kwayu & Gharaibeh (2021), which assessed students' perceptions of distance learning, student interaction and collaboration were low during the COVID-19 pandemic. Most of the students felt distance learning disrupted

and diminished interactions and collaboration with their classmates and trainers. From the results, it was observed that most of the students perceived a lack of interaction among students and the trainer as the result of shifting to distance education during the COVID-19 pandemic. The study also assessed student's perception of distance learning instructional methods that were offered. The importance of the trainer in distance learning is growing and should be more intensive to the adaptation to the new learning environments. The educator's availability, communication, and feedback are some factors that impact distance learning (Yengin et al., 2010). Students' ratings showed that the students preferred face-to-face meetings that online meetings with the trainers.

Another interesting subject that was explored in this study was student's perspective of distance learning methods that were provided. The methods of learning that were examined include the synchronous teaching method, the asynchronous teaching method, and the hybrid method. Each method had its pros and cons.

With synchronous learning methods, students learn and interact with trainers and classmates in real time, while during asynchronous learning the trainers provide all the necessary material, and students can read and complete assignments and exams in their own schedule. Students were asked to rate each of the above-mentioned learning methods. They strongly preferred the in-person or hybrid classes over online classes. Moreover, there was a consensus among students that online classes were the preferable choice due to the coronavirus crisis.

According to another recent study conducted by Alsubaie (2022), the COVID-19 pandemic and distance learning have negatively influenced students socially in a number of ways. This study provided insights on online education and the social literacy skills of students during the COVID-19 pandemic via their teachers' perspectives. According to the author, distance education reduced physical interactions between students and teachers, which presented significant challenges in their ability to effectively equip the students with social literacy skills. For instance, distance education caused the absence or reduction of physical interactions between students and their educators. Consequently, educators could not use strategies based on face-to-face interaction, such as cooperative learning, and peer interactions that support the development of social literacy skills (Teo & Divakar, 2021) because the lack of physical contact limited students' interaction, making them less able to handle various social scenarios.

In addition to this, students were not interacting with new people (Grose, 2020). Thus, distance education, given its nature of zero physical interaction, has had a negative impact on social literacy skills, especially for elementary school students (Berker, 2021).

Physical peer interactions are essential to enhancing communication and social literacy skills, but they are absent in distance education. Thus, the self-confidence of most students declined because of distance education during the COVID-19 pandemic, which led to emotional stress and anxiety because face-to-face peer interactions are crucial to developing students' abilities to interact.

The cumulative effects of the COVID-19 pandemic may have exacerbated the impact of distance education on students' social literacy skills because the technostress has affected students' behaviors, feelings, abilities, and practices. In addition to this, some social literacy skills have been negatively affected by online education during the COVID-19 pandemic, such as sharing, respecting the personal space of other people, and maintaining eye contact, as Fitria et al. (2021) indicated in their study.

The study by Mawee, Kwayu & Gharaibeh (2021) also concluded that educators who understand how to use distance learning tools can utilize them to help shape and improve their students' social literacy skills. Thus, digital literacy is a significant issue to consider, and all members of educational institutions should have it.

Hence, to improve the development of social literacy skills among students, educators, parents, and others, education stakeholders have to encourage and support teachers to seek opportunities to expand the scope of distance education platforms in order to incorporate additional educational activities and enhance the development of students' social literacy skills. In this respect, teachers must demonstrate flexibility and creativity in replicating physical class activities online in order to enhance holistic learning. In addition to this, parents and education stakeholders must strive to offer support in operating and acquiring digital learning devices and resources.

In conclusion, distance learning is one of the innovations in education that has advantages as well as disadvantages. Distance learning provides flexibility when considering time and place in the learning activity. However, distance learning diminishes the social interaction between

students and educators and among students themselves. The lack of interaction may cause antisocial behavior from being lonely.

There is no denying that distance learning has already improved many aspects in the educational field. However, to improve the lack of social interaction in students, distance learning needs to fix the current system, especially the asynchronous system. Educators who teach online need to implement more interactive methods to do the learning activity. The synchronous system is one of the solutions that can be used. It is true that the synchronous system decreases the flexibility on distance learning, but the users would feel less lonely.

Another way to improve the lack of social interaction in distance learning is a group-based student activity in real life that could be held at least three times a week. The group-based activity does not need to be focused on education. This group-based activity can be used as an “ice-breaking” activity in distance learning to make students feel less lonely and thus improve their social skills. In that way, distance learning can become better and not make students socially isolated.

## 2. Physical health deterioration

In addition to the social aspects, it should also be taken into account that the distance / online learning environment had a substantial negative impact on the physical health of students from all age groups. Online learning, also known as “e-learning”, is the use of various electronic technologies and media (Tamm, 2020), either synchronous or asynchronous to impart education (Dhull & Sakshi, 2019).

During the closure of various educational institutions (such as schools, universities, colleges, training organizations, and others) in order to prevent the spreading of the coronavirus disease, online teaching and learning became the novel routine that led to significant changes in the lifestyles (including in the participation in physical activities) of young people and not only.

Physical inactivity can be considered as another health pandemic by itself. Before the COVID-19 pandemic, on a global scale, 80% of adolescents (aged 11-17 years) did not meet the World Health Organization's global recommendations on physical activity for healthy living (World Health Organization, 2020), and the tendency was that physical inactivity was not increasing,

in contrast to the time spent on sedentary behavior (especially, in front of electronic devices such as laptops or computers).

Unfortunately, most studies during the COVID-19 pandemic have focused on the mental health alone of the students and discarding other important aspects such as their physical health. Despite the scarce research on the topic, the results from some psychological studies indicate (Chu & Li, 2022) that during the online learning periods there was a substantial reduction in physical activity among students. Specifically, male students showed a greater decrease in vigorous physical activity compared to their female counterparts. These results are quite important, as a strong relationship has been found between exercise frequency and mood regulation during the COVID-19 pandemic, indicating that individuals who exercised more frequently might have had a better mood overall (Brand et al., 2020). In general, physical health in various populations was inevitably affected during lockdown and school closures during the corona crisis.

It is also evident that physical activity and health (including aspects of physical AND mental health) are interrelated. Past research findings have shown that prolonged sitting periods (as in during periods of online learning) or sedentary lifestyles are strongly associated with increased risks for chronic diseases, such as obesity, cardiovascular diseases, hypertension, or diabetes (Biddle et al., 2020). These conditions can coexist with or lead to mental health issues such as depression and anxiety disorders.

As all classroom-based activities were moved entirely online and accessibility to exercise facilities had become impossible during the closures, this may have hindered students from maintaining their physical activity routines and regularly participating in sports (Meiring et al., 2021). Instead, their time spent in physical activity was replaced by sedentary behaviors, since online learning requested a large amount of time using electronic devices. Furthermore, other measures taken during the online learning period simultaneously and significantly reduced their opportunities to engage in daily physical activities, including closure of all places for entertainment and leisure, social distancing measures, and domestic travel restrictions. In addition to this, due to the cancellation of face-to-face classes, the daily walking time of students was greatly reduced (Gallè et al., 2020).



Another study by Idris, Zulkipli, and Abdul-Mumin (2021) assessed the impact of distance / online learning on the physical health of students. They have also found that during this time period there was a limited active participation in sports activities subjecting students to be less physically active with more screen time (more than the recommended of 2 hours daily), and consuming unhealthy diets (eating more junk foods), which may lead to a variety of health issues.

The majority of students reported that they missed eating outside and experienced a lack of extracurricular activities. They also reported more back problems, tension headaches, migraines, and eye strain or dry eyes. According to the American Optometric Association, people who look at their computers and cellphones for long periods have reported eye discomfort and vision problems. Students can have around 7 hours of classes every day to attend, as well as digital assessments and projects to work on, and have no choice but to be on a computer or cellphone longer than recommended. However, the set guidelines for the recommended screen time for learners aged over 13 years is 2-3 hours a day.

In terms of their mental health, students reported more stress, followed by increased anxiety, loneliness and depression as well as sleep and eating disorders. Therefore, the increased need of computers or devices for online learning led to negative physical and mental effects and computer-related stress, most likely to be exacerbated by the prolonged screen time.

It was further hypothesized, that younger people prefer participation in social or group sports, which at that time, had been restricted. The abovementioned findings were consistent with reports that a reduction in physical activity and increase in screen time during the COVID-19 pandemic negatively impacted the physical and mental health of students (Xiang et al., 2020).

What are some other factors that have influenced the physical health of students during the period of distance learning? One important element is poor ergonomics, caused by taking online classes on bed and sofas which are one of the commonest reasons to the recent rise of back pains or fibromyalgia pain (which is defined as chronic, widespread pain throughout the body or at multiple sites) in students. Additionally, the lack of outdoor physical activities can cause obesity which can be further exacerbated by binge eating (i.e., a pattern of disordered eating which consists of episodes of uncontrollable eating) and easy availability of junk food at home.

For younger students losing their muscle mass and adding fat is definitely going to negatively affect their growth. Research has shown that the more physically active a child is during the growing period the better their physical and mental health is for the next 3-4 decades of life (Narayana Health, 2020). By being physically inactive for a long time, children might also find it very difficult to cope with sports when they resume in the future (due to the muscle rigidity which occurs).

Another very recent study by Papageorgiou et al. (2023) assessed the effects of the two-year distance learning on the physical activity and musculoskeletal health of students in Greece. This was a national, cross-sectional study using data collected via an online questionnaire distributed through university communication platforms, which included questions regarding online education routines, musculoskeletal health, physical activity of university students, and other.

According to the research, the percentage of students who didn't do any exercise at all, significantly increased during the period of distance learning. But, on a more positive note, the percentage of students exercising at home or practicing video-assisted training programs was significantly increased during the lockdown.

On the other hand, a significant decrease was observed in gym exercise, team sports, and swimming. Furthermore, a small decrease was observed in students practicing yoga and Pilates. However, no difference was observed in running. The majority of students stated that during the online learning, they reduced the time for exercise.

As regards the physical symptoms, the most common sites of reported pain during distance learning were the neck (nearly 60% of the participants in the study), shoulders (nearly 23%), back (around 30%), and low back (around 67%). The results indicated that musculoskeletal pain significantly increased during the lockdown. Everyday pain was referred by significantly more students during the lockdown, while the percentage of asymptomatic students was significantly decreased.

Interestingly, gender differences were found between male and female students – back pain, and in particular low back pain, and neck pain were more common in female students compared to their male counterparts. Shoulder pain was also more common in female students compared to male students. However, more male students reduced their physical activity during the

lockdown compared to female students, and more female students increased their physical activity during the lockdown compared to male students. Nevertheless, female students remained more vulnerable to the negative impact of distance learning on their physical health. Fortunately, the results from the study conducted by Papageorgiou et al. (2023) suggested that musculoskeletal pain caused by distance education isn't a major concern, because only a small amount of the students believed that their symptoms were severe enough in order to require a consultation from a medical professional. Furthermore, nearly 60% of them stated that the pain was reduced soon after the end of the online learning which supports the notion that the pain was linked to this new and unhealthy lifestyle. Therefore, even for a limited time, the distance / online learning has been able to cause an increase in musculoskeletal pain in students.

Regarding the physical activity itself, the percentage of students who did not exercise significantly increased during the lockdown. Distance learning and total screen time were positively correlated with pain scores. On the contrary, an increased frequency of ergonomic position, walking intervals, and physical activity was associated with significantly decreased pain scores.

Papageorgiou et al. (2023) have also concluded that distance / online learning and limited physical activity led to a significant increase in musculoskeletal pain in students, whilst exercise and ergonomic body position were found to be protective factors. Their main conclusion was that interventions to encourage physical activity and healthy studying habits should be developed by educational institutions, especially since distance learning is likely to occur again in the future, and not only because of unprecedented circumstances like the COVID-19 pandemic.

However, contradictory results have also been reported (Wunsch et al., 2021). Some recent studies conducted in education institutions found that the numbers of physically inactive students increased during the distance learning, and this decreased physical activity was associated with increased sitting time and neck pain. As a matter of fact, physical inactivity was often accompanied by inadequate dietary intake and high alcohol consumption in students, thus leading to a sedentary lifestyle.

On the other hand, in a study conducted by Wickersham et al. (2021) on students studying in the United Kingdom, an increase in the number of steps walked per week was observed from

the beginning of the online learning which was contradictory to previous research results. Moreover, in a Spanish study conducted by Leirós-Rodríguez et al. (2020) found an increase in the frequency of physical activity was identified and associated with a reduction in the prevalence of musculoskeletal pain.

Another quantitative study by Lemana (2022) focused on the physical and mental health of learners doing online learning during the COVID-19 pandemic. The study sought to answer the following questions: What is the overall physical and mental health of the respondents? Is there a significant difference between the physical and mental health of the respondents when grouped according to their characteristics: age; gender; civil status; and year level?

The study acknowledged the interrelation between physical health (anything that concerns the overall condition of the body) and mental health and well-being aspects (including how well a person handles stress, connects with other people and makes important decisions).

The study by Lemana (2022) found both physical and mental health issues in learners who have attended online classes during the COVID-19 pandemic. Factors that have contributed to the negative impact of distance learning on the physical and mental health of students were financial and technical problems, low learner motivation, and tutors' inexperience with online learning. Frustrations with the new learning environment also had a significant impact.

In conclusion, studies that indicate the negative effects of distance learning on the physical health of students, prevail. The abovementioned results imply that students should be targeted for health promotion interventions aimed at maintaining and improving their physical activity and dietary practices. According to the World Health Organization (2021), the COVID-19 pandemic has highlighted the importance of being physically active as an important part of our daily lives.

In addition to this, institutions should implement measures that encourage physical activity, and for the promotion of good health and improvement of the quality of life of students, transitioning after this pandemic and beyond. There is also a need for the development of hybrid teaching approaches in the after-COVID period. A stimulating learning environment comprising of physical and virtual learning spaces would support diverse learning needs and enable the adoption of flexible pedagogies.

### 3. Mental health deterioration

The COVID-19 pandemic has forced the education system to undergo significant changes, and abruptly move from a physical environment to an electronic / online one. While online learning can be quite helpful to keep the education of young people (as well as other age groups) going forward, even in unforeseen circumstances such as this, there are a number of problems identified with it as well.

Distance learning became the dominant form of education during the COVID-19 pandemic, reducing interpersonal contacts, which has negatively affected the mental health and well-being of students from all over the world. In addition to this, the shutdown of classroom learning caused decreased levels of social inclusion and integration, and low satisfaction with school for many young people, especially from disadvantaged / vulnerable groups (such as students with special educational needs - SEN, learning disabilities, and / or pre-existing mental health problems).

According to some recent psychological studies (Grubic et al., 2020), there has been an increased prevalence of depressive symptoms (around 30%) and levels of perceived distress (around 50%) among students during the COVID-19 pandemic. The most significant predictors of depression and high levels of stress were factors related to distance learning:

- Social isolation from friends, classmates and acquaintances;
- Negative impact on the level of knowledge;
- Reduced motivation to study and learn;
- Worsening grades and overall school performance.

Most students in school, college and university were already stressed before online learning started but since then, they are even more stressed due to increased school demands.

Contributing to stress, anxiety and depression among young people, are also other factors such as choosing a boring virtual (online) learning and assessment methods by the educator / teacher, fear of online examinations and feelings of unpreparedness caused by the new situation, and decreased productivity in the learning process. Psychological studies have also indicated that female students experienced extreme depression, distress, anxiety, and fear of examinations much more than their male counterparts (Azmi et al., 2022). Thus, it is asserted that females

are more commonly inclined toward depression and anxiety disorders than males in this virtual learning environment.

Other recent psychological research also suggests that the COVID-19 pandemic itself has caused serious damage to mental well-being (Xing et al., 2020). Young people and not only have lost their sense of security, which has triggered stronger emotional reactions, causing intense negative feelings such as anger, fear, irritability, frustration, increased distress, insomnia, nervousness, anxiety (including health anxiety, formerly known as hypochondria), cyberchondria (health anxiety that is created or worsened by using the Internet to search for medical information) post-traumatic stress disorder (PTSD), and other mental health conditions. Other factors associated with decreased mental health include financial issues in the family, presence of pre-existing disorders, physical or mental health issues, and fear of losing a relative or friend due to the coronavirus.

While the Internet allows students to continue to communicate, socialize, and learn during the COVID-19 pandemic, this also comes with a set of negative consequences. Results from recent studies indicate that spending excessive time online correlates with increased levels of depression, anxiety, and psychological distress (Keles et al., 2020). There has also been a significant decrease in physical activity levels among students as a result of the experienced social isolation, and increased consumption of junk and unhealthy fast foods, which may be another factor that affects mental health in a negative way.

Other negative consequences of distance/online learning among students are increased absenteeism and disengagement from school activities. These can be caused by technology-induced information overload and overstimulation. Internet-connected gadgets such as cell phones, computers, laptops, and tablets expose the human brain to overwhelming amounts of information. And this is one of the reasons why problems such as sleep disorders, and poor attention spans are rising at an alarming rate.

The COVID-19 pandemic worsened these consequences when educational institutions shifted from face-to-face activities to online / distance learning to limit the spread of the coronavirus (Malolos et al., 2021). While all students can be affected by this, those with lower socioeconomic status are at a higher risk due to the inequality they face and financial problems in the family which have been further exasperated by the pandemic and work layoffs. This can

unfortunately result in large mental health disparities among students (Cleofas & Rocha, 2021). Another vulnerable group is students who already have existing mental health problems which can be worsened due to distance learning.

Another interesting negative consequence is the so-called Virtual learning fatigue – defined as feelings of exhaustion after long online classes or video conference calls (for example, on Zoom, Google Meet or other online platforms). As mentioned above, there is information overload during distance learning and facing the screen for a prolonged period of time can be mentally draining. This is also due to the fact that students have far exceeded the recommended daily amount of screen time (2 hours).

It becomes even more challenging for students to learn new information, and even though they just sit in front of the computer and do not do any physical activity, they feel physically tired. Virtual learning fatigue can lead to anxiety and stress for both students and educators / teachers (Testa, 2022).

However, virtual learning fatigue is not the only factor associated with decreased mental health in students – lack of face-to-face interaction and increased social isolation play a much larger role (Curtis, 2020). School is a place where important relationships with peers are built and social skills are learned through repeated daily live communication with others. All people (not only students and educators / teachers) have the need to connect with their friends and socialize. This is particularly important in adolescence, which is a vital period when the personality of the individual is formed. During the teenage years, students tend to spend more time with their peers than with their families.

Students also need a sense of community with their classmates, teachers and friends at school or university. This is not always possible to achieve during distance learning. According to Oliphant and Mueller (2016), the best sense of community in online learning comes from using a combination of both face-to-face and online setting.

However, since this was definitely not the case during the COVID-19 pandemic, students and especially adolescents have been struggling with increased levels of social isolation which had a negative impact on their mental health, physical and psychological well-being. This, as a consequence, could lead to feeling of loneliness and lack of motivation to study and learn new information (Matthews et al., 2014).

As regards the increased levels of anxiety and distress among students, this is also related to the lack of a set and strict schedule in a traditional live classroom setup – with a defined time to wake up, prepare for the school day, go to the educational institution, do homework, communicate with classmates and peers and attend extra-curricular activities. This all “disappeared” with online / distance learning and there was a significant lack of structure in the average day during this abrupt transition.

This change affected the focus of students during the online learning activities as they had trouble separating the home and the learning environment, and became distracted much more easily than before. As a result, residual stress from the school day and procrastination occurred, as well as school / academic burnout which has a well-known negative effect on grades and academic performance in general.

Studies indicate that different factors were predictive of school / academic burnout (Lacombe et al., 2023). At the individual level, perceived stress, low academic performance and somatic symptoms such as lack of energy, fatigue, pain, sleep difficulties, and anxiety predict the onset of school burnout. At the interpersonal level, support from classmates, teachers, and parents are related to a decrease in burnout and summative symptoms and a negative classroom climate predicts student burnout. With regard to factors related to the COVID-19 pandemic, students who indicated that they had returned to their pre-COVID-19 life, had confidence in the future, and received sufficient support to make up for their shortcomings were less likely to suffer burnout than their peers. These three factors were negative predictors of burnout. Conversely, an increase in workload due to COVID-19 was a predictor of burnout.

As regards differences between countries, the situation in some states was even more difficult (as it was in Bulgaria), although at first the students got used to the new circumstances and seemed to adapt very easily. Initially, online learning was very interesting to them as it was a novel situation, but soon they began to feel mentally exhausted (Global Metrics Ltd, 2020). Their mental health was affected due to the increased screen time, and the lack of live interaction with their teachers / educators and classmates. The parents of young students shared that it was not possible for their children to keep up with online learning as they felt physically and mentally drained after attending classes online (through Zoom, Google Meet, or other



online platforms). Students have also found it difficult to build and maintain relationships with their classmates and friends in these challenging circumstances.

In addition to this, the learning process was assessed by students and their parents as much more difficult than before. Students shared that they felt overwhelmed by the increased amount of their homework. During distance / online learning, for example, they received homework for subjects such as music and arts, which is not very typical for face-to-face learning.

Other unforeseen problems can also be detrimental to the mental health of students – such as existing stressors at home, taking care for their younger siblings, Internet connectivity issues, distracting environments during online learning (noises, etc.), lack of privacy, and other issues. These added factors have contributed to the pressure and the already existing health anxiety related to the COVID-19 pandemic (Muñoz, 2021). Contributing to this pressure, were also the larger amount of online classwork, and the wider choice of programs and sites that were used. This emotional stress can also lead to physical problems such as tension headaches, insomnia, muscle tension, stomach and back pains.

Students also found it more difficult to engage in an authentic way with their classmates and educators during distance / online learning. Engagement in this instance is the students' sense of connection to, and involvement in their learning environment that leads to positive results in motivation, academic performance, and attendance. It has different aspects including self-efficacy, and feelings of belonging in their learning environment. These aspects of engagement are linked to the levels of students' mental health and well-being and need to be well examined and understood in order to create a safe and positive online learning environment which provides quality education to all young people (Muñoz, 2021).

Despite the potential for online / distance learning to have a negative impact on students' mental health and well-being, there are still some important benefits that must be considered. For some young people, being close to their family and at home, especially during the COVID-19 pandemic, can bring a sense of safety and connectedness. These students feel that their home is a safe learning environment and become more productive and motivated to study and learn new things.

In addition to this, the online environment “eliminates” some negative social interactions and limits bullying and harassment (although, cyberbullying is still a growing issue in today's

society and new and more effective ways to deal with it need to be implemented). Online learning can be quite helpful when a student is a victim to face-to-face bullying at school. They get the chance to study in a safe home environment and are also more likely to get better grades, and continue their education. Some students view distance learning as a way to cope with their depression, stress levels, and anxiety and for others, it reduces the feelings of peer pressure (Wise, 2020).

However, due to the established negative mental health consequences which were mentioned above, it is very important to assess the mental health and well-being of students, especially in the context of online / distance learning. Students require psychological support and appropriate assistance from specialists on managing their increased stress levels. Their mental health should be monitored even after the end of the COVID-19 pandemic, because the negative psychological consequences can have a lasting influence on many areas of their life.

#### **4. Reduced concentration, motivation and school performance**

Distance / online learning presents a fundamentally different way to communication as well as a different learning framework. This novel educational environment posed numerous challenges for students such as them having more work to do than before, a bigger number of tasks to complete, and larger study loads in the distance learning process (Nenakhova, 2021). This undoubtedly has had a negative impact on the mental health and well-being of trainees with consequences that may last even in the long-term.

Learners also shared that during the period of the COVID-19 pandemic it was hard to keep attention on the computer screen for a long time, therefore distance learning negatively affected their levels of concentration (Bakhov et al., 2021). In addition to this, some students had difficulties in finding a quiet and suitable learning environment at home or anywhere else, where they could follow distance education courses more effectively (Taşkaya, 2021).

The attentiveness and concentration of students during distance learning were definitely a concern as shown by the cited studies above. Most of the learners were highly accustomed to traditional classes and might not have thought about the possibility of virtual classes replacing their regular in-person classes. In addition to this, when the concentration levels were lowered

in the online learning classes, the students' learning rate, motivation and academic performance significantly decreased.

As a response to this issue, Lee, Oh and Shim (2022) devised a framework for recognizing and estimating students' concentration levels (through deep neural network). To implement this framework properly, the researchers recruited participants to take several online classes. They found that although the students participated in the classes, they were not focused enough on the contents of the classes.

Therefore, appropriate measures should be taken to determine and elevate the levels of students' concentration in class. Typically, lecturers have determined students' concentration levels based on their own experiences in online / distance learning. For example, they would make inferences about whether students were concentrating on a lecture or not through various visual cues, such as the focus of students' eyes or their body movements during social interactions. However, according to a study conducted by Koçoglu and Tekdal (2020), when it comes to distance education, teachers currently do not have sufficient resources to supervise and evaluate students.

There have been many attempts to measure the concentration levels of students using various methods, such as taking their skin temperature, recognizing visual attention and students' emotions, and detecting electroencephalogram (EEG) signals. However, these methods often do not work well in online classes because teachers cannot promptly interact with each individual student. In addition to this, these attempts lack detail because their concentration levels are classified as discrete states. As students' concentration levels are simultaneously changing states, this information may help educators.

However, maintaining concentration and attention levels was not the only problem for students during the period of distance learning. The anonymity of virtual-learning systems also led to demotivation and disengagement among some learners (Gedera et al., 2015). When education shifts from in-person classrooms and campuses to virtual ones, as was the case with the COVID-19 pandemic, students who prefer the traditional classroom experience to the virtual classroom may lose interest in online learning (Sharma, 2021). And as it is well known, motivation is an essential component in the process of learning for all learner age groups.

In a recent survey of English teachers which focused specifically on their perceptions of classroom activity during the COVID-19 pandemic, the educators' main concern was insufficient student motivation (Wright, 2021). In whatever environment a classroom activity takes place, the interaction between teachers and students constitutes a critical factor affecting the motivation of learners; it is necessary for their engagement in the learning activities and thus for effectiveness of learning.

The fact is that while some students managed to succeed without putting in any major effort in the distance education environment, others got disengaged and very unmotivated (Ferrer et al., 2020). Motivation is undoubtedly one of the most significant contributors to students' achievement in the learning process.

According to Dörnyei and Ryan (2015), motivation is the initial and most important requirement for tackling a learning activity as well as the engine that drives this process. Motivation, when absent or insufficient, leads to learners' underperformance and academic struggling, even if they possess exceptional skills and talents (some can even become at risk of early school leaving, i.e., dropout). The researchers also argued that motivation is closely linked to engagement, and that to enhance students' participation, motivation must be maintained.

In recent years, several studies have investigated students' motivation in distance learning education environments. For instance, Meşe and Sevilen (2021) examined how students perceived distance education and how it influenced their motivation to learn. The findings indicated that online education negatively affected students' motivation because of the lack of face-to-face interaction, the misalignment of anticipation, and the preexisting curriculum and management problems. Results also indicated that, in the absence of sufficient motivation, learning challenges can sabotage the academic goals of students.

A study by Mak (2021) carried out in India also showed that distance learning had a negative impact on students' motivation to learn. The research investigated what factors were associated with learners' motivation during the COVID-19 pandemic and how parents motivated their children to learn at home.

The results confirmed that students in India were significantly less motivated to learn during (versus than before) the COVID-19 pandemic and revealed that a child's motivation to learn at home was associated with multiple factors, such as: household income, parents' employment

status, the child's academic achievement (previous and current), and the parents' enjoyment in the homeschooling process.

In contrast, the availability and usage of various technological resources bore no relation to a student's motivation. Not surprisingly, children with poorer academic achievement before the COVID-19 pandemic generally had weaker motivation to learn during school closures and distance learning. Despite the importance of motivation, surprisingly little research has directly examined the effect of COVID-19-related closures on children's motivation or how parents motivated their children to learn during the pandemic.

In addition to motivation, academic performance of students also suffered during the period of distance / remote learning. A recent study conducted by Carrion et al. (2023) revealed the negative impact of the COVID-19 pandemic and online / hybrid learning on the academic performance and mental health and well-being of students. A survey was developed to assess how distance learning affected these aspects in the academic life of students. The results indicated that learners who were not accustomed to distance learning or to not having an in-person / live educational experience found it difficult to achieve success in the academic sphere. Although some students (35%) reported having higher grades during the distance learning period, 25% reported having lower grades, while 40% reported no change in their academic performance. Unfortunately, most students believed their workload had increased during the COVID-19 pandemic (75%). An interesting fact was that increased stress and anxiety levels during the distance learning were associated with decreased academic performance overall (i.e., a decline in grades).

Another recent study conducted by Wang et al. (2022) focused on the academic performance of students under the conditions of COVID-19 pandemic, and the role of online learning readiness (which is defined as "students' preparation to learn effectively in an online environment") and emotional competence. Two groups of students participated in this study - 1,316 high school students, who were representing adolescents, and 668 college students, who were representing young adults.

The results showed that, for high school students, both online learning readiness and emotional competence were positively associated with online academic performance during distance learning. However, for college students, only online learning readiness showed a significant



positive relationship with online academic performance during the coronavirus pandemic. These results clearly demonstrated that being ready to study online and having higher emotional competence could make students more resilient toward COVID-19–related challenges and help them learn more effectively online.

This study also highlighted different patterns of associations among cognitive factors, emotional factors, and online academic performance during COVID-19 in adolescence and young adulthood. In short, however, learning effectively online was extremely challenging during the pandemic for all age groups.

In conclusion, all three factors – concentration (as well as attention levels), motivation and academic performance of students were negatively impacted by distance / remote learning during the COVID-19 pandemic. However, more studies are needed to address the role of online learning readiness in students' online academic performance and to determine how to support students in preparing for online learning, especially during situations such as the COVID-19 pandemic. In addition to this, developing students' ability to perceive and regulate their emotions, can help them succeed academically.

## **VI. Negative impact of distance learning on the mental health and well-being of teachers**

### **1. Burnout and stress**

During the COVID-19 pandemic many educational institutions (such as schools, universities, colleges, training / learning centers, and others) transitioned abruptly to online / distance teaching. This circumstance has had a negative impact on learning activities and has been very challenging to the teaching staff, especially those who were not very skilled in using technology in such a context. As a result, stress and burnout levels have risen substantially among educators (Mosleh et al., 2022).

For many years, burnout has been recognized as an occupational hazard for various people-oriented professions, such as human services, education, and health care (Maslach & Leiter, 2016). Within such occupations, the prevailing norms are to be selfless and put others' needs first; to work long hours and do whatever it takes to help a client or patient or student; to go the extra mile and to give one's all.

Burnout is defined as a condition that occurs as a result of chronic stress at work and is characterized by exhaustion, negative attitudes of the person experiencing it, and reduced productivity at work (World Health Organization, 2019). The three key dimensions of this psychological syndrome / response are: an overwhelming exhaustion, feelings of cynicism and detachment from the job, and a sense of ineffectiveness and lack of accomplishment. The exhaustion dimension is also described as “wearing out, loss of energy, depletion, debilitation, and fatigue”. The cynicism dimension was originally called depersonalization (given the nature of human services occupations), but was also described as “negative or inappropriate attitudes, irritability, loss of idealism, and withdrawal”. The inefficacy dimension was originally called reduced personal accomplishment, and was also described as “reduced productivity or capability, low morale, and an inability to cope with demands” (Maslach & Leiter, 2016).

These dimensional factors were all present for educators who were teaching online during the COVID-19 pandemic. The significance of the abovementioned three-dimensional model is that it clearly places the individual stress experience within a social context and involves the person's conception of both self and others.

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In addition to professional burnout, stress levels have also risen among educators during distance teaching in the midst of the COVID-19 pandemic. Stress is the feeling of being overwhelmed and incapable of dealing with internal and external stressors which have affected educators negatively in the psychological sense. It concerns the general experience of negative physical, mental, emotional and relational factors that cause the person and the nervous system to feel overwhelmed.

Physical signs often associated with stress include muscle tension, jaw clenching, fatigue, headaches, restlessness, and general aches and pains. Emotional symptoms include feelings of overwhelm, frequent instances of being emotionally reactive, racing thoughts, forgetfulness and impaired problem-solving. Behavioral signs may include decreased sleep quality, changes in appetite or weight, substance use and sexual difficulties (Phillips, 2022). Unfortunately, if left untreated and unaddressed, stress develops into chronic stress and eventually crosses over into burnout.

The sudden transition to distance learning also raised concerns about the readiness of educational institutions and its staff to teach online (Code et al., 2020). A lot of educators felt increased pressure and stress because their work methods required drastic change which needed to happen as quickly as possible. They also received limited support and resources from their respective institutions, while some (especially older) teachers had additional issues due to their lower skills in teaching in an online environment. All of these factors, led to a significant disruption in the learning process and affected negatively educators' communication and interaction with the students who also experienced stress due to the novel situation.

Increased work overload, lack of digital / technology skills, and a lack of balance between professional and family life were major factors that contributed to increased stress levels for educators during online teaching (Pickup, 2020). Some teachers were not satisfied with the complexities of the distance learning method, and this has had a negative impact on their mental health and emotional well-being.

This negative impact was not limited just to distance teaching but affected all daily life aspects. Social distancing, lockdowns and quarantines were all linked to increased stress and burnout levels as well as having children (especially little ones) at home while working, and a lack of clear distinction between home and work.



The drastic change in the teaching environment during the COVID-19 pandemic put immense psychological pressure on educators which affected both their physical and mental health and well-being. They experienced increased work demands in terms of preparation for online classes which contributed to the rising of their levels of burnout. In some countries, educational institutions transitioned to distance teaching with less than three days of notice to teachers (Mosleh et al., 2022). It is also argued that the abrupt transition to online learning affected the well-being and the quality of teaching, regardless of the presence of preliminary training of staff. However, there are still limited studies on the impact of working from home on the stress and burnout levels of educators.

The limited psychological research that is currently available suggests (Houlden & Veletsianos, 2020) that some educational staff experienced online teaching positively, while others viewed it as more stressful and challenging. Educators who had a positive experience were provided with additional training in advance and efficient technology to support the learning process. On the other hand, teachers who had a negative experience were not able to integrate the new approaches into their teaching.

According to Course Hero (2020), nearly 75% of educators reported significant distress when they switched abruptly to online teaching, and shockingly, almost 40% considered leaving their current work position. For two-thirds of the participants in this study, the stress was caused by their inability to meet the emotional and mental health needs of students which have significantly changed due to the COVID-19 pandemic. Coping mechanisms were also negatively affected, with more than half of the teaching staff reporting frustration with the institutional decisions or from financial concerns. These findings shed light on the need to provide additional mental health care and support to teaching staff in such circumstances.

In some countries such as Bulgaria, the educators also felt overworked and burned out. In the conditions of distance learning they had to check homework daily (often sent in hard-to-read formats such as a photo), send immediate feedback to their students, conduct consultations, participate in operational meetings of the school team and prepare lessons applicable in an online environment for the next school day. Teachers have complained that their working day has significantly increased in these novel conditions. Prolonged work with a computer led to

tension headaches and migraines, discomfort and the need to use somewhat expensive medicinal products for the dry eyes.

In addition to these problems, there was also an increase in stress levels among educators in Bulgaria (Global Metrics Ltd., 2020). Time wasted troubleshooting technical issues, numerous hours spent in front of a computer, longer working days, and increased work pace all contributed significantly to the rise of these levels. Teachers also found it difficult to control the learning process within the framework of online learning - whether students prepared their homework independently or not. There was also no guarantee for teachers that students did not cheat on their assignments in the home environment.

In other countries (including African countries such as Nigeria) more than 60% of the educators had high levels of stress. The main stressors were uncertainty connected with the COVID-19 pandemic, work overload and inadequate working environment. The more stress educators experienced, the more negative psychological symptoms they had. Expectedly, burnout was higher for teachers with higher levels of stress. In addition to this, educators during distance teaching have reported an increase in headaches, fatigue/exhaustion, anxiety, anguish, dizziness, lightheadedness, high blood pressure, nervousness, and sleeping and eating disorders (Idris et al., 2020).

In addition to this, when the work workload is significantly higher than the available resources to meet it, the motivation of teachers to practice their profession drops significantly. When work demands cannot be met, this almost always leads to burnout syndrome and negative consequences for mental health in general.

The educators have also shared that their adaptation to the new working conditions required more time compared to their students, who got used to the new learning environment more quickly (Global Metrics Ltd., 2020). This fact significantly contributed to their distress, although some educators often took advantage of the opportunities of online / distance learning and have successfully integrated new methods and approaches into their work and practice. On a positive note, a substantial part of teachers improved their digital skills in the distance learning environment (more or less because they had to). In the conditions of the online learning, many new and valuable skills and competencies have been acquired, both by teachers and students, which would not have been achieved in a normal environment.



In general, teachers believe that distance / online learning cannot replace fully the personal contact from face-to-face learning. In their opinion, education is not only the transmission of the study material and theoretical information. Important social interaction that contributes to the personal development of students takes place at the educational institution, both with teachers and between classmates. That is why, new approaches or methods need to be found and applied to address this issue with distance learning (for example, emphasis on the project-based learning model).

Contributing to the levels of burnout and stress of teachers is also the fact that the introduction of distance learning made more visible the problem with too much workload of the curriculum with new lessons and the lack of time to consolidate the taught material.

Based on what the psychological studies have shown during the last few years (Pressley, 2021), there was no shortage of stressors for educators who taught online during the COVID-19 pandemic. The limited research available on the impact of distance teaching on teachers, shows which stressors contribute to professional burnout and need to be addressed by the educational institutions. These areas include COVID-19-related health anxiety, anxiety about work demands, anxiety about communication with parents, and lack of administrative support.

It is important to mention that there was no difference in the levels of teachers' burnout and stress based on characteristics such as ethnic origin, location, and years of teaching experience. To address the educators' burnout and stress, educational institutions need to monitor teachers during online teaching and after to evaluate the negative consequences, their lasting impact, and provide additional support if it is necessary.

Evidently, teachers were faced with new demands and exhibited high levels of stress with the new requirements. This is understandable as educators needed additional support during these unprecedented times (such as instructional, digital / technological and / or psychological support). Educational institutions should provide clear communication and protocols to help teachers feel safe during such events if they ever occur again. As regards anxiety, telehealth options could be given to address levels of stress and burnout (Shen, 2015). Also, a mental health day would be useful to support the self-care needed during such times.

In addition to this, teachers often unfairly received criticisms from parents regarding the decisions made by the educational institution. Educators need better support for communication with parents in such circumstances, if they ever happen again in a similar situation.

Last of all, teachers should receive adequate support and guidance to help reduce their anxiety around online teaching which still occurs as a supplementary form of teaching and is very likely to be used in the future. These protective measures can increase the feelings of self-efficacy and job satisfaction of teachers in the long term (Ferguson et al., 2012).

In conclusion, more psychological research should be conducted to explore the impact of distance teaching on teachers and the negative consequences including stress and professional burnout. These studies could be particularly useful for developing new methods and tools for educators who continue teaching online, or in the case of emergency situations.

## 2. Social isolation

Following the categorization by the World Health Organization of COVID-19 as a pandemic (in February, 2020), public health experts and authorities recommended social isolation as a measure to mitigate the spread of the coronavirus. People of all age groups, including students and teaching staff at educational institutions in the majority of countries, were asked to avoid physical social contact and participation in group and community activities, family gatherings and public events.

With very few exceptions, self-isolation was suddenly required, particularly of people who were returning from more severely affected by the virus regions, as well as for elderly people and those with underlying health conditions. While self-isolation has been considered as an act of individual responsibility, some countries introduced and enforced regulations to restrict movement outside the home and to require the usage of face masks to protect against the coronavirus (Filho et al., 2021).

It is a well-known fact by all that humans are a social species: it is in their nature to interact and form various types of relationships with other people. Social isolation has been understood both as an objective phenomenon experienced by individuals, such as that characterized by a “lack of social interaction” (Hämmig, 2019), “the actual lack of social ties”, and “social disconnectedness”.

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It is also understood as a subjective experience by individuals, such as a “lack of engagement with others”, “loneliness” (Cacioppo & Cacioppo, 2014) or “the perceived discrepancy between actual and desired social relationships”. The widespread mandated household confinement and mobility restrictions created objectively real physical isolation, immediately and severely reducing direct social interaction and contact with anyone outside the household. At the same time, these conditions created circumstances in which individuals subjectively experienced social isolation.

Evidence gathered from social science and public health studies suggest that social interaction and relationships are important for mental health and well-being throughout the lifespan (including for teachers / trainees). For example, Hartup and Stevens (1999) concluded that friendships can foster a sense of well-being and higher self-esteem.

On the other hand, Umberson and Montez (2010) have also concluded that over the lifespan, social relations do influence physical and mental health and by extension, social isolation contributes to the feelings of anxiety and depression. Correlations have also been found between the perceived lack of social connections and feelings of loneliness, with higher rates of morbidity and mortality.

Similarly, strong correlations have been demonstrated between social relationships and physical health, such that more socially connected individuals have been found to be healthier and to live longer than their more isolated peers. In addition to this, there was a link between being socially engaged and the experience of stress, although this link is complex; stress might be both a cause and effect of social isolation.

A recent study conducted by Filho et al. (2022) aimed to identify the impact of the COVID-19 lockdown and the period of distance / remote learning on the working conditions and on the social isolation imposed on academic staff and students. A substantial majority of educators (70%) felt that the lockdown and distance learning has adversely affected their work and performance. The respondents stated that the main personal challenges due to the mandated social isolation were: a lack of personal interactions with colleagues and staff (72%), a lack of motivation, including for professional development (57%), heightened anxiety and stress levels, which were closely followed by boredom and feelings of loneliness.

Another relevant study conducted by Parte & Herrador-Alcaide (2021) examined feelings of social isolation, and sense of belonging in a sample of tutors before and after the COVID-19 disruption. It is a well-known fact that teaching is generally a stressful profession in all education modalities. Distance education however, is an interesting case due to its vast differences from traditional education. E-learning is characterized by an asynchronous learning environment, rapid technology changes, time management, perceptions of social isolation, and multicultural factors and complexities, among others.

Another stressor variable in the e-learning modality is the isolation perception of academic staff. Isolation is associated with a perception of loneliness that members experience during the learning-teaching process. In the teachers' collective, isolation was linked to an absence of communication between peers and an absence of support by peers, which essentially engage in a sense of not being part of a community, and can cause cognitive distortions and mental health problems (Ortega-Jiménez et al., 2021). In addition to this, the sense of belonging to the academic community and professional identity have also attracted the attention of researchers. The abovementioned study conducted by Parte & Herrador-Alcaide (2021) studied educators' isolation using two main approaches. The first approach referred to the conditions in which teachers work and interact with their colleagues, and the second approach was related to the personal psychological status rather than to work conditions. This research responded to recent calls in the literature and the ongoing growth of online education around the world. Several reasons motivated the carrying out of the study: (1) the importance of teacher stress and isolation not only for the education context but also for the whole society, and (2) the calls for more research about the effects of the COVID-19 pandemic and distance learning on society, including emotional, mental, physical, and psychological problems.

Traditionally, it is thought that educator isolation is high in the online learning modality due to the lack of social interaction and the lack of physical presence. Although online education has strong frameworks that allow cognitive, teaching, and social interaction, the introduction of ICT can lead to "unequal loneliness" (Ahn, 2020). Indeed, loneliness is associated with both psychological and sociological problems.

The new social isolation caused by the COVID-19 lockdown resulted in the closures of schools, colleges and universities worldwide. It was examined how well teachers have coped with this

unexpected situation. Most of them have found a significant increase in their stress levels, emotional problems, anxiety levels, and symptoms of negative effects on their mental health and well-being, among others.

The results of the study conducted by Parte & Herrador-Alcaide (2021) provided relevant information to expand the literature in the field of health and teaching professionalization. The findings suggested that social isolation, and sense of belonging were worse for educators who were teaching out of their family location, as well as for part-time educators. So therefore, this problem needs to be considered further in order to minimize, prevent and deal with decreased levels of teachers' mental health and well-being.

Taking into account the abovementioned results, it must be noted that social isolation and loneliness can affect both mental and physical well-being of teachers. In fact, the risk to health that loneliness and social isolation can bring is greater than those associated with many factors such as obesity, lack of exercise and air pollution.

Some mental health symptoms that occur as a result from loneliness include: anxiety, depression, poor quality sleep and increased stress. Loneliness can also have serious physical health implications like:

- high blood pressure and high cholesterol;
- poor nutrition;
- increased stress hormones and inflammation in the body;
- digestive problems;
- heart disease;
- weight gain;
- deficits in self-care and motivation, exercise and personal hygiene.

Caring for teachers' and academic staff mental health is crucial if we want our education system to thrive. The COVID-19 pandemic added to existing pressures, and teachers had to learn how to manage classrooms digitally without any training or forewarning.

In conclusion, the consequences of feelings of isolation among educators during distance / online learning can be substantial, unless actions and measures are taken to prevent and deal with them effectively. Better trained teachers will be able to deal with emergency situations, such as the COVID-19 pandemic, but will also be able to mitigate loneliness and other stress

factors such as a lack of support and socialization. Aside from the COVID-19 pandemic, how the faculty deals with the new education context, where digitalization and innovation play a fundamental role, is a challenge for future interventions looking to contribute to teaching quality and implications for the mental health and well-being of educators.

### 3. Ineffective communication

Communication especially in the education sector needs to be studied as communication between educators and students has the ability to improve the learning experience for trainees and to create a positive learning environment. Communication is simply defined as the transfer of information from one person to another, or group to another. The word “communication” was derived from the Latin “communis,” meaning “common.” Therefore, “communicating” means “making common,” “making known” or “sharing” and involves verbal, non-verbal and electronic means of human interaction (Velentzas & Borni, 2014). The definition underlines the fact that no communication occurs unless a shared understanding emerges from the exchange of information.

Effective communication is the process of exchanging ideas, thoughts, knowledge and information in such a way as to fulfill the purpose or intent in the best possible way (Alawamleh et al., 2020). In other terms, it is nothing more than the sender’s expression of views in a way that the recipient understands best.

Furthermore, the communication process also draws from many interpersonal skills. They include talking, listening, watching, analyzing, interpretation and evaluation. Message recipients must be able to identify the intent of the sender, take into account the context of the message, resolve any misunderstandings, decode the information accurately and decide how to act upon it. Such skills are essential for learning, building healthy relationships, building a sense of community and gaining success (Velentzas & Borni, 2014).

The objective of online communication is the same as that of face-to-face communication: bonding (connecting), exchanging information, being heard and being understood. Fostering a sense of community in online classes can make the students’ learning experience more meaningful and it can help them stay connected. When educators communicate with their



students, whether in a face-to-face class or an online class, they communicate for the purpose of offering knowledge or having information to gain understanding and develop relationships. Communicating in an online environment requires a little more thought and planning on the part of educators than communicating with students in the traditional environment because the online environment lacks body language. Trainers have the advantage of using body language and facial expression in a face-to-face class to help them connect and get their message across to their students. When interacting in an online class, educators do not have the advantage of using body language to help their students communicate. Knowledge of communication weaknesses within online environments can help them decide how to establish timely and appropriate communications, and how to interact effectively with their online students.

A study by Alawamleh et al. (2020) aimed to explore whether online / distance learning had an effect on communication between educators and students in a negative way, and if it reduces its effectiveness. As well as, to evaluate and suggest ways of improving communication between educators and students during online courses. Since this shift to online learning is very new to most educators, there is a great interest in this topic along the way of experiencing this change.

This study aimed to answer the following research questions: 1) Does online learning have a negative impact on communication between educators and students? and 2) How communication between educators and students in educational institutions can be improved?

According to the authors of the study, effective communication occurs when a desired effect is the result of intentional or unintentional exchange of information, which is communicated by different individuals and performed in a desired manner. This influence also ensures no distortion of the message during the contact process. Effective communication achieves the desired effect and upholds the effect, with the potential to improve the message's effect. Therefore, effective communication serves the purpose it was intended or built for. Possible objectives may be to make change, to encourage action, to create awareness, to educate or to convey some idea or perspective. Good communication also means talking and listening (Velentzas and Borni, 2014).

To succeed in their career, educators need outstanding communication skills. Trainers need listening, interpersonal, written and oral communication skills to promote comprehension of

the teaching results and the ability to effectively fulfill their responsibilities. Developing effective communication skills is an essential part of the ability for educators to succeed. Developing these skills not only increases the potential of the instructors but will also improve the quality of the teachers created.

Advanced communication skills are important in all aspects of the teaching cycle. Trainers must have highly developed oral and writing skills to interact effectively with supervisors, learners and collaborators. To increase communication effectiveness, schools need to gain knowledge of the value of the responsibilities of the sender and receiver and adhere to the active listening skills (Lunenburg, 2010).

Currently, the topic of communication skills development is very commonly researched. A teacher in a society is a highly respected individual, and teaching is considered the most important and distinctive profession. How effective instructors are is very much linked to how they communicate. They express ideas, information and expectations in a number of ways: by speaking, by gestures and other body language, and by written words (Duta et al., 2015).

Educators need to be mindful of how they interact because communicating effectively will help them have a presence in the classroom that motivates students and encourages learning; they might send unintended messages if they do not know things about their own body language; new technologies provide new opportunities to connect with students (Duta et al., 2015). Trainers with strong communication skills can thus create a more positive learning and teaching atmosphere for the students. For teachers, it is very important to guide students in their learning process.

However, online learning during the COVID-19 pandemic has had a somewhat negative impact on communication between teachers and students. The above-mentioned study by Alawamleh et al. (2020) found that some students were satisfied with taking their courses online, however, the majority still preferred taking their classes in a classroom instead. Half of the students also explained that their understanding of the material being taught online has gotten worse due to communication issues.

Second, the majority of students agreed that online learning had a negative impact on communication between educators and trainees and that interacting with their teachers have

become harder as well. Students reported feeling disconnected with their instructors, the course content, and their fellow classmates.

To summarize, the study aimed to explore whether online learning has an effect on communication between educators and students in a negative way. As well as, to evaluate and suggest ways of improving effective communication between educators and students in online courses. The data was collected by using an online survey. This study found that online learning indeed has a negative impact on communication between educators and students and its effectiveness.

In online learning, it is necessary to build opportunities for interactions and communication between students and their teachers. Asking questions is a way of moving deeper into the subject and going deeper makes the subject more comprehensible. It is recommended and encouraged that instructors try their best to keep in touch with their students through online office hours, as well as reach out to each student in their class individually if there is a sudden decrease in performance.

It is best if educators communicate with their students and vice versa in a more informal way like through WhatsApp, Messenger, private video call meetings, etc. They should also encourage students to participate and study more by providing incentives, at the end of the day every student wants to gain good grades and without the motivation for it is hard to achieve, this can be fulfilled by giving extra marks through short quizzes.

Another study by Salarvand, Mousavi and Rahimi (2023) also found that educators experienced challenges in communication and cooperation in online classrooms during the pandemic. In-depth and semi-structured interviews were conducted to collect data. The results of the study identified two experiences - lack of socialization and communication-related concerns. Teachers experienced challenges in their class activities, leading to a decrease in trust, a lack of motivation to learn from students, and decreased quality of teaching.

The study aimed to explain the experiences of educators and students regarding the challenges of communication and cooperation in the classroom during the COVID-19 pandemic and distance learning. Overall, the results showed that the problems caused by virtual education outweighed its benefits. Issues like lack of participation and communication, problems of class management, incomplete infrastructure and insufficient training of educators due to the speed

of transition to virtual education, lack of motivation of educators and students, lack of innovation, and incorrect assessment were among the biggest problems.

In the study by Salarvand, Mousavi and Rahimi (2023), the participants reported failure in educational feedback, including one-way communication/lack of two-way communication, and a lack of interaction with students. The participants also pointed out infrastructural barriers to establishment of optimal communication in the online classroom, including slow internet speed, lack of appropriate facilities, and lack of a support center. It also appeared that virtual communication led to misunderstandings between the educators and learners.

In conclusion, online learning during the pandemic caused communication challenges and ineffective communication between students and educators. Lack of attendance in the classroom and face-to-face interactions also led to a lack of effective feedback on learning. The communication barriers were caused by the lack of sufficient knowledge of educators and students about each other, which led to a decrease in trust, lack of motivation to learn in students, and a lack of motivation to teach in educators.

#### **4. Time management issues**

The COVID-19 pandemic and the long-distance learning period have undoubtedly caused numerous personal and professional issues for educators as well as their students. While the severity of these issues tends to vary, one particular aspect that has been especially challenging for educators during the period of online teaching is time management.

How is time management defined? Felton (2009) describes time management as “the process of planning and exercising conscious control of time spent on specific activities, especially to increase effectiveness, efficiency or productivity”. Furthermore, Cottrell (2013) defines time management as “a juggling act of various demands of study, social life, employment, family, and personal interests and commitments with the finiteness of time”. It is an important skill for educators to have because it ensures the academic success of their students. In addition to this, keeping a healthy work–life balance is one of necessities to efficiently and effectively manage the limited resources and available time of educators.

Recent psychological research has found that time management has a direct influence on the efficiency and effectiveness of educators at work and on the learning outcomes of their students

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(Lipawen & Guzman, 2022). If the time management aspect is not taken into a serious consideration during the period of distance learning, its negative impact on learning outcomes is inevitable. In theory, by applying effective time management practices and strategies, teachers can increase their productivity and provide a better education for their students, despite the unprecedented circumstances which were posed by the COVID-19 pandemic.

In reality, educators were forced to adjust their schedules very quickly due to the negative consequences of the coronavirus (this included school and university closures, employment issues, and even the coronavirus itself). These abrupt changes created major challenges for educators, particularly those converting traditional daytime face-to-face courses into online and hybrid formats (Heath & Shine, 2021). In addition to this, they often struggled with balancing work and family responsibilities.

So, what exactly were the time management problems of educators during the period of distance learning? Besides doing their regular duties, teachers were handling more tasks than ever. They managed online learning platforms, communicated constantly with both parents and students, and strived to create engaging content for their learners. As a result, they were left with little time to take care for themselves. Here are some common problems that teachers faced while doing their day-to-day activities during the period of distance teaching (Akter, 2021):

- Limited time for planning: Educators often got little time left for planning. This resulted in rushed lesson planning and ineffective instructional materials.
- Numerous administrative tasks: Teachers completed various administrative tasks such as grading papers, record keeping, communicating with the parents of students, and other. These tasks took up a significant time of their day.
- Interruptions and distractions: the occurrence of unexpected events such as behavioral problems of students, meetings with the parents, and technology failures often interrupted and distracted educators from properly performing their duties.
- Poor classroom management: When teachers failed to manage the online classroom correctly for various reasons, this resulted in disturbances for instruction and a waste of time which impacted negatively both educators and students.

- Lack of support: Some teachers failed to get appropriate help and support from the school authorities and colleagues, and found managing their workload and time during the COVID-19 pandemic, much more challenging.
- Poor work-life balance: During the period of distance teaching educators struggled to balance their personal and professional lives because of the increased workload, family responsibilities, and other personal and professional commitments. As a consequence of these, teachers often suffered from burnout and frustration. This also resulted in poor outcomes at work.

Why is it important to deal with the abovementioned factors effectively? What is the importance of time management for teachers in the context of distance / online teaching? Because time is a finite resource, educators must know how to manage time well because it substantially impacts their efficiency at work. By managing time correctly, they can balance their classroom responsibilities and personal lives. Here are a few of the numerous benefits of time management for educators (Akter, 2021):

- Increasing time spend for teaching: By effectively managing their time, a teacher can utilize instructional time correctly. Instead of wasting time dealing with disruptions and unnecessary materials, he / she can spend more time teaching and ensuring that the learning objectives have been met by students. By properly planning time, a teacher can use the time for student engagement and collaboration and cover more materials.
- Improving work-life balance: Sometimes, teaching becomes a stressful and demanding job. A lot of educators have suffered from burnout and frustration even before the COVID-19 pandemic. Effective time management can help teachers avoid feeling overwhelmed and reduce their levels of stress. They can find a balance between personal and professional life and experience significant improvement in their overall mental health and well-being.
- Increasing productivity: With effective time management, teachers know the importance of prioritizing tasks and using their time efficiently. It helps them manage their workload, complete essential tasks first and get things done quickly. Their overall performance improves, and productivity increases.

- Enhancing professional development: Effective time management allows teachers to pursue other professional development opportunities. They can manage time to attend training workshops, conferences, and other professional development activities. Therefore, they can improve their teaching skills and competencies and remain updated with the latest educational trends.
- Gaining job satisfaction: Effective time management empowers teachers to accomplish more and improves their professional performance and the lives of their students. They begin to feel much more confident, skilled and organized. These feelings lead to a greater job satisfaction among educators.

In essence, effective time management makes educators more efficient and improves student outcomes.

However, time management of teachers has undoubtedly been negatively impacted during the period of distance / online teaching. A study by Ünal and Dulay (2022) explored the time management and work-life balance of educators during remote teaching in the context of the COVID-19 pandemic. The results from the research indicated that educators, who needed to work from home, did not maintain a healthy balance between their personal life and their work life because of challenges such as: inadequacy of workspace, irregularity of working hours, lack of support by the educational institutions, and role conflicts. As a consequence, they failed to achieve the desired outcomes at work and in their individual lives which adversely affected their overall mental health and well-being.

As regards the aspect of time management, the problems of teachers were related mainly to the irregularity of the working hours, significant lack of resting time, not being able to allocate time for themselves and their respective family members, and being available all the time for communication with students and their parents. The participants in the study by Ünal and Dulay (2022) reported that the resting time was not enough during distance learning, and emphasized that they had to spend their time developing the teaching and learning materials, making the house suitable for the online classes, or meeting their own personal needs. So therefore, educators never found an opportunity to rest adequately and felt exhausted.

The participants in the research also emphasized that they did not spend enough time with their respective family members because of the irregularity of working hours and the overflow of

work-life into family life (i.e., blurring of the boundaries between work and family life). They stated that their workloads had increased due to the excessive work demands of the online teaching methods, which greatly consumed their personal time, thus, they were not able to manage their time in the most efficient way to ensure the positive academic outcomes of their students.

Working from home during the COVID-19 pandemic also led educators to “be constantly accessible” due to the working hours which had become uncertain and flexible. The participants in the study stated that they could limit their working hours when they were working at a school, but that they were always reachable while working from home which severely impacted their time management. They also reported that parents or the school administration could call them any day or time of the week.

A recent psychological study by Crompton, Chigona, and Burke (2023) has also found that educators who taught online during the COVID-19 pandemic experienced major challenges such as: time management issues, social isolation, anxiety, issues with meeting student needs and engaging them sufficiently, technology issues and other problems. These findings were supported by Reyes (2023) who examined the lived experiences of pre-service English teachers in online teaching internship during the COVID-19 pandemic. Among the challenges that the educators encountered were time management, technological issues, and students’ concerns.

The participants in Reyes (2023)’study disclosed that they found it difficult to manage their time in their teaching practicum because of their multiple duties as students and pre-service teachers, and their other personal responsibilities. They shared that they are not only a student-teacher; they had personal responsibilities as well, and sometimes multitasking was not enough. Due to the COVID-19 pandemic, they were unable to achieve what they want in terms of professional outcomes. Trying to balance work and their other personal obligations, made it difficult for them to perform their duties in the most efficient way. Fortunately, the majority of participants stated that they had managed to complete their tasks on time despite the obstacles by implementing planning strategies.

Nevertheless, the results from the above-mentioned studies show that a significant number of teachers struggled to manage their time effectively during the period of distance teaching. Thus,



more effective and specific techniques to facilitate the time management skills of educators who continue to teach online in the future should be implemented.

## **5. Deterioration of self-esteem, motivation and working capacity**

During the COVID-19 pandemic educators suddenly had to adapt to teaching online using digital tools, including specific online platforms, in order to reach out to the students – such as Zoom, Cisco Webex, Google Classroom, Google Meet, Microsoft Teams, D2L, and Edgenuity and others (Cataudella et al., 2021). Both students and teachers lacked face-to-face communication, and parents began to be more involved in the lessons of their children at home, whilst also struggling with their own work responsibilities.

Although some teachers / educators believed that they were adequately prepared, a substantial part of them had to adapt to the novel situation without receiving sufficient support and adequate training from their educational institution, and without acquiring the necessary digital and technology skills. This abrupt transition to distance teaching and the lack of preparedness expectedly led to self-esteem issues in teachers.

However, it should be noted that the teaching profession has experienced other crises and challenges throughout history. It is one of the most stressful jobs due to bureaucracy, excessive workload, lack of discipline in some more difficult students, professional instability, lack of motivation in teachers, and the growing demand for digital skills (Skaalvik & Skaalvik, 2015). The COVID-19 pandemic has definitely shed light on the need of teachers to become more skilled in using newer and more effective technologies. Senior educators were the group that found it most difficult to acquire these new competencies.

The sociologist Rosenberg (1979) who developed the Rosenberg self-esteem scale (RSES) which is still extensively used in cross-cultural studies in different nations, defines self-esteem as “individuals’ positive and negative self-perception”. It is described as an individual’s view of themselves as competent and important, as successful and valuable. Psychological research has shown that levels of self-esteem and levels of job satisfaction are interrelated (Bono & Judge, 2003). Mbuva (2019) who explored teachers’ self-esteem and its effects on teaching, students’ learning and self-esteem, stated that “Educators’ self-esteem is very important for

their success in teaching and that it also affects students' self-esteem as regards studying and learning".

More recent psychological research suggests that there should be a stronger focus on self-esteem and self-efficacy (i.e., one's belief in one's ability to succeed in specific situations or accomplish a task) in instructional strategies and instruments designed for teachers as they may perceive their difficulties in distance teaching as a personal flaw in their character. Furthermore, the data on self-esteem and self-efficacy of educators showed a negative tendency after the sudden introduction of online teaching, as well as a failure to develop effective coping responses and an inability to find possible solutions to frustrating tasks (Alves et al., 2020).

As regards senior educators, they found the distance teaching environment much more damaging to their self-esteem, especially if they had not received adequate training and preparation beforehand in their respective educational institutions. This specific group might need to reevaluate what they have learned throughout their entire career which poses a serious professional challenge that is not typical for less experienced educators. However, teachers who managed to successfully involve students in the online learning process, both emotionally and cognitively, had an increase in their self-esteem and self-efficacy levels.

Recent psychology research also shows that distance teaching had a significant negative impact on the motivation levels of educators. Female teachers, teachers working with students of lower socioeconomic status (SES), in public schools, and primary and secondary teachers were the most affected groups (Panadero et al., 2022).

It is well known that educators not only need to have substantial content knowledge on the subject(s) that they are teaching, but they also need to feel motivated enough to work with students in order to be effective and achieve good results in their profession. Many psychological studies have focused specifically on the well-being of teachers, and their motivation levels because those are some of the most important factors in the academic success of their students.

During the COVID-19 pandemic, it was found that the sudden introduction of online teaching has significantly altered how teachers and students communicate with each other (Tejedor et al., 2021). Because most of the educators did not receive adequate preparation, support and training beforehand, these abrupt changes caused high levels of demotivation (lack of interest

in and enthusiasm in their work) among them, which had a negative impact on the online learning experience of students.

According to Sutton and Wheatley (2003), the emotions of teachers have a direct influence on their levels of motivation. Studies on motivation focus on three main motivation theories: expectancy-value, achievement goal, and self-determination.

The expectancy-value theory (EVT) is a motivational theory used to study how an individual believes they will perform on a specific task and why they think it is worth it to do so (Wigfield & Eccles, 2000). This theory addresses motivation and achievement of goals within a specific domain. EVT was developed by Atkinson in 1964 and was further developed and used in educational psychology by Eccles and Wigfield. According to the theory, motivation is at its highest level when the person feels there is a challenge, but also feels that the goal is attainable. EVT measures motivation based on the expectancy beliefs and value beliefs of the individual about a specific task.

Expectancy beliefs are defined as “the extent to which a person feels that they can succeed in the task, including their own beliefs and abilities”. On the other hand, value beliefs are based on the level of importance the individual places on completing the specific task. The value that a person attributes to a task includes their enjoyment of performing it, the usefulness of the task, and the necessity they feel to complete it in order to achieve their goal. In contrast with the abovementioned beliefs, cost beliefs involve the negative factors that influence both value and expectancy. Cost beliefs can include effort and time required to fulfill the task, the effort needed for other activities, and / or social consequences of successfully completing the task or not.

The second main motivation theory is the achievement goal theory (AGT), which explains why some people perform better than others in different situations. According to AGT, a person’s performance in achievement-related activities fluctuates in their participation level directed towards ego or task goals. Therefore, the individual can be more or less ego and task involved at different periods during their task completion. Bruner et al. (2020) indicate that AGT is based on the idea that variations in people’s judgment of their ability and definition of successful accomplishments are important for understanding the motivational process. Also, according to AGT, the perceived motivational climate influences the process of setting and pursuing goals regardless of whether the person is task or ego-oriented.

At an intrapersonal level, AGT proposes that people develop a higher likelihood overtime to regard ability as ego or task-oriented within a particular achievement context. According to Bruner et al. (2020), considerable evidence supports the belief that high levels of task orientation lead to positive behavioral, cognitive, and affective outcomes at the individual level. On the contrary, neutral or less optimal results, especially in the low perception of competence, are evident when one is more inclined towards the ego. However, this motivational theory largely applies to the field of sports.

The main problem is that the motivation of educators to teach cannot be explained fully based on the same models as students' motivation to learn, as the context of learning and the context of teaching are very different (Fives & Buehl, 2016).

Of the three motivation models, only the self-determination model can be applied to teachers' work. Deci and Ryan (1985) developed the self-determination theory (SDT) which posits that an internal feeling or perception of volition motivates individuals over their actions.

For example, within a live school setting a motivated teacher may perceive a higher level of control over what can be taught in their classroom. Individual motivation (also known as self-determination) is categorized into three main concepts: intrinsic, extrinsic and amotivation. Intrinsic forms of motivation are engaged in for internal reasons, such as enjoyment, pleasure or for the feeling of personal satisfaction (Ryan & Deci, 2000).

Extrinsic motivations are influenced by external factors, such as earning a prize or feeling pressure to complete a task. Finally, amotivation is viewed as a lack of motivation or desire as in people who do not engage in behavior no matter how many external prompts are provided. The three forms of motivation could be placed on a continuum with extrinsic motivation placed between intrinsic and amotivation. In addition, the closer a person is toward the intrinsic end of the spectrum the more self-determined they are.

In the practical context, motivation is also known to influence the type of instructional strategies teachers use (Fives & Buehl, 2016). It is important to examine the factors having an impact on the motivation of teachers – such as the sense of belonging to the school community, relationships with their students and other factors.

During the pandemic of COVID-19, online teaching has also affected teachers' motivation due to the additional work pressures. According to Kulikowski et al. (2021) work characteristics

such as task identity, task significance, autonomy, and social dimensions could decrease as a result of the distance teaching which has quite a negative impact on teachers' motivation and the levels of their job performance.

In addition to this, Khanal et al. (2021) found that some educators were intrinsically and extrinsically demotivated due to the heavier workload and the increased lack of discipline of some students in the novel learning environment. During the period of distance teaching, teachers' extrinsic motivation increased stress and professional burnout levels while intrinsic motivation seemed to decrease them.

From the abovementioned research, it can also be concluded that teachers' motivation was lower, due to them worrying about their students' well-being and needs, the new learning environment itself, and how it was affecting students and their parents. Female teachers were found to be less motivated, as well as teachers who worked with students with lower socioeconomic status (SES) or with other disadvantaged groups. As regards gender differences, higher levels of stress could be linked to childcare responsibilities and domestic labor that often fall on women, and them having to balance different tasks whilst at the same time working at home.

Moreover, the motivation of educators was much lower during distance teaching than before the COVID-19 pandemic (Kulikowski et al., 2021). Some motivational factors were lacking during online teaching such as face-to-face interaction and live communication with the students (Moorhouse & Kohnke, 2021). In conclusion, it is very important to examine the motivational levels of educators, explore the main factors influencing their motivation, and what coping strategies they usually apply to adapt better to this new and challenging environment.

As regards the educators' work capacity during distance teaching - although technology is widely used in the daily life of many people – it has rarely been applied in education and in the face-to-face classroom historically, which posed a problem in the conditions of the COVID-19 pandemic (Nguyen & Pham, 2020). Online learning is important not only in the context of a global crisis and emergency, but also in the long term in the increasingly more digital world that we live in.

During the COVID-19 pandemic, many countries had to review their online teaching capacity, IT infrastructure, national policies, and legal frameworks for distance teaching. During such abrupt transitions in the learning environment, the training of teachers on how to work more effectively is absolutely necessary. A key element to ensuring the good job performance of educators is to build their capacity in this area (Burns & Gottschalk, 2019).

Building capacity in online teaching for educators is also important because they play a significant role in supporting the integration of students into the novel learning environment. It is necessary for teachers to have adequate knowledge and training, an ability to adapt to change and be flexible, and to apply the digital tools that are needed. Educators need to increase their competencies in the use of online communication tools and virtual learning environments. This requires acquiring ICT skills to address any technical challenges that may occur during online teaching.

For example, in countries such as Bulgaria, teachers in villages have lower information communication technology skills and a more limited experience of using digital technologies in their practice with students. While every second teacher in the larger cities has more than five years of experience in using ICT in their work with students, this share among teachers working in schools in rural areas is only about 37.5%. Every third teacher in the villages has started working with computers and the Internet in their classes only in the last few school years (Hristova et al., 2021)

In addition to digital skills, teachers need to learn and implement different methods and strategies applicable to the new learning environment. The ability to engage students during distance teaching requires a specific approach which is beyond the ICT skills that the educator possesses (Mallinson & Krull, 2013). What works in face-to-face teaching may not be effective in an online learning environment.

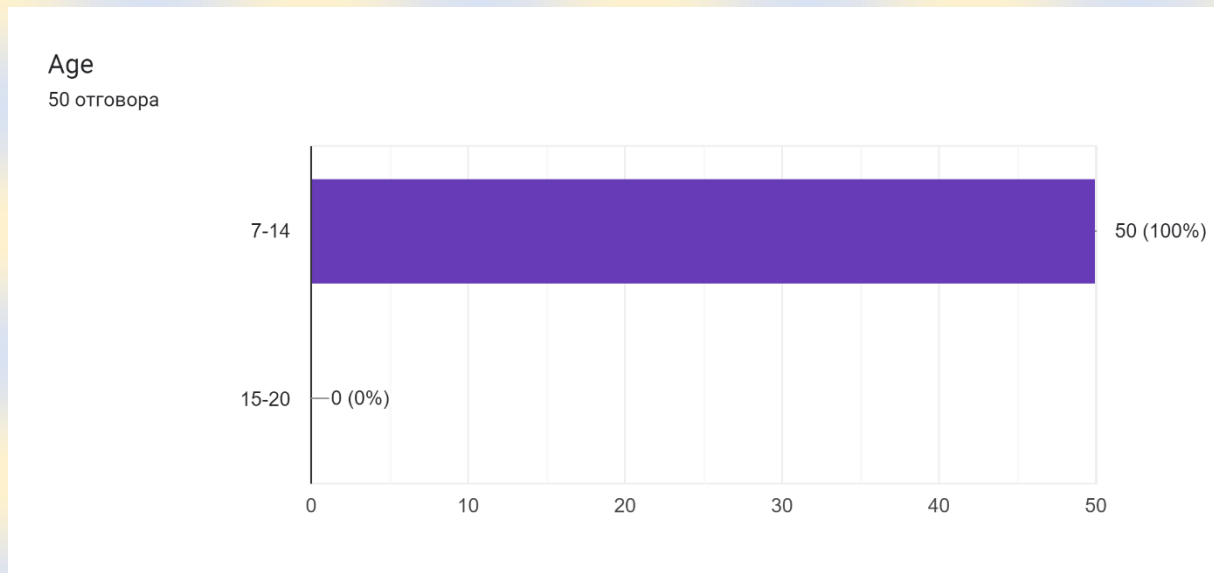
The abovementioned studies show the importance of building capacity for educators to teach online – this requires additional training and preparation in order for them to go beyond the established patterns and learn new techniques and methods. Teachers need to integrate relevant knowledge and skills to support students in the online learning environment, and promote their emotional wellbeing and academic performance. Building capacity for educators to teach online is essential to ensure the success of implementing distance learning in the long term.

## VII. Analysis of the survey results of the attitudes of students and teachers on well-being and mental health and the consequences of distance learning

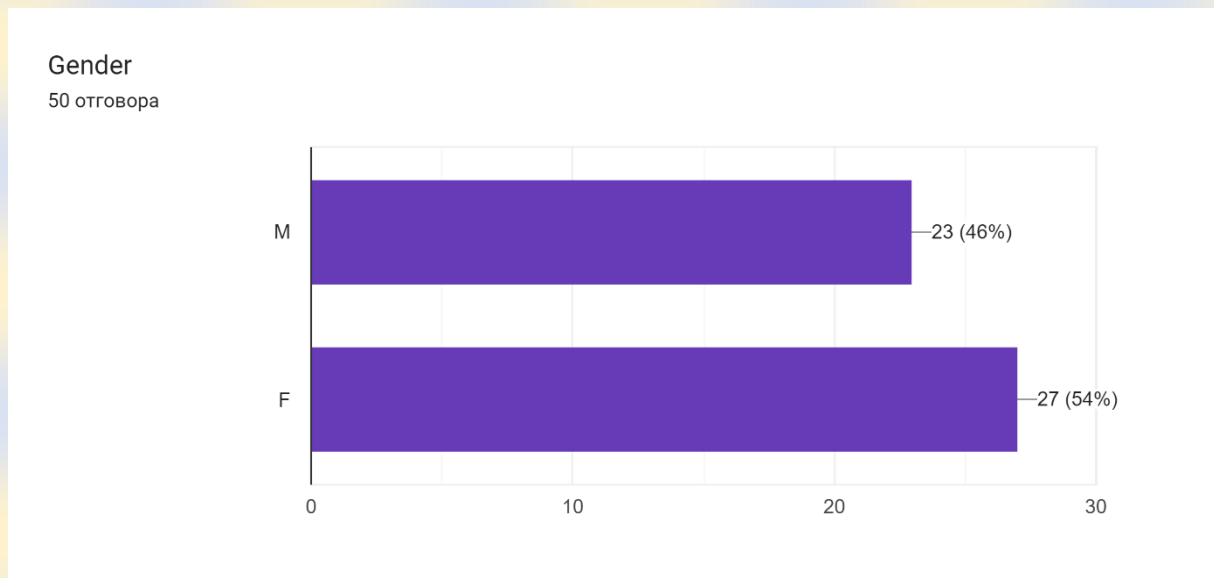
### 1. Analysis of the results of the survey among students

#### 1.1. Analysis of the results from Bulgaria

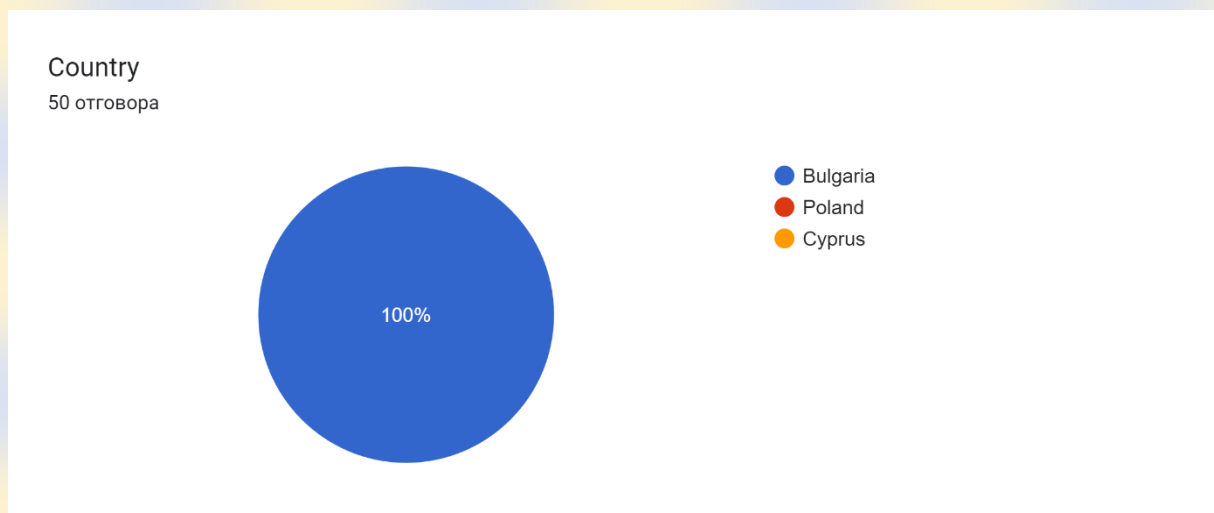
In Bulgaria, 50 students completed the [Questionnaire for assessing students' attitudes about well-being and mental health and the consequences of distance learning](#) (Appendix 1). They are from "Hristo Botev" Primary School and according to the data provided in the demographic part, they are all aged 7-14.



Regarding gender, 27 (54%) of the respondents were female while 23 (46%) were male.

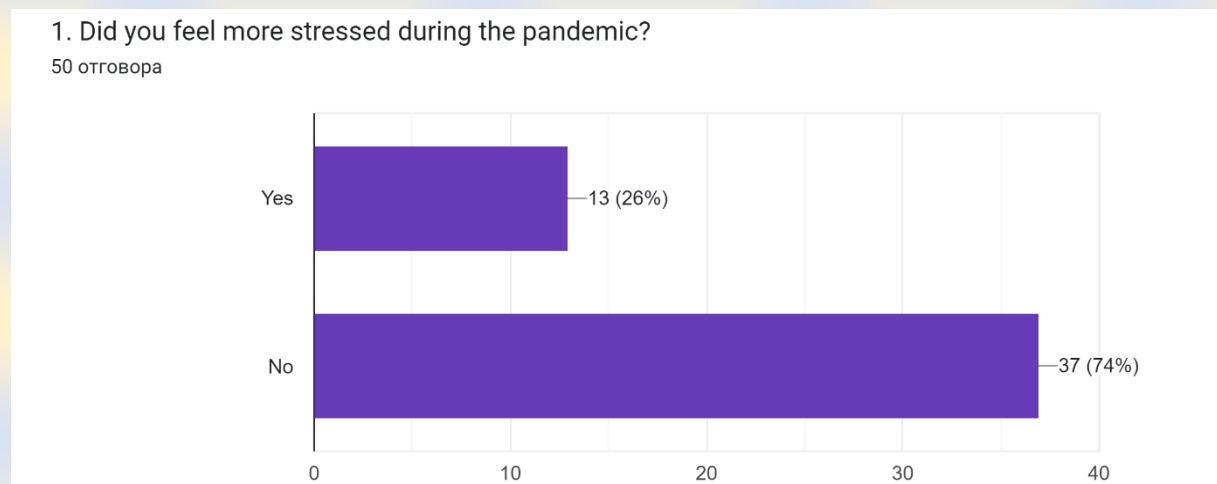


In addition, 100% of the students are from Bulgaria.

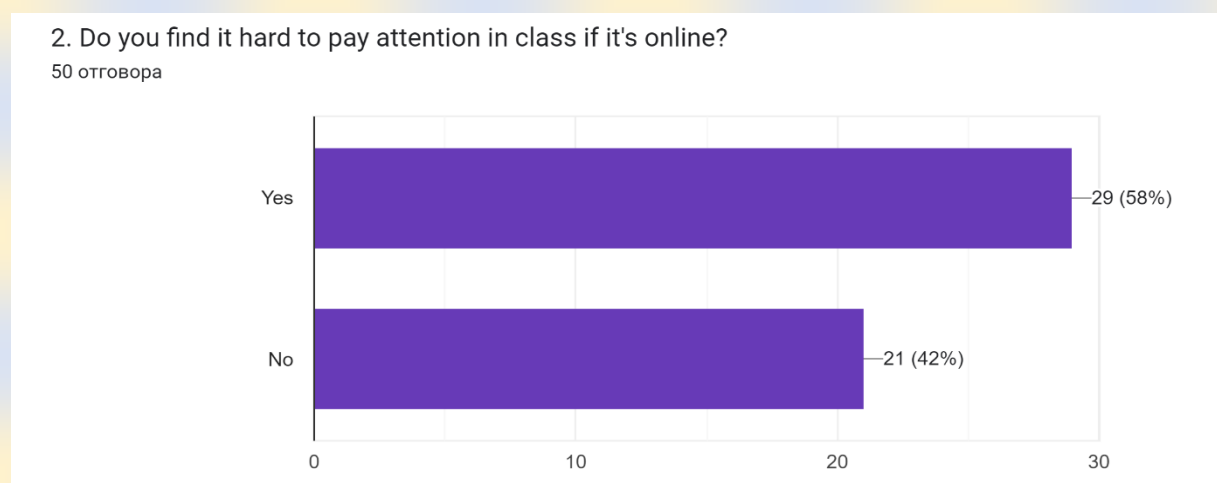




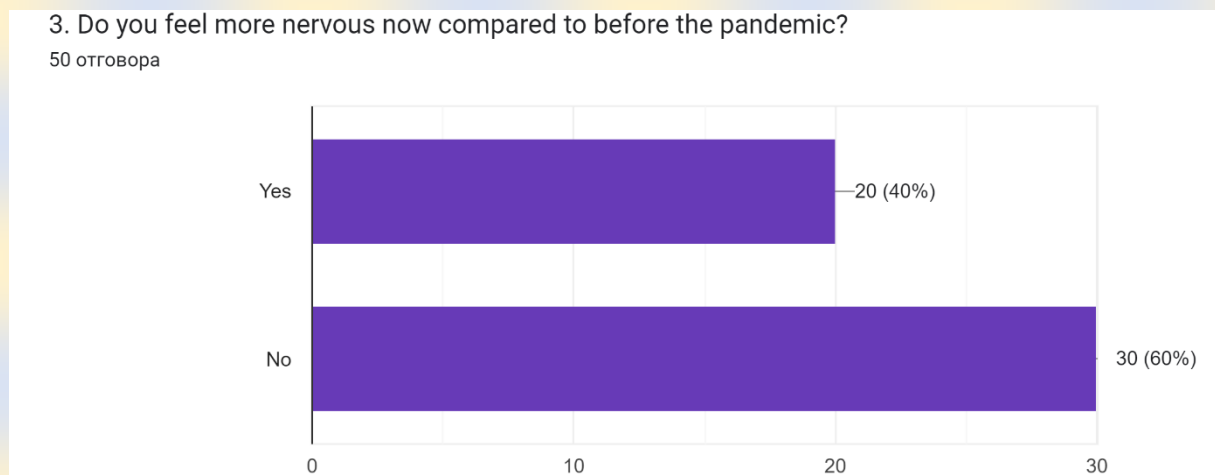
The first question in the main section assesses whether students think they have been more stressed during the COVID-19 pandemic. The results show that the majority of respondents (74%) do not report experiencing higher levels of stress compared to the period before the pandemic, with only 26% considering that they were more stressed during this unprecedented situation.



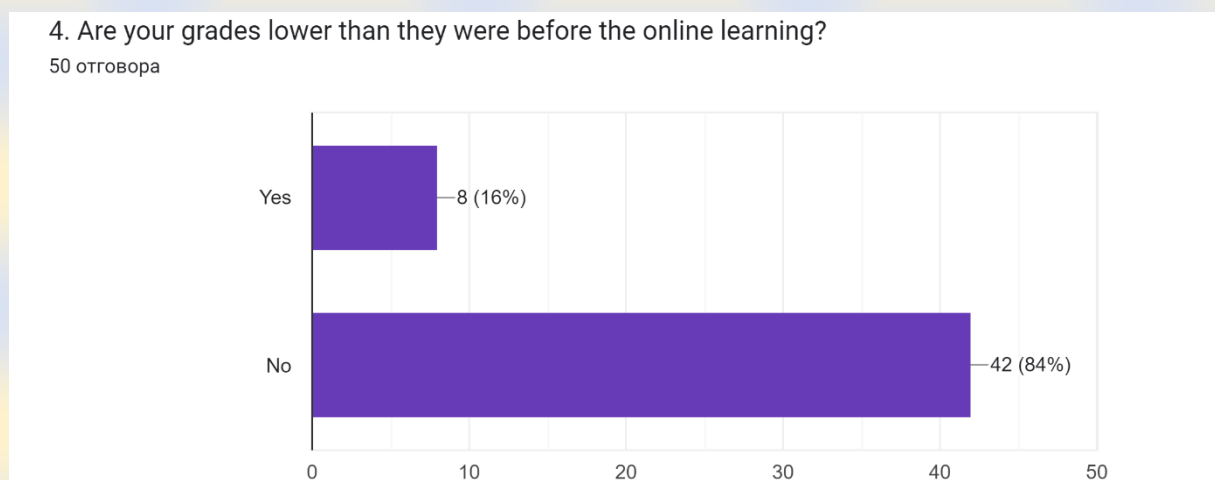
The second question is focused on students' ability to pay attention during the online class. 58% of the participants reported that they had difficulty maintaining their attention during online learning, while 42% did not encounter such difficulties. This indicates that for a significant proportion of students, attention in class is a challenge and additional efforts from their teachers are required to be better engaged during online learning.



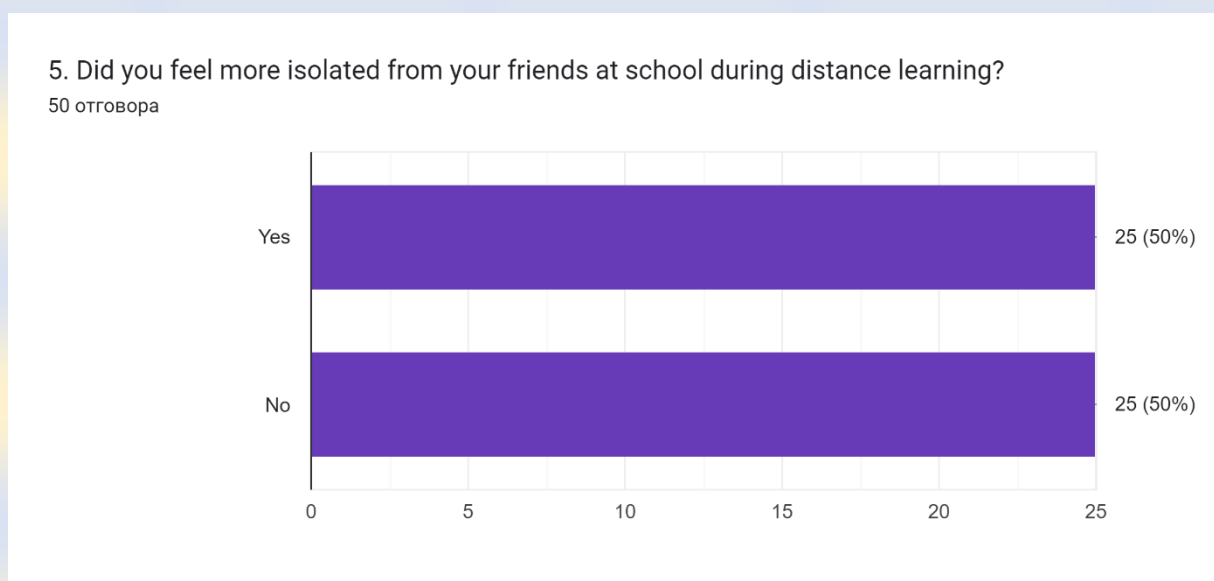
The next question assesses whether participants feel more nervous now than before the COVID-19 pandemic (and thus before the distance learning period). Although the majority of the respondents (60%) answered in the negative, there is a considerable share of students who answered "Yes" (40%). This again shows that a significant proportion of students (although not a majority) faced emotional challenges that contributed to their deteriorating mental status and well-being during this unprecedented situation.



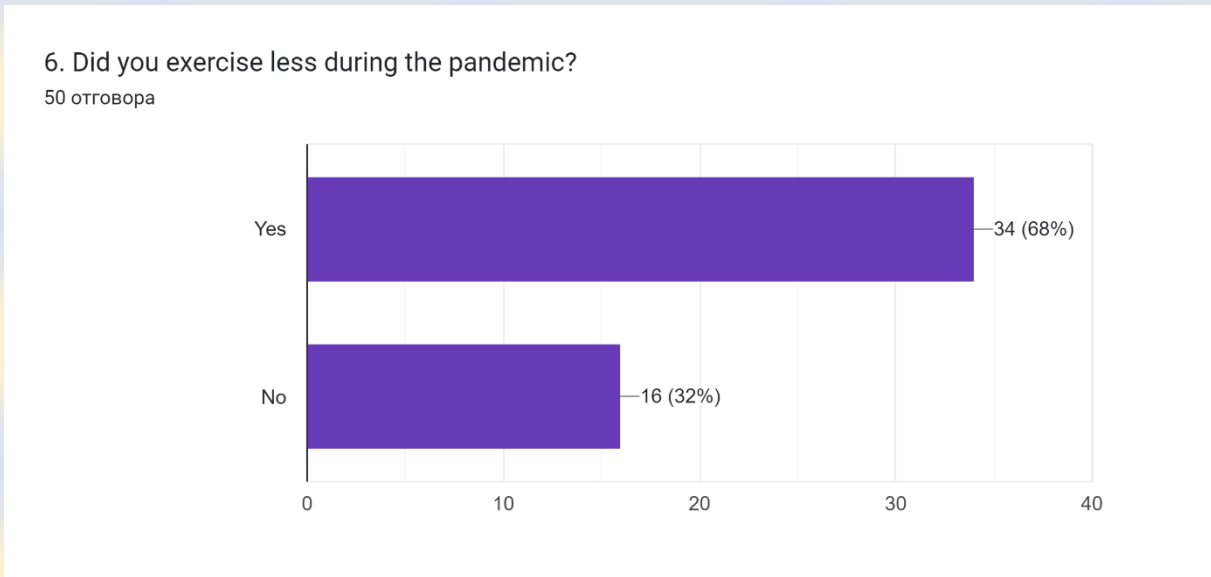
The fourth question looks at students' academic performance (their grades). The results show that the majority of respondents (84%) maintained their success compared to the period before the pandemic, with only 16% of them worsening their performance at school. From this we can judge that the majority of the participants were able to easily adapt to the requirements of the new situation and maintain the level of their academic achievements.



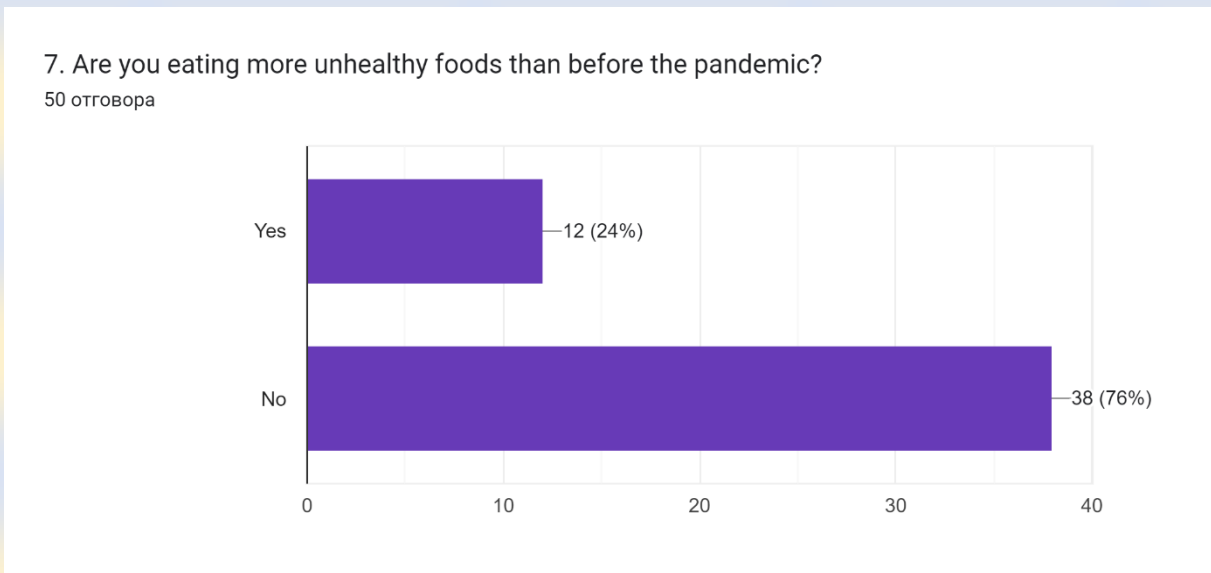
The next question is "Did you feel more isolated from your friends at school during distance learning?". Here, opinions are divided into two - 50% of the survey participants answer the question positively, and the remaining 50% negatively. This reveals that for a large proportion of students (half according to the results of our survey), online learning does not create a favorable environment for maintaining friendships with peers at school. Additional efforts are needed, including by teachers, to encourage contact between students to increase the proportion of those who feel connected to their classmates and to reduce feelings of isolation.



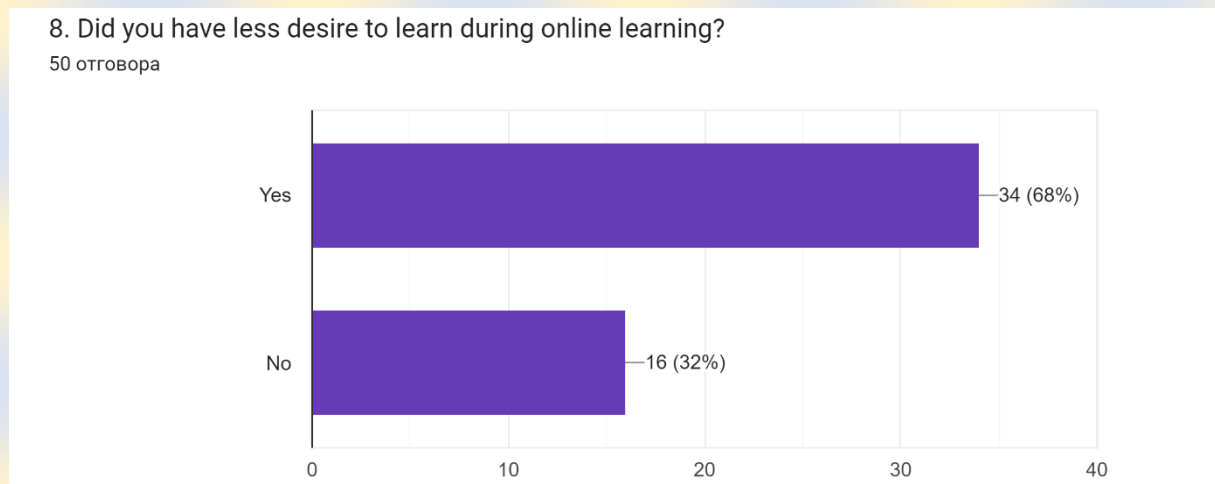
The sixth question examines whether students exercised less during the COVID-19 pandemic and the distance learning period. The result is negative for 68% of those surveyed, who say that they exercised less during the pandemic. According to only 32% of students in the survey, they were able to maintain this healthy habit. The results clearly show that students are experiencing difficulties in maintaining their physical activity during the pandemic and additional measures are needed to encourage the sports engagement and physical activity of students when participating in online learning, at home.



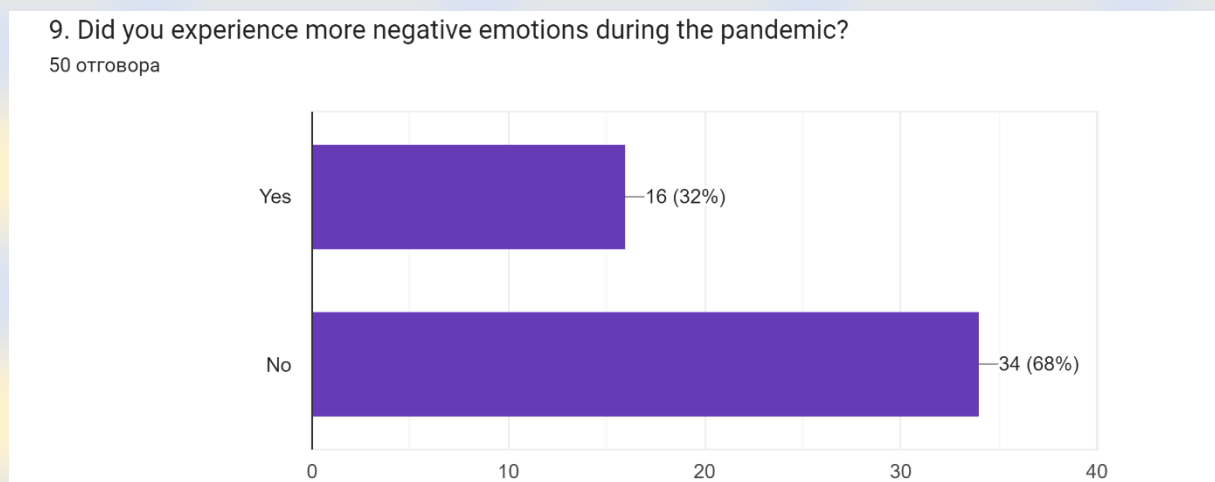
The seventh question assesses respondents' nutrition habits during the COVID-19 pandemic, and specifically whether they consumed more unhealthy foods. The results are rather positive. They show that 76% of the participants in the study have not changed their nutrition habits, while only 24% of them considered that their daily menu had become less healthy compared to the period before the pandemic. Diet is very important for mental health and overall well-being, so special attention should be paid to encouraging the maintenance of healthy eating habits among students.



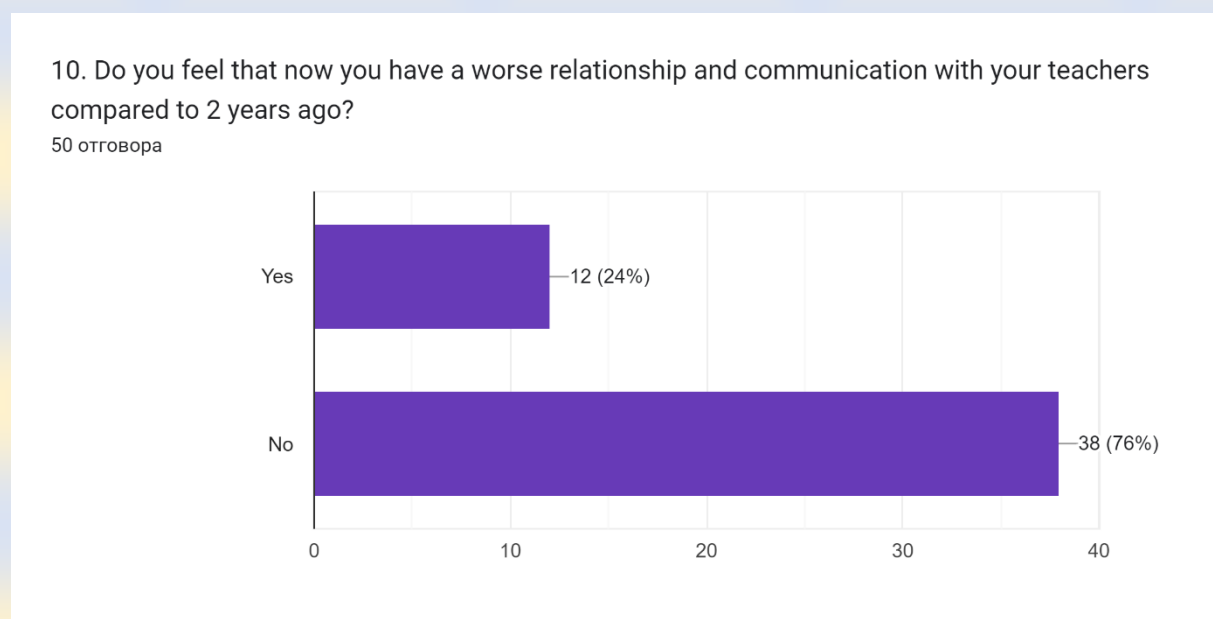
The next question explores the change in learning motivation during the distance learning period, compared to before. The data shows that the majority of students (68%) share that their willingness to learn is lower, while 32% of them see no difference in this attitude. These negative results are directly related to the problem of student demotivation in the pandemic environment and the increased demands on them related to the learning process in an online environment.



The next question asks students "Did you experience more negative emotions during the pandemic?". The majority of respondents (68%) shared that they did not feel an increase in negative emotions. However, 32% of participants stated that they had such an increase. This shows that a significant group of students did not need additional support to deal with negative emotions and manage their emotional well-being during the COVID-19 pandemic and the distance learning period.



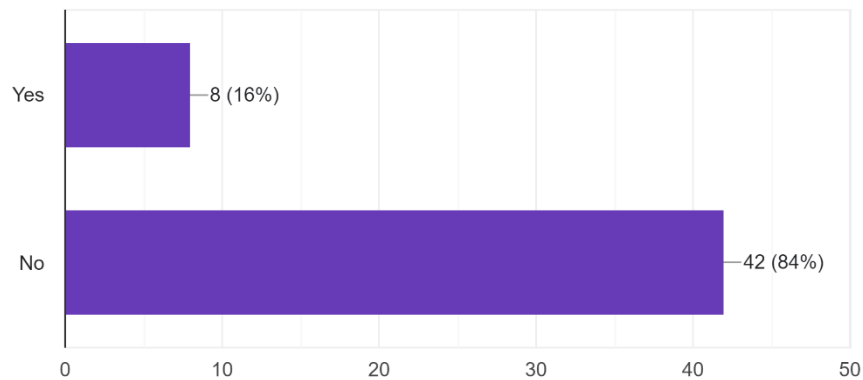
The tenth question assesses the quality of the relationship and communication between students and teachers compared to a period 2 years ago (before the COVID-19 pandemic and distance learning), through the perspective of students. The majority of respondents (76%) state that they do not have worse relations with their teachers, while 24% of them share a deterioration in the quality of these contacts. Despite the many barriers to communication during the period of the COVID-19 pandemic, the data show that the majority of students maintained a sense of closeness and effective communication with teachers, which is considered an important indicator of academic success and well-being at school.



The next question explores relationships and communication with peers at school, compared to the period 2 years ago. The majority of participants say that they did not feel a decline in their relations and communication with classmates during distance learning (84%), and only 16% are of the opposite opinion. These results show that the students were able to maintain a sense of closeness with their peers at school as well, despite the stressful situation, the sharp reduction in live contact, and the social isolation they experienced during distance learning.

11. Do you feel that now you have a worse relationship and communication with your classmates compared to 2 years ago?

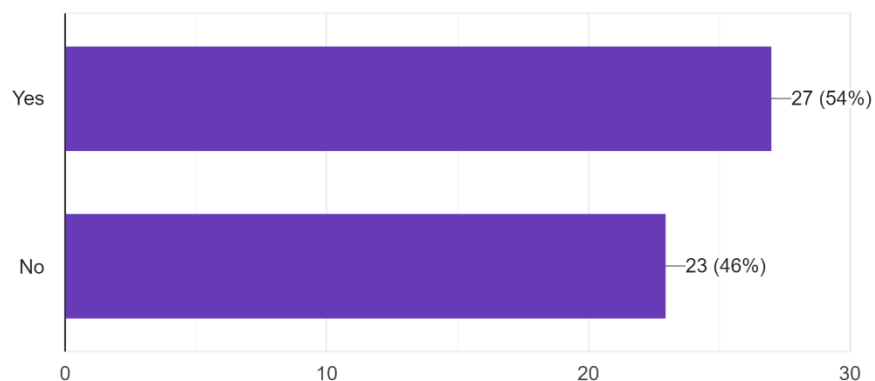
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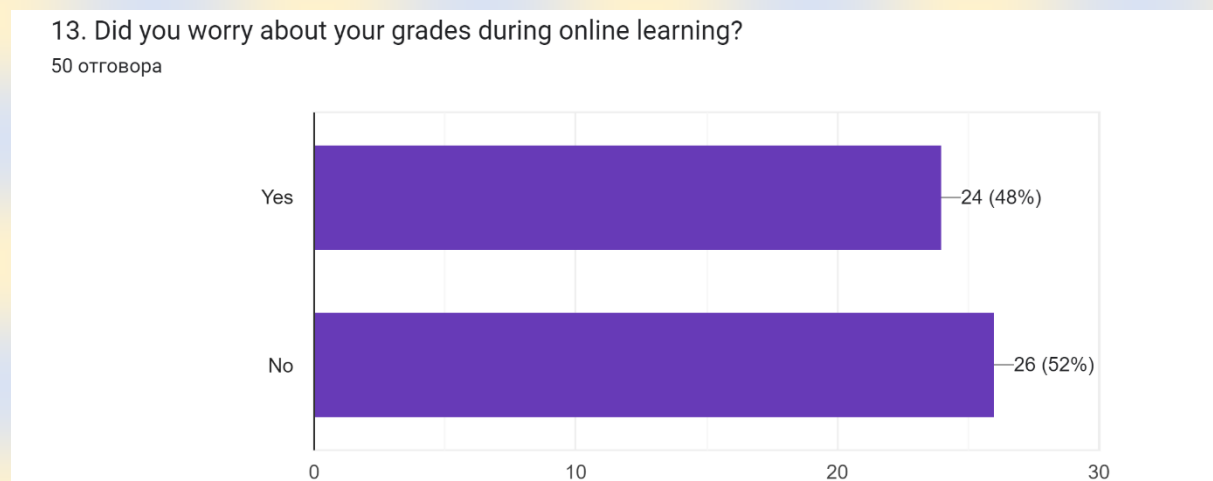
The twelfth question addresses concerns among students about their own health during the COVID-19 pandemic. The answers are divided into two - 54% (27 participants) shared that they experienced increased anxiety about their health during the Corona crisis, while 46% did not consider that they were more worried in this regard during the period in question. This fact shows that some of the students are more resilient and better able to manage their negative emotions than others, which may be related to their general state of well-being and mental health, but nevertheless, a large number of students need support to overcome their concerns.

12. Did you worry more about your health during the pandemic?

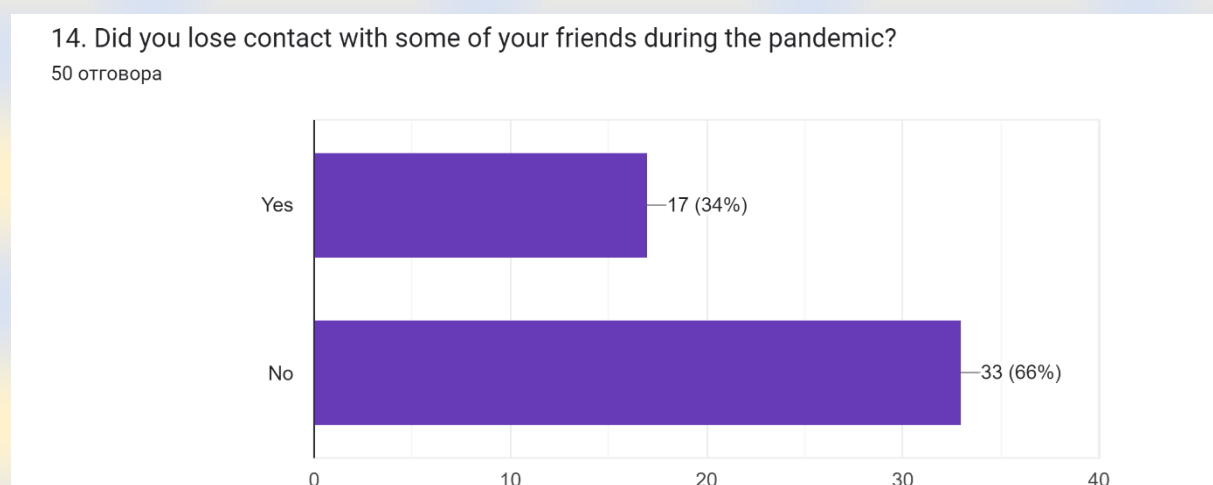
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The next question explores another potentially negative emotional experience of students during online learning – concerns about their academic performance (school grades). Here, the results are mixed, with 52% of study participants saying they didn't worry about their grades during online learning, while 48% said they did. This shows that a large proportion of students struggled with their negative emotions (such as worry) due to the new learning situation and how it would affect their academic performance.



The last closed question reads: "Did you lose contact with some of your friends during the pandemic?" The data shows that more than half of those surveyed (66%) kept in touch with their friends even during the COVID-19 pandemic, which was characterized by periods of lockdown, quarantine, school closures and distance/online learning. On the other hand, 34% of the respondents had difficulties in this aspect and lost contact with part of their social environment.





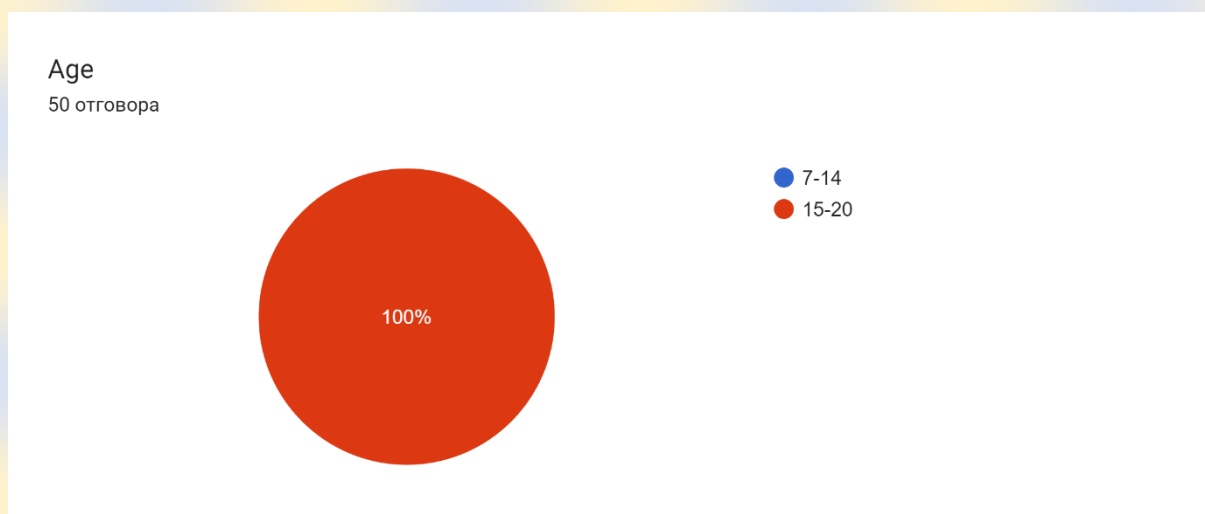
The last question, the 15th, was open-ended and read: "Please share if you have any additional comments related to distance learning and the impact of the COVID pandemic on you and your close one." 20 respondents answered the question, which is 40% of all filled out the questionnaire from Bulgaria. The answers are varied. We see individual opinions of students who felt "good" and "safe" during online learning. This is expected, as emergency measures were taken to ensure the health and safety of students and teachers. That was the reason to switch from a face-to-face to an online form of education during the COVID-19 pandemic. However, the negative consequences are particularly visible from the majority of comments left, which speak of fear, isolation, loneliness and difficulty understanding the learning material. All the answers to the open questions are:

- *"During COVID-19 my friend Krasimir became very aggressive and nervous".*
- *"When we were home during the COVID-19 pandemic we didn't go out much and we were very isolated".*
- *"I was afraid not to get sick".*
- *"I and my little brother got sick with COVID-19, but we are ok now".*
- *"During the distance learning it was hard for me to understand the lessons and I missed my classmates".*
- *"I liked distance learning".*
- *"Distance learning is not good for the students, as they don't understand the lessons and their grades are lower".*
- *"When the pandemic started, I was in third grade. Now I am sixth grade and I am an excellent student".*
- *"In the beginning of the pandemic, it was a bit hard. When we got used to it, we started chatting with my friends and I didn't feel lonely."*
- *"When we were in distance learning I wasn't able to train and do exercises."*
- *"After the pandemic I changed my life. Now I eat healthy and do exercises on a regular basis."*
- *"Not everyone had an electronic device and wasn't able to be present in online classes. Plus sitting in front of the electronic devices damages the eyes."*

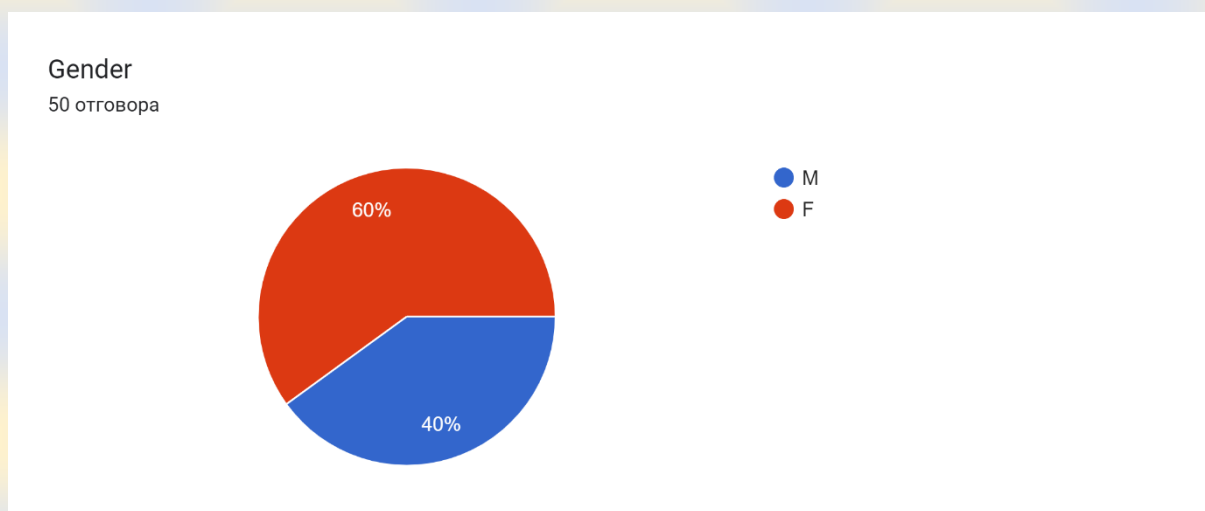
- *“I think distance learning is better than no learning at all. COVID-19 pandemic had a negative influence, because it isolated us from the world.”*
- *“Distance learning isolates the students and is more difficult as the students don't understand the lessons.”*
- *“During the pandemic I was not worried about my relatives, because at home was safe.”*
- *“During the pandemic I didn't like that I wasn't able to play with my friends.”*
- *“I lost contact with my friends during the pandemic.”*
- *“No one paid enough attention to the lessons during the distance learning.”*
- *“I got sick with COVID-19. The feeling is like any other flu or virus.”*
- *“According to me 20 minutes for a lesson is not enough. The teachers took time from the breaks.”*

## 1.2. Analysis of results from Poland

[The Questionnaire for assessing the attitudes of Students on well-being and mental health and the consequences of distance learning](#) (Appendix 1) was filled in by 50 students. They all attend the School of Business and Health Sciences/ Wyższa Szkoła Biznesu i Nauk o Zdrowiu (WSBINOZ) and according to the results of the demographic part of the questionnaire, they are aged 15-20 years (100%).

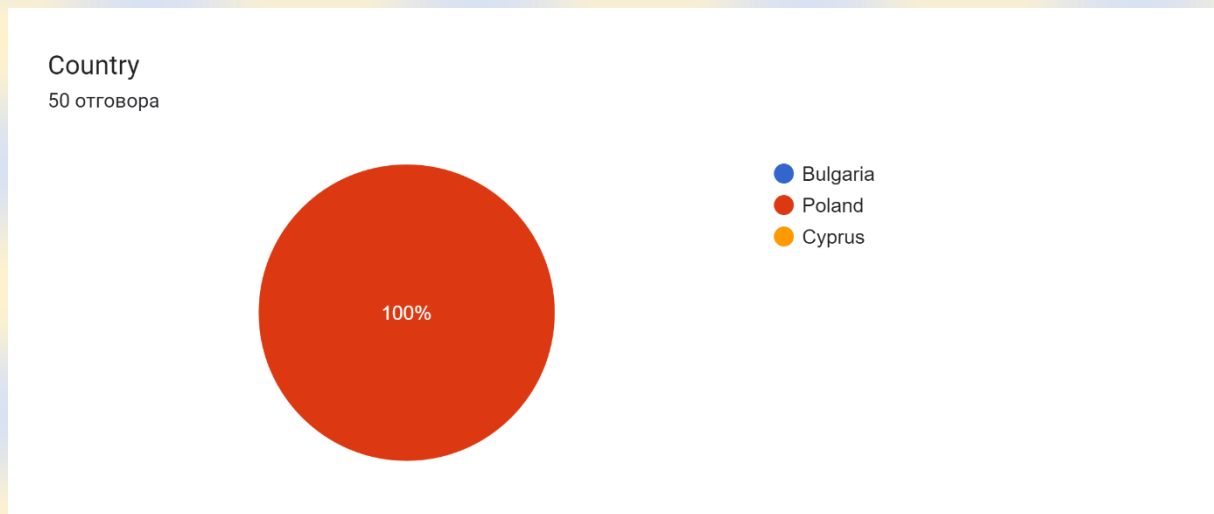


The gender breakdown of the survey participants was: 30 (60%) of the respondents were female, while 20 (40%) were male.

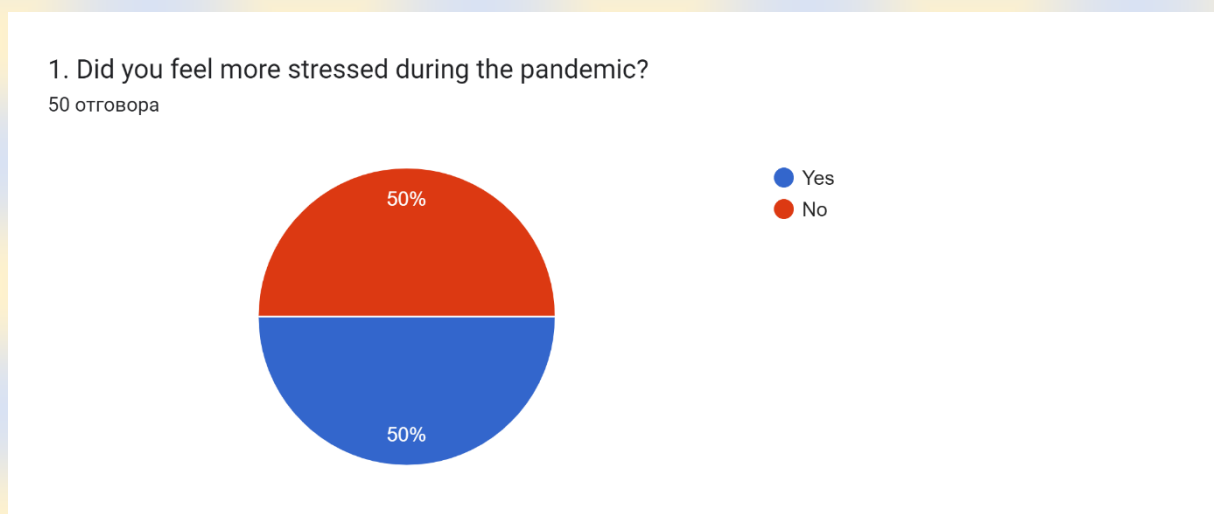


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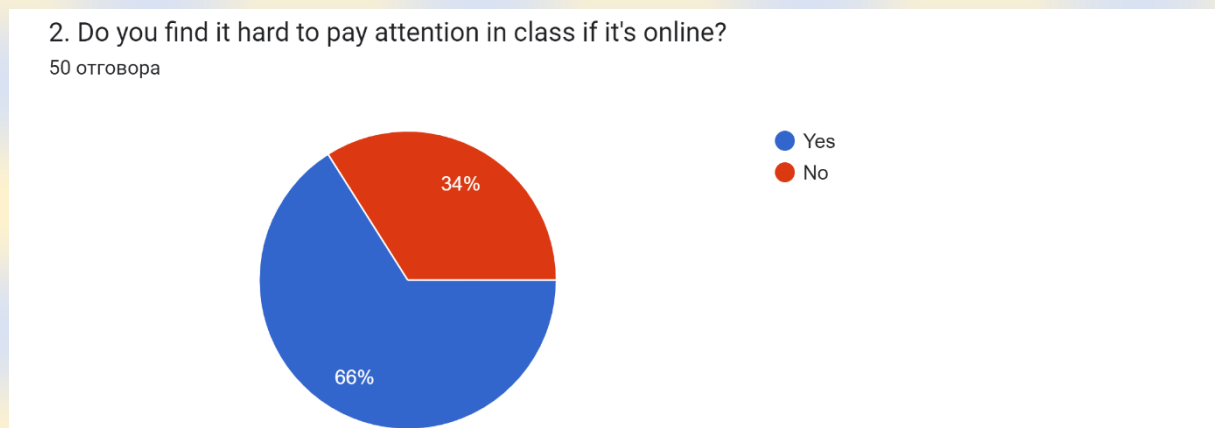
All students (100%) are from Poland.



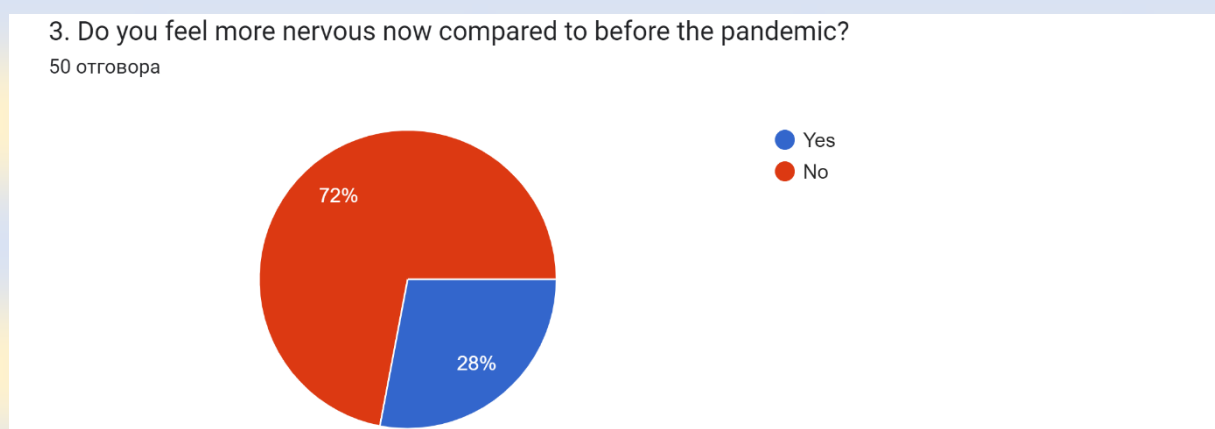
The first question evaluated whether students felt that they were more stressed during the COVID-19 pandemic. The results showed that half of Polish participants felt more stressed during this period, whilst the other half did not. Thus, the results are mixed and more effective ways need to be applied to students in order to manage their elevated stress levels.



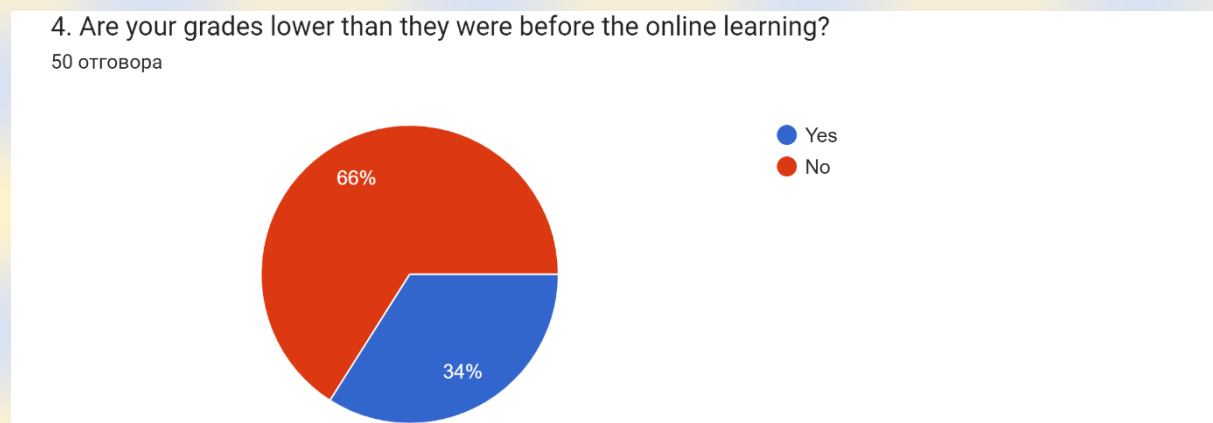
The second question explored whether students found it difficult to pay attention during online classes. According to the results, 33 students (66%) experienced such a challenge, while only 17 participants (33%) had no difficulty paying attention during online classes. These results are troubling because student engagement during class largely determines how much of the lesson will be understood, as well as their subsequent academic performance. Therefore, teachers should seek and implement more effective methods to increase engagement among their students during online teaching.



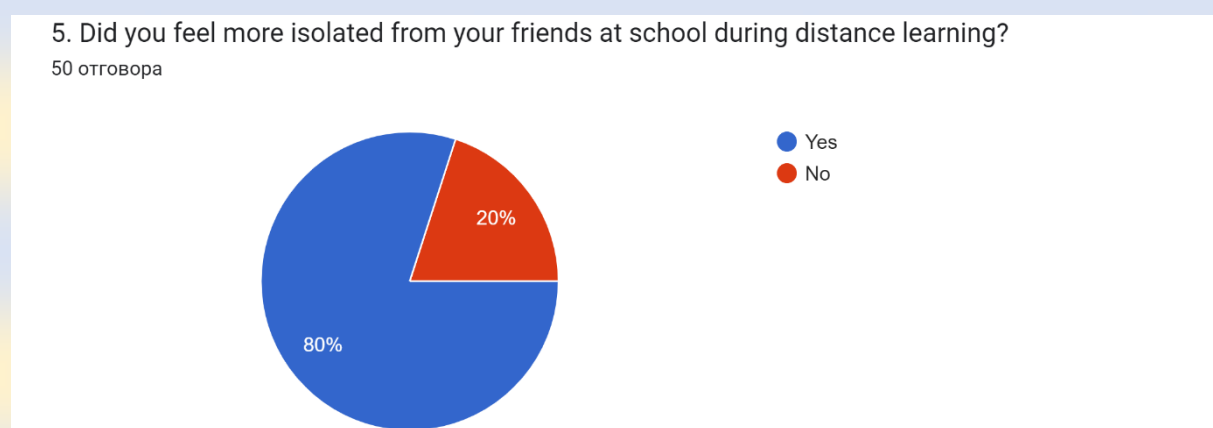
The third question assessed if students felt more nervous now in comparison to before the COVID-19 pandemic and the distance learning period. Fortunately, the majority (72%) of participants in the study answered “No”. However, 14 students answered “Yes” (28%) whilst shows that a small proportion of trainees had increased levels of nervousness due to the pandemic and experienced worsening of their mental health and well-being. Therefore, more effective ways to manage mental health and well-being during unprecedented situations need to be implemented among students.



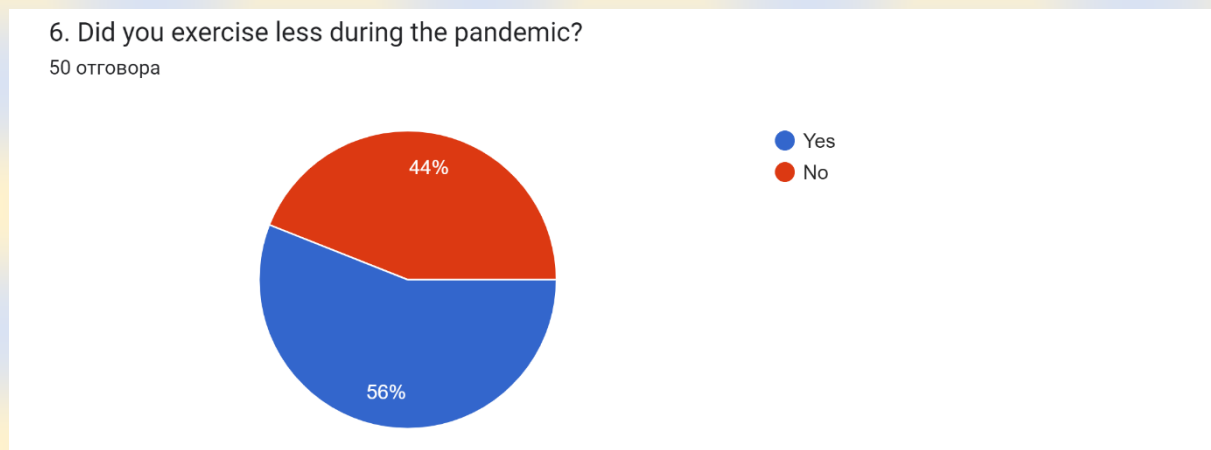
The fourth question concerns the grades of students after the period of online learning. The results indicated that 33 students (66%) did not have lower grades compared to the period before online learning started, whilst 17 trainees (34%) had worse academic outcomes. This shows that the larger part of participants managed to adapt to the increased academic demands because of the unprecedented situation (the distance learning during COVID-19). However, a small part experienced difficulties which means that novel methods should be applied to preserve the academic performance of students during crises.



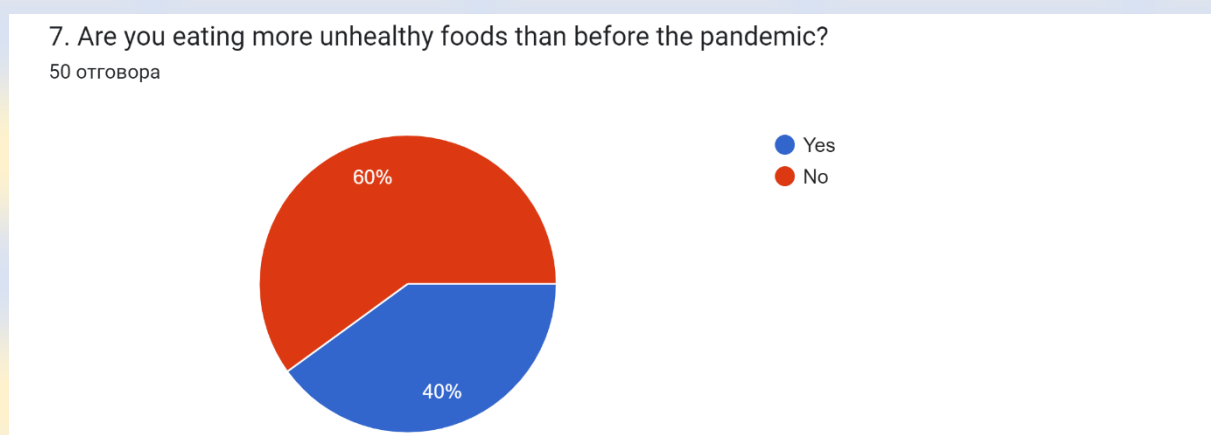
The fifth question states “Did you feel more isolated from your friends at school during distance learning?”. Here the results were troubling, again – 80% of participants in the study (40 students) shared that they felt more isolated from their school friends during the period of distance learning. In contrast, only 10 students (20%) did not have such an issue. This indicates, that unfortunately, many trainees found it challenging to maintain their friendships with classmates during distance learning, and as a result felt isolated (which can also have a negative impact on their mental health and well-being).



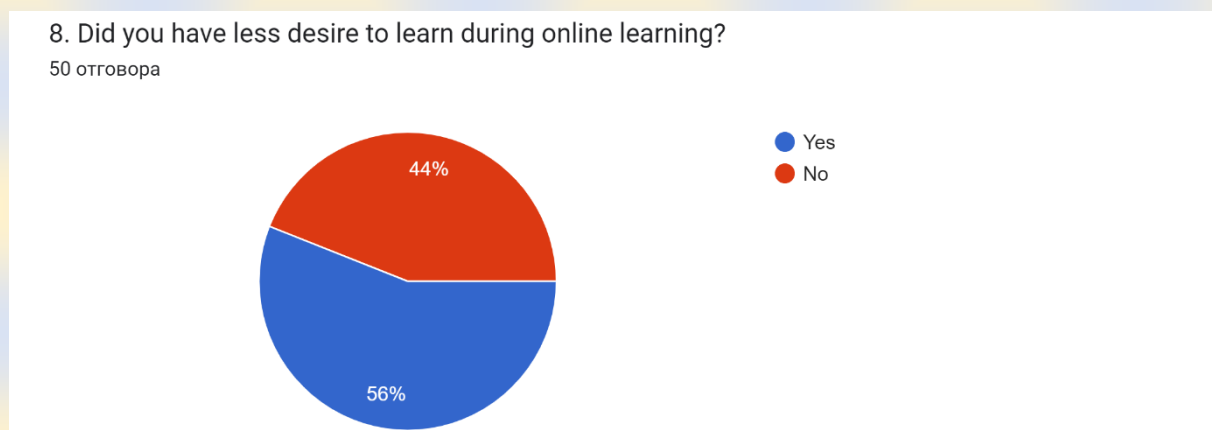
The sixth question reads: "Did you exercise less during the pandemic?". The results here were mixed - 28 respondents (56%) shared that they exercised less during this period. In contrast, 44% (22 students) shared that they maintained their previous levels of exercise and preserved this healthy habit. This shows that the larger part of students found it challenging to maintain their physical activity levels during the COVID-19 pandemic. This is a significant issue as healthy levels of exercise have been found to be correlated to better mental health and well-being.



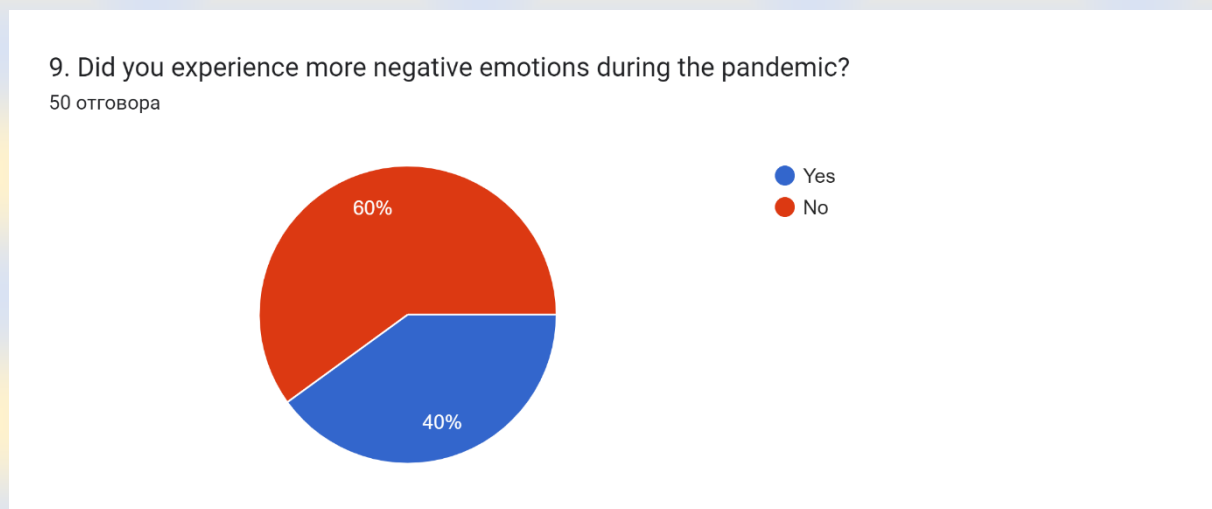
The seventh question evaluates the students' eating habits now compared to before the pandemic, and in particular, whether they consumed more unhealthy foods. The results are mixed – 60% of respondents shared that they were not eating more unhealthy foods than before, whilst 20 students (40%) had developed unhealthy eating habits. It should be mentioned that a healthy diet is very important for mental health and well-being, thus more effective methods should be applied to students to encourage healthy eating habits.



The eighth question assesses if students had less desire to learn during the period of online learning. The results showed that more than half of participants (56%) had less motivation to learn, whilst 44% did not experience any significant changes in their attitude towards learning. This is a mixed result, whilst pinpoints the problem of some students being not motivated enough to study during the pandemic and the distance learning period, which was associated with increased demands.

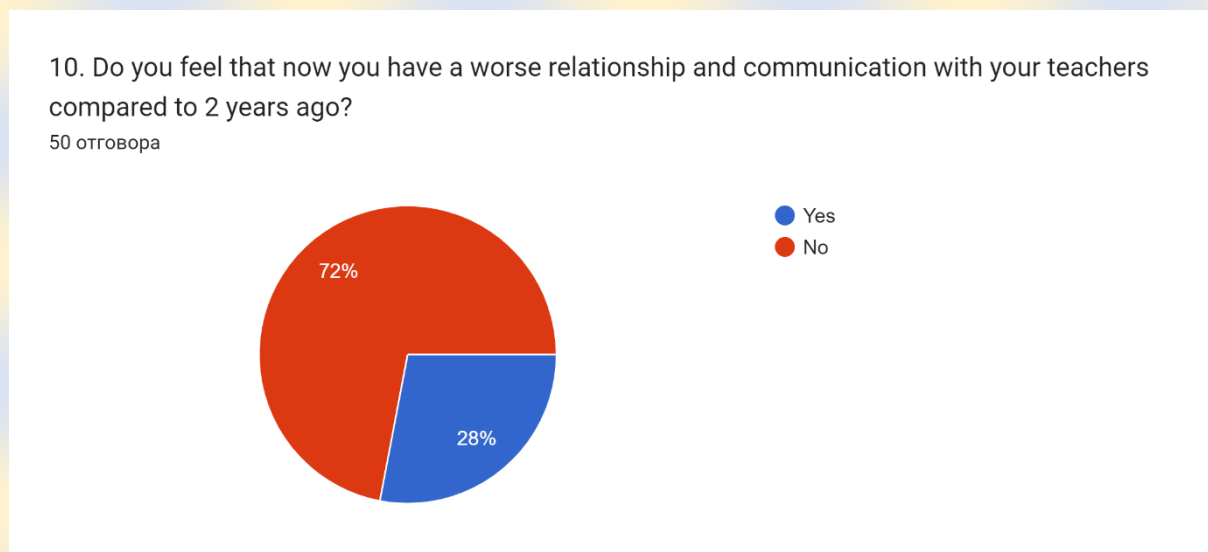


The ninth question states “Did you experience more negative emotions during the pandemic?”. The results are mixed – 60% of respondents (30 students) disagreed with the statement, whilst 40% of them agreed. This clearly shows that a substantial portion of students experienced increased levels of negative emotions during the COVID-19 pandemic and distance learning period. Thus, more effective ways for managing these emotions should be applied to students, including by teachers.





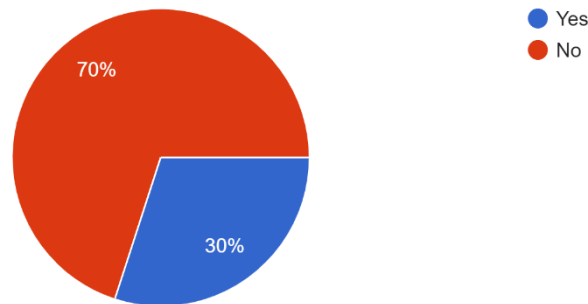
The tenth question reads: "Do you feel that you have a worse relationship and communication with your teachers now compared to 2 years ago?". The results are promising - the majority of respondents (72%) shared that they do not have worse relations and communication with their teachers, while the remaining 28% (14 students) faced a similar challenge. The data shows that the majority of learners were able to maintain the quality of the relationship and communication with their teachers, regardless of distance learning.



The eleventh question states “Do you feel that now you have a worse relationship and communication with your classmates compared to 2 years ago?”. It is a similar question to the previous one, but concerns the relationship and communication with classmates, and not teachers. Fortunately, the majority of respondents (70%) shared that their relationship and communication with their classmates has not worsened during the distance learning period, whilst only 15 students (30%) were of the opposite opinion. This clearly shows that trainees managed to preserve the quality of communication and relationship not only with their teachers, but their classmates as well, regardless of the unprecedented situation they were in.

11. Do you feel that now you have a worse relationship and communication with your classmates compared to 2 years ago?

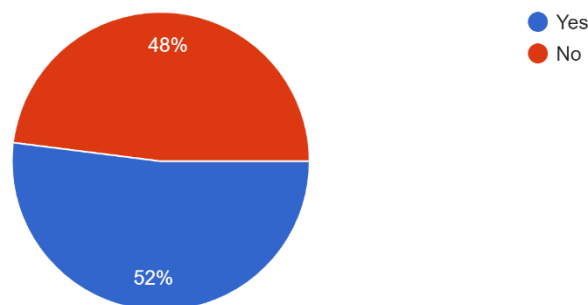
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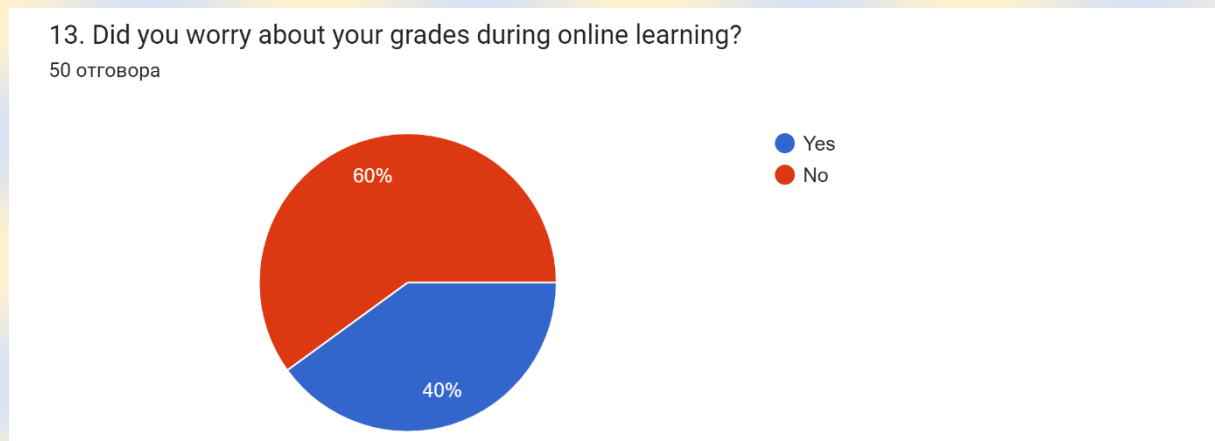
The twelfth question focuses on students' feelings of worry about their health during the pandemic. The results were mixed - 52% (26 participants) responded that they experienced increased worry about their health during the COVID-19 pandemic, whilst 48% did not. The results showed that nearly half of the students were unable to manage their emotions effectively and needed additional support to deal with their own health concerns, which can significantly impact on young people's overall well-being and mental health.

12. Did you worry more about your health during the pandemic?

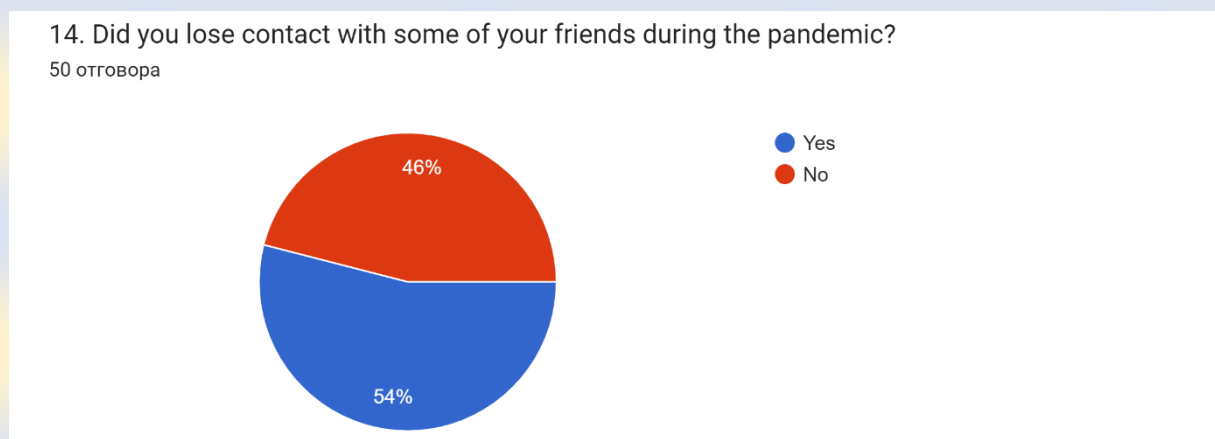
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The next question addresses another source of anxiety for students—their worries about grades. More than half of the participants (60%) reported that they did not feel worried about their grades during distance learning. However, 20 students (40%) shared that they worried about their success. This indicates the need to implement better methods to effectively manage general anxiety among students, as excessive anxiety can have a negative impact on academic achievement, mental health and well-being.



The last closed-ended question is: “Did you lose contact with some of your friends during the pandemic?”. The results indicated that more than half of participants (54%) lost contact with their friends during the pandemic, likely due to closures, lockdowns, quarantines and distance learning. However, 46% of students did not experience such an issue and managed to maintain their contacts with friends. The results are troubling and clearly show the need for the application of better methods for preservation of friendships among students during difficult situations.





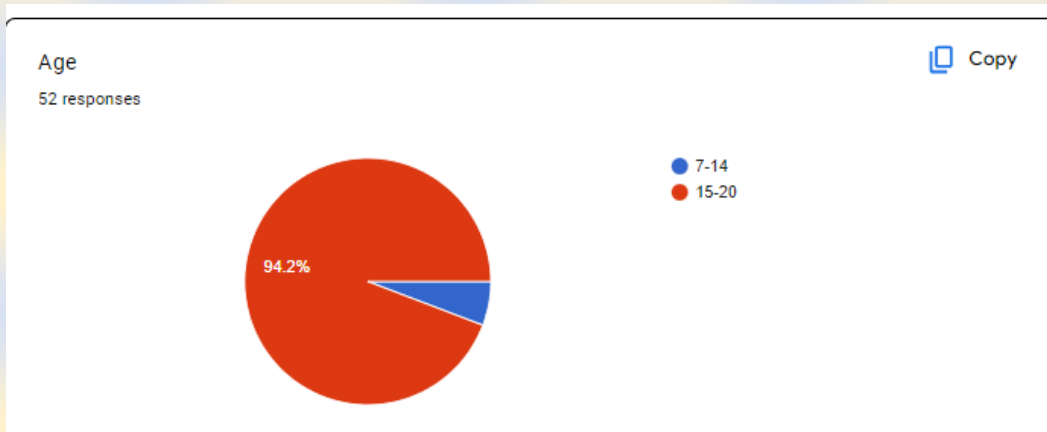
The last question, the 15th, was open-ended and read: "Please share if you have any additional comments related to distance learning and the impact of the COVID-19 pandemic on you and your loved ones." The question was answered by 4 respondents, and their answers were as follows:

- *" I didn't get a chance to meet the rest of the class"*
- *"Teaching is often boring and more schematic"*
- *"Organizational Chaos"*
- *"It's hard to concentrate while studying online. There is a lack of real interaction."*

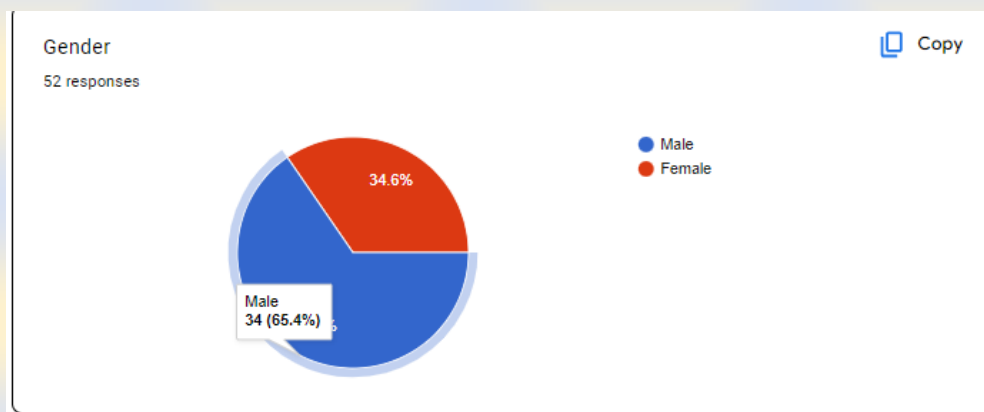
### 1.3. Analysis of results from Cyprus

[The Questionnaire for assessing the attitudes of Students on well-being and mental health and the consequences of distance learning](#) (Appendix 1) was completed by 52 students of IMS Private School in Cyprus.

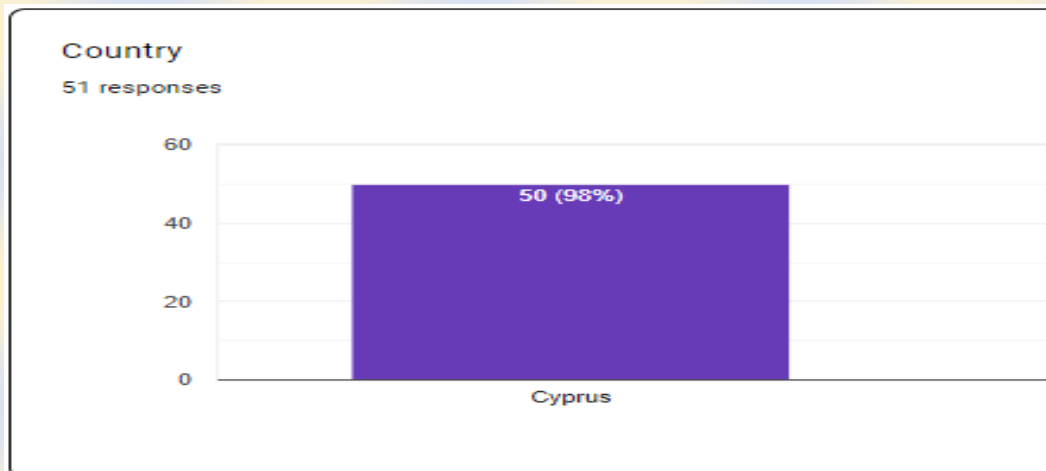
Demographics shows that the majority of the participants in the study were aged 15-20.



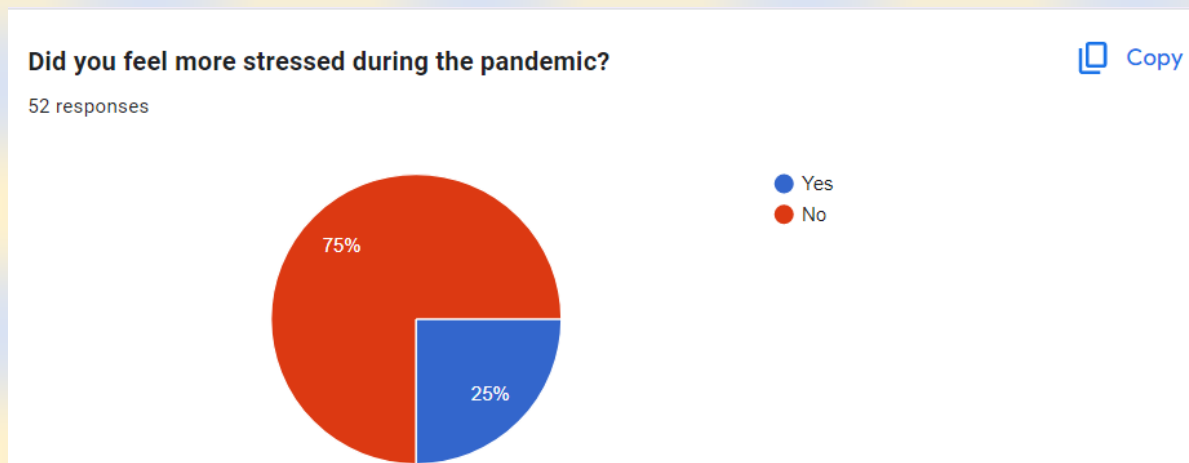
The gender breakdown shows that 18 (34,6%) of the respondents were female while 34 (65,4%) were male.



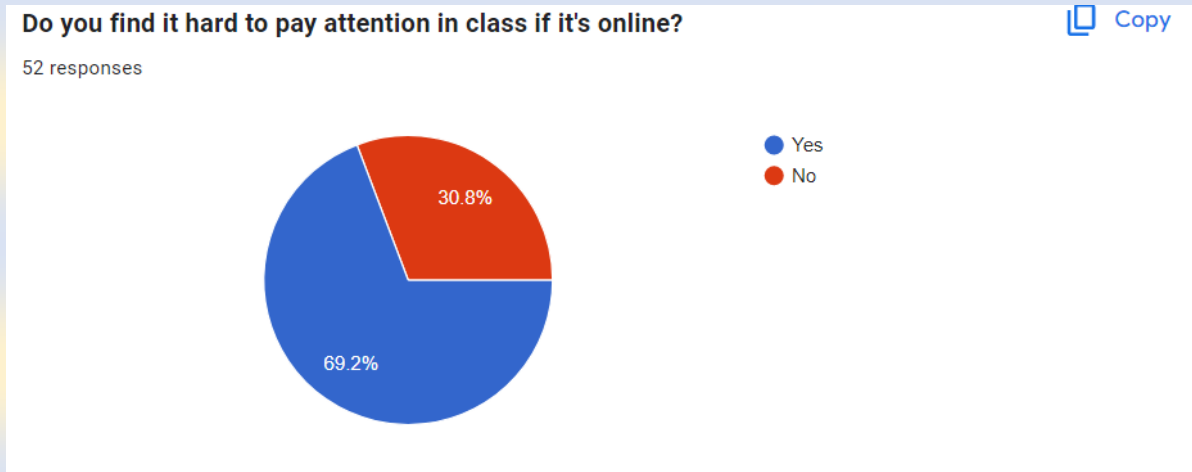
All participants are from Cyprus.



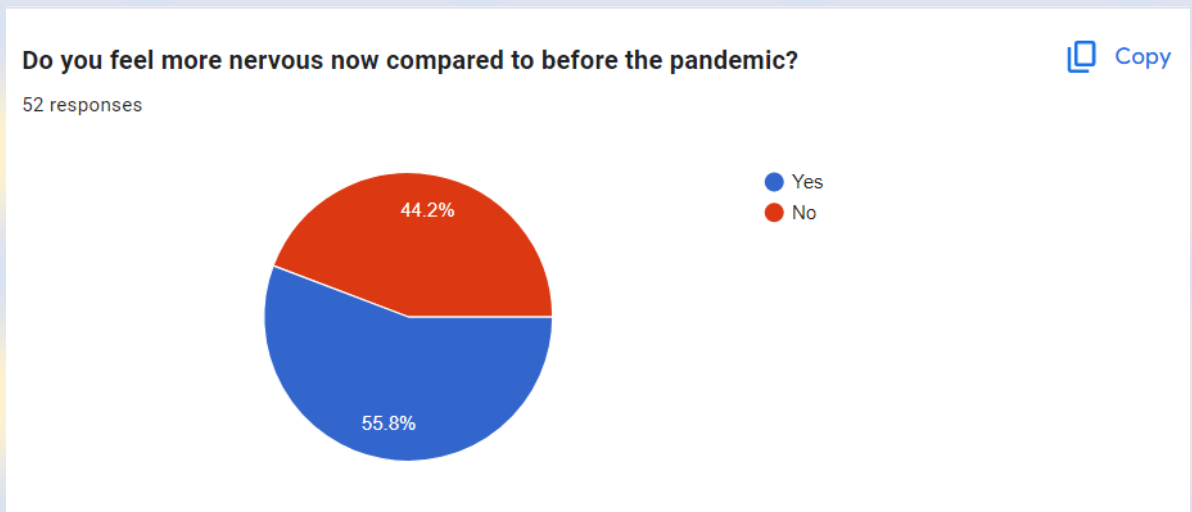
The first question in the main body assessed whether students felt that they were more stressed during the COVID-19 pandemic. The results indicated that the majority of respondents (75%) did not have elevated levels of stress in that period, and only 25% were more stressed during this unprecedented situation.



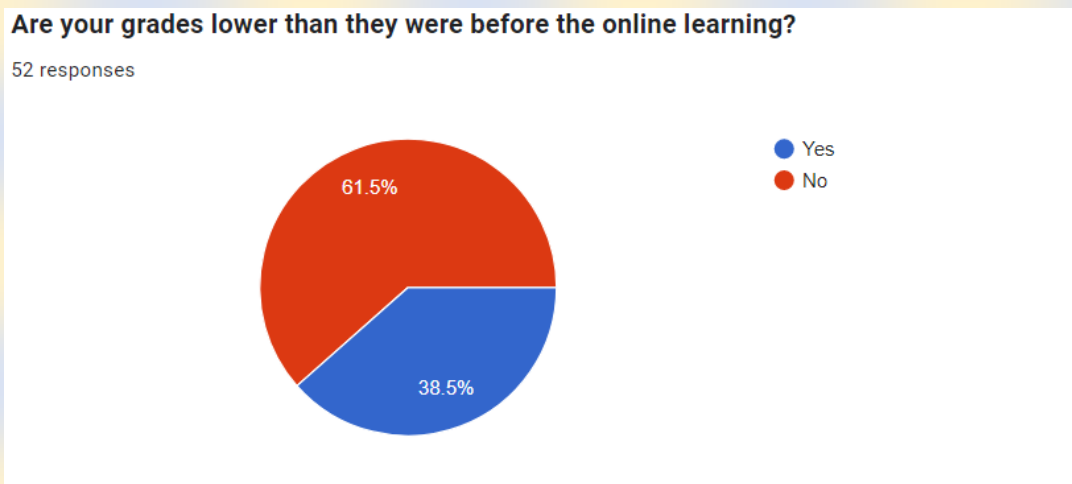
The second question focused on the ability of students to pay attention during online classes. Here, the results indicated that – 69,2% of participants shared that they found it hard to pay attention, while 30,8% did not have such difficulty. This shows that a substantial part of students needs to be better engaged during online learning by their teachers.



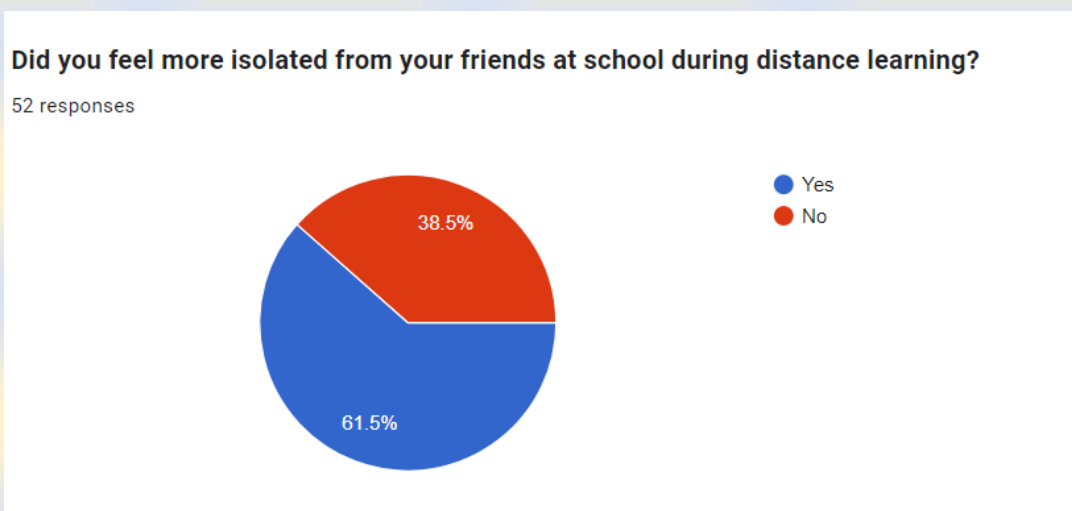
The third question reads: "Do you feel more nervous now compared to before the pandemic?". The majority of respondents (55,8%) answered positively, and the remaining 44,2% answered "No". This again shows that a significant proportion of students experienced emotional problems contributing to their mental health and well-being during this unprecedented situation.



The next question deals with the school performance of students (their grades). The results showed that the larger part (61,5%) of respondents did not have lower grades than before the period of online learning, and 38,5% of them had worse grades. This indicates that the majority of participants were able to adapt easily to the demands of the new situation and preserve the level of their academic performance, but a significant number need additional support in learning new knowledge in an online environment.



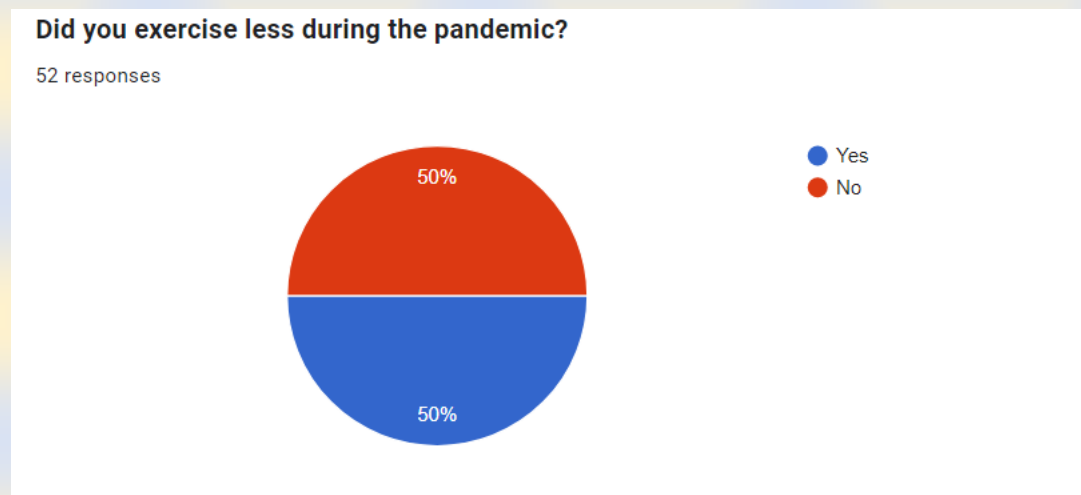
The fifth question focuses on the feeling of isolation among students from the usual social environment of peers at school during distance learning. Here, the results show that 61,5% of participants in the study agreed, and 38,5% disagreed with the statement. This reveals that, unfortunately, many students struggled to maintain their friendships with their classmates during the period of online learning, and felt socially isolated. They need additional support and opportunities to communicate, including during the learning process.



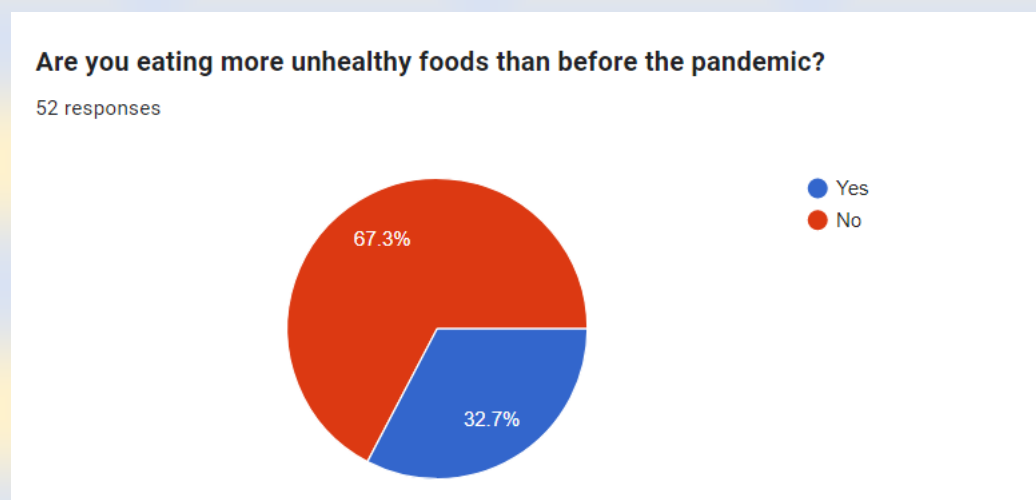
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The sixth question is about whether students have exercised less during the COVID-19 pandemic (and respectively, the distance learning period). The results here are mixed as the responses were 50-50 split. 50% of the respondents shared that they did not exercise as before and 50% of them managed to preserve this healthy habit. This clearly shows that students experienced difficulty in maintaining their physical activity during the pandemic.

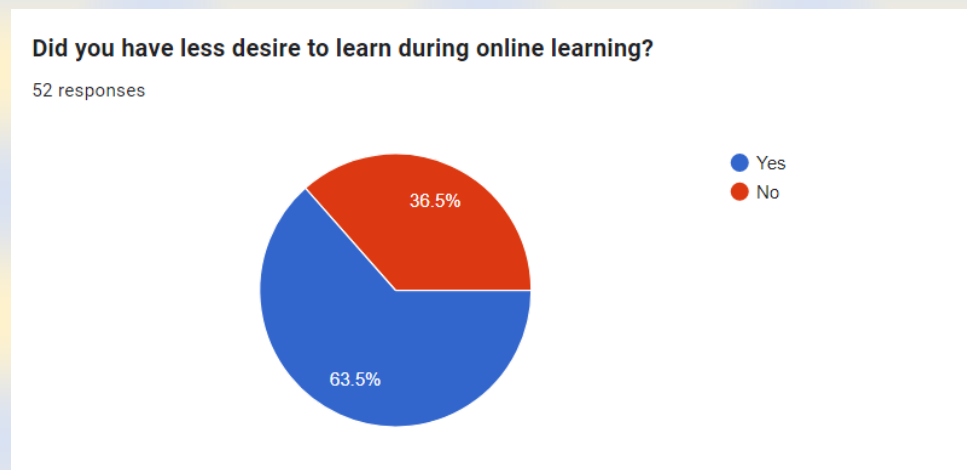


The seventh question assesses the respondents' eating habits during the COVID-19 pandemic, and more specifically whether they consumed more unhealthy foods (such as junk food). The results are very good – 67,3% of participants in the survey shared that they are not eating more unhealthy foods, while only 32,7% of them struggled in this aspect. Diet is very important for mental health and overall well-being; thus, special attention should be paid to promoting the maintenance of healthy eating habits among students, including when participating in online classes.

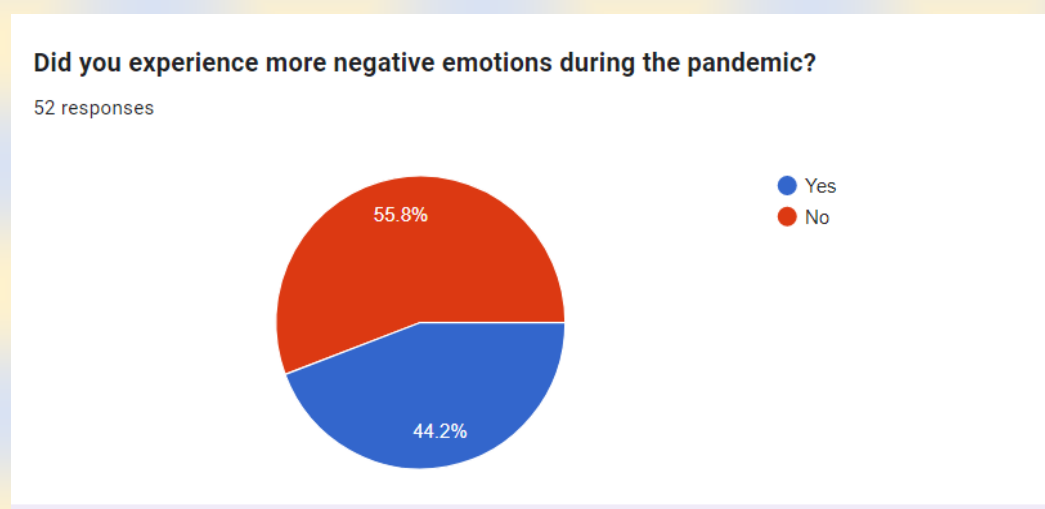


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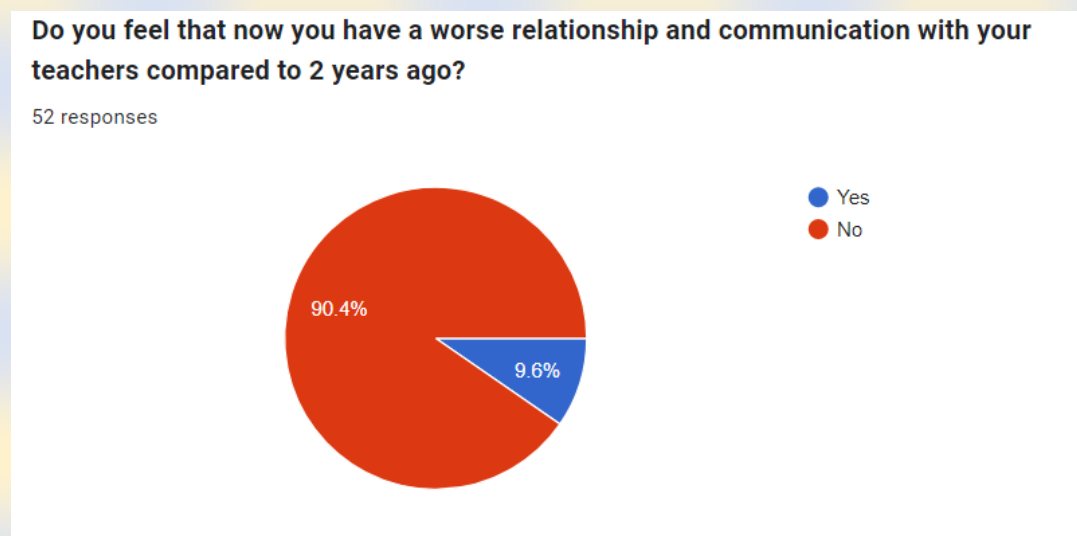
The eighth question evaluates whether respondents had less desire to learn during the period of distance learning. The data clearly shows that the majority of students (63,5%) had less desire, whilst 36,5% of them did not see any difference in their attitude towards studying. This is not a positive result, as it pinpoints the issue of students being demotivated by the pandemic situation and the increased demands on them related to the online learning process.



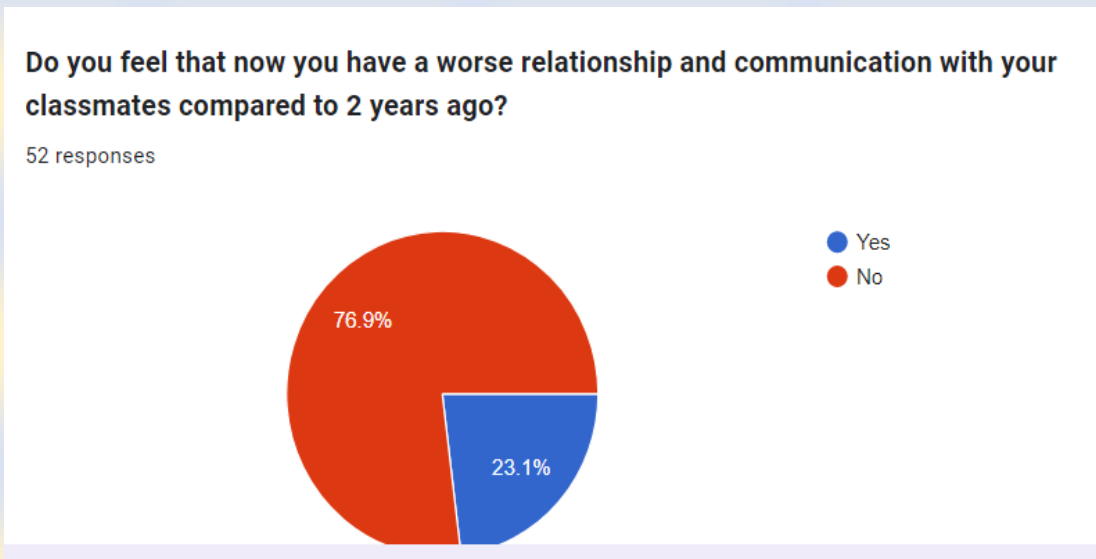
The subsequent question states “Did you experience more negative emotions during the pandemic?”. The results indicate that the majority of respondents (55,8%) shared that they did not experience an increase in negative emotions. However, 44,2% of the participants stated that they had such an increase which shows that some students struggled to manage their emotional well-being during the COVID-19 pandemic, and respectively, the period of distance learning.



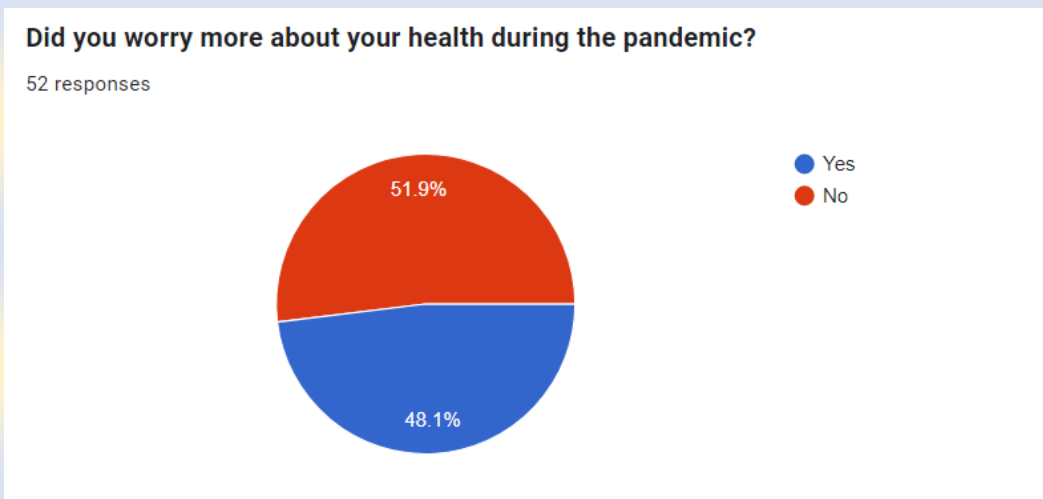
The tenth question evaluates the quality of the relationship and communication between students and teachers compared to 2 years ago (before the COVID-19 pandemic and distance learning). The results are very interesting – the majority of respondents (90,4%) have stated that they do not have a worse relationship and communication with their tutors, whilst only 9,6% of them experienced deterioration. This data shows that a larger number of students managed to communicate well with their teachers, which is an important indicator of academic success and well-being at school.



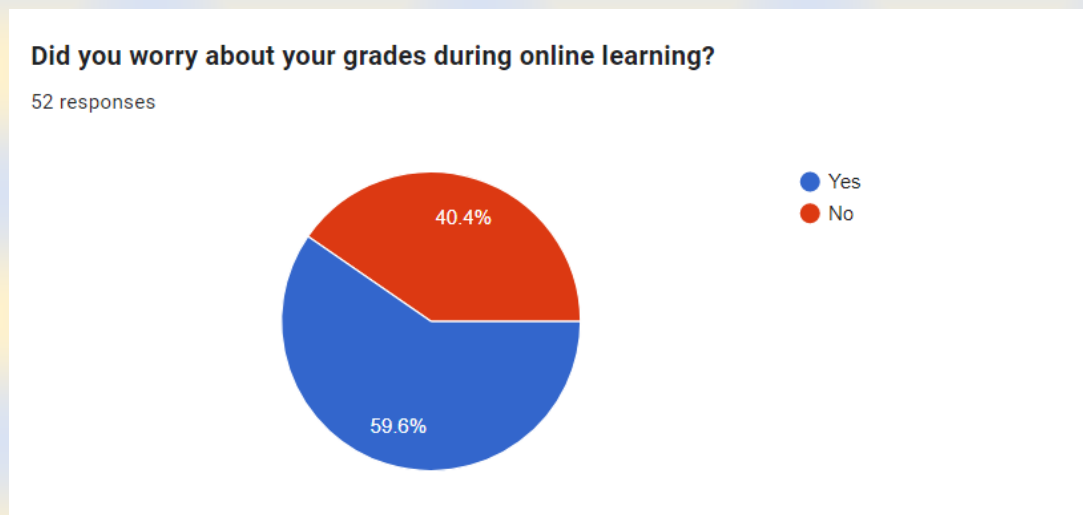
The next question examines changes in the quality of communication with classmates and reads "Do you feel that now you have a worse relationship and communication with your classmates compared to 2 years ago?". The majority of participants shared that their relationships and communication with their classmates did not deteriorate during distance learning (76,9%), and only 23,1% were of the opposite opinion. This clearly shows that the students were able to maintain good communication and relationships with their classmates, regardless of the stressful situation and social isolation they experienced during distance learning.



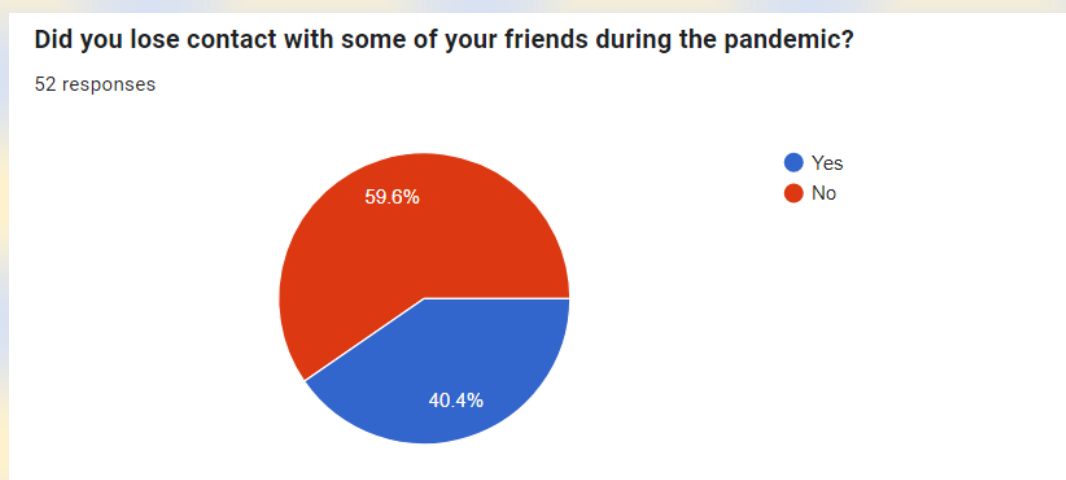
The twelfth question refers to students' feelings of anxiety about their health during the COVID-19 pandemic. The opinions of the participants are divided in two - 51.9% (27 participants) answer that they feel increased anxiety about their health during the corona crisis, while 48.1% do not. This fact shows that some of the students are better able than others to manage their anxiety and negative emotions, which may be related to their general state of well-being and mental health (particularly health anxiety), or to receiving adequate and timely support.



The next one addresses concerns about student academic performance. Here the results are not unambiguous. 40,4% of survey participants said they were not worried about their grades during online learning, but the majority (59,6%) felt such anxiety. This indicates that a large number of students, among other concerns in addition to the pandemic situation, have struggled with anxiety about their academic results and performance during distance learning.



The last closed-ended question reads: "Did you lose contact with some of your friends during the pandemic?". The data shows that more than half of respondents (59,6%) have not lost contact with their friends even during the COVID-19 pandemic, which is characterized by lockdowns, quarantines, school closures and distance/online learning. On the other hand, 40,4% of the respondents had difficulties in this aspect and lost contact with some of their friends.



The final 15th question was as open-ended and stated: “Please share if you have any additional comments related to distance learning and the impact of the COVID-19 pandemic on you and your close one.” The students' responses showed a great deal of thoughtfulness and acceptance of this unprecedented situation, but also a critical and adequate assessment of its consequences. Some of the answers are:

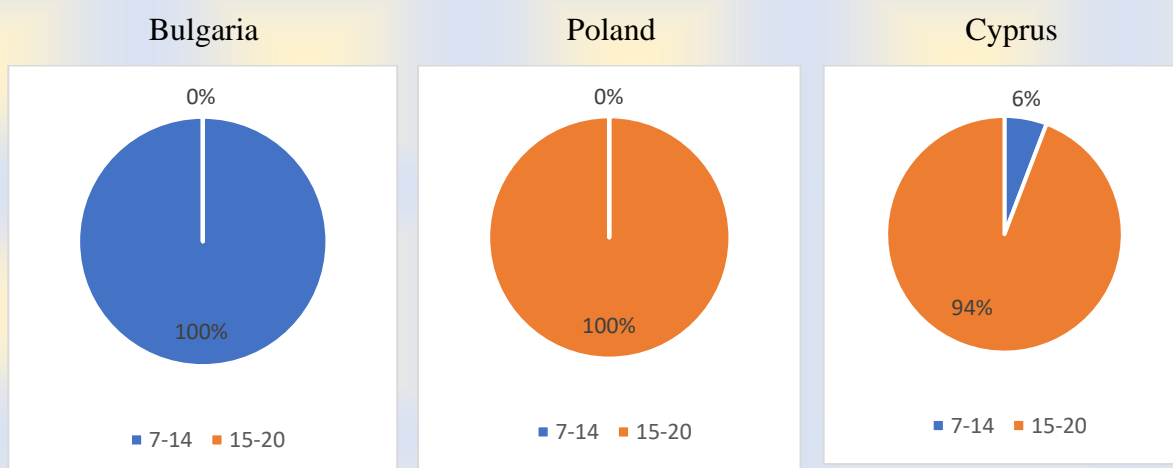
- *"Massive waste of time"*
- *"Had an effect economic situation of my family, causing us to live different lifestyle"*
- *"The COVID-19 pandemic and distance learning negatively affected my grades and my desire/ability to learn. However, it also gave me more time to focus on myself and find new interests in my life."*
- *"I had to return to my home country for a few months"*
- *"Distance learning only works as an emergency measure. Hardly anyone can learn during it, so the grades went down. It is generally bad for students."*
- *"It wasn't pleasant"*

## 1.4. Comparative analysis and summary of the results from Bulgaria, Poland and Cyprus

After the individual analyzes of the results by country from the Questionnaire for assessing the attitudes of students, in this chapter we make a summary analysis and comparison of the results. When analyzing the results by questions, we often use the average values for the entire set of answers received. As researchers, we allow ourselves this approach because we observe a similar distribution of the answers of students from Bulgaria, Poland and Cyprus. In some of the questions, there are also larger differences that we have paid attention to, but for the most questions the trends are similar.

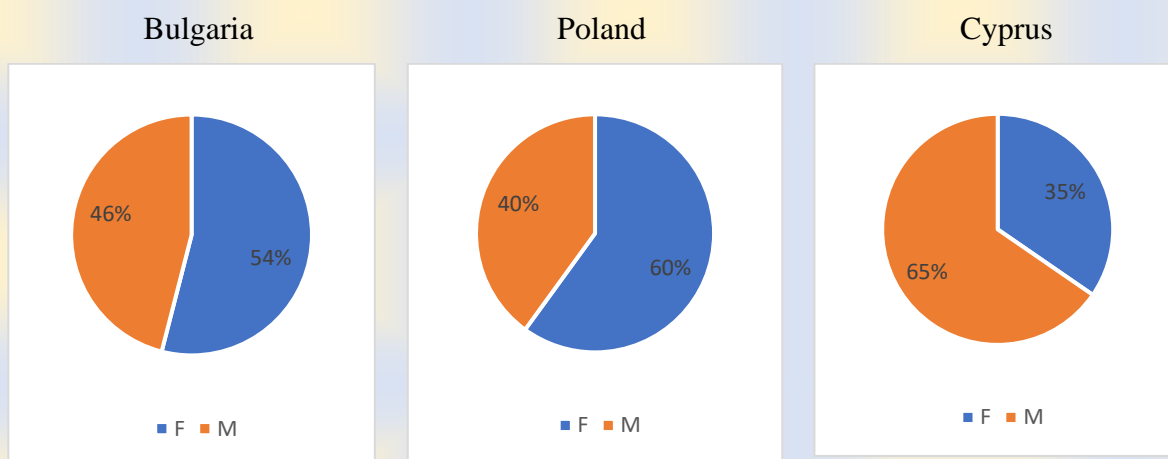
As part of our study, the [Questionnaire for the assessment of students' attitudes to well-being and mental health and the consequences of distance learning](#) (Appendix 1) was completed by a total of 152 students, respectively 50 from Bulgaria, 50 from Poland and 52 from Cyprus. The majority of all participants were aged 15-20 (65%), with the remaining 35% aged 7-14. From Bulgaria, all participants are representatives of the lower age group, while from Poland and Cyprus they are mostly students aged 15-20. The age breakdown of participants from the three countries is presented in the graphs below:

Age distribution of study participants



Regarding the gender of the respondents, the overall distribution of women ( F) to men (M) is exactly 50%-50%. As mentioned in the study methodology, demographic characteristics such as gender were not taken into account in the selection of participants in the samples. However, the end result shows a representativeness that matches the natural gender distribution in a school and ensures that the views of both sexes are taken into account.

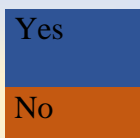
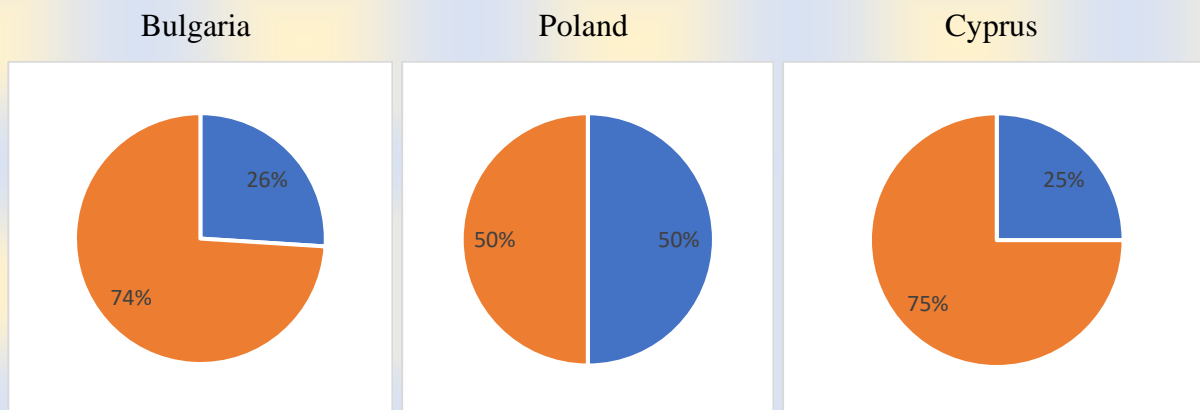
#### Gender distribution of study participants



The first question in the main part of the questionnaire assesses whether students feel more stressed during the COVID-19 pandemic. One third of all participants (34%) estimate that the pandemic has been a more stressful time in their lives, while the remaining 66% do not share this opinion. A significant difference can be seen in the results from Poland, where the proportion of students rating the stress during the pandemic as higher is twice as large as the proportion of students from Bulgaria and Cyprus (see the comparison graphs with the results below). In all three countries, measures are needed, including by teachers and school authorities, to support this large group of students, who are more vulnerable in critical situations and more exposed to the influence of stress.

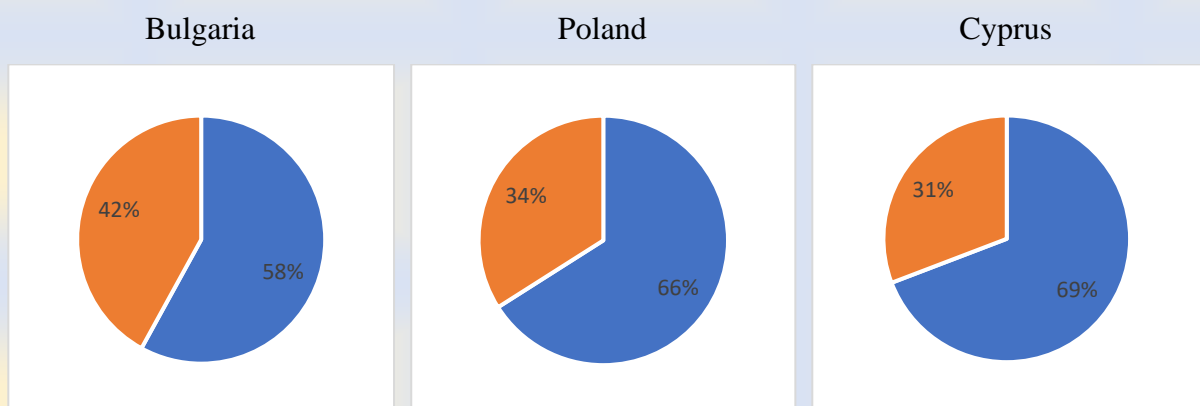


1. Did you feel more stressed during the pandemic?



The second question focuses on the potential attention difficulties that students may encounter when taking online classes. The concentration challenge is most severe for students in Cyprus, where 69% indicated that they find it difficult to pay attention in class if it is online. The situation is similar in Poland (66%), while in Bulgaria 58% have difficulty paying attention in class. Despite the slight discrepancy in the figures across the three countries, the results strongly indicate that staying focused in class is a serious challenge when delivering online learning for students from the three partner countries (64% of all respondents). It should be identified and adequately addressed by educators when planning and conducting lessons, so that students can progress at the same pace as in face-to-face classes.

2. Do you find it hard to pay attention in class if it's online?



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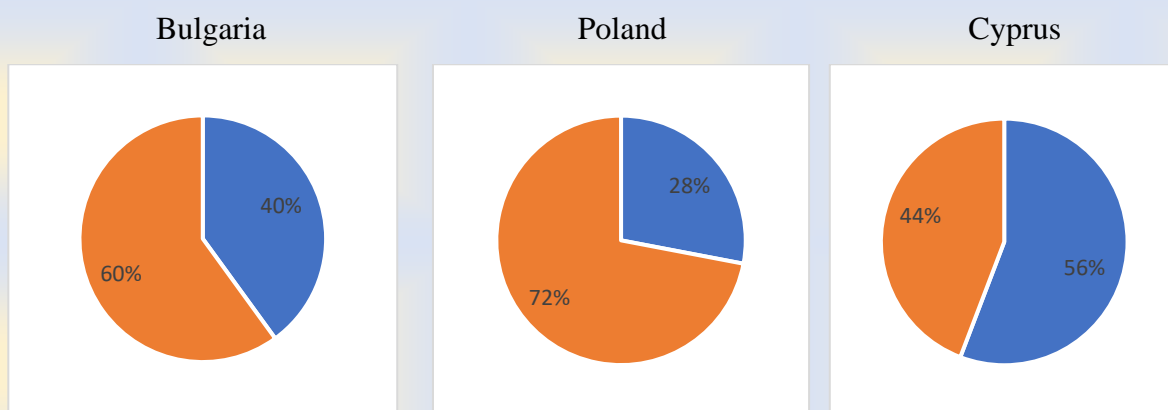
No

The third question assesses whether students feel more nervous now than before the pandemic and the distance learning period. 41% of all participants reported higher levels of nervous tension. Stress and nervousness are related conditions, and yet we see large disparities in the distribution of responses by country relative to the answers to the first question, "Did you feel more stressed during the pandemic?". In Poland, for example, half of the participants (50%) reported increased stress, and 28% said they felt more nervous during the pandemic. In Cyprus, 26% felt they were more stressed, but as many as 56% described themselves as more nervous during the pandemic. The divergence in Bulgaria is similar, as can be seen from the graphs below.

For us, as researchers and psychologists, this is no surprise. Often the respondents, especially if they are children, encounter difficulties of a semantic nature, to evaluate and express a certain psychological state or phase that they are going through. Therefore, in the present study we included three similar questions in the different parts of the questionnaire, which aim to identify the deterioration of mental health among the respondents, but worded differently (along with the two discussed, and question number 9 "Did you feel more stressed during of the pandemic?" has a similar meaning).

Despite the different numbers, the results support the conclusion that a **large proportion of students need support and measures to deal with nervousness and stress that have increased during the period of the COVID-19 pandemic and distance learning.**

3. Do you feel more nervous now compared to before the pandemic?



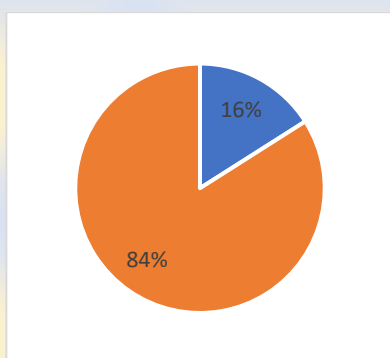
Yes  
 No

The fourth question asks students about their academic performance (grades) during online learning. The results show that, according to the majority of all survey participants (70%), their grades did not worsen during the period under review. Among the three countries, the largest share of students in Bulgaria (84%) did not register a decay in their success. Online learning had the biggest negative impact on Cypriot students, where 39% felt their grades were lower.

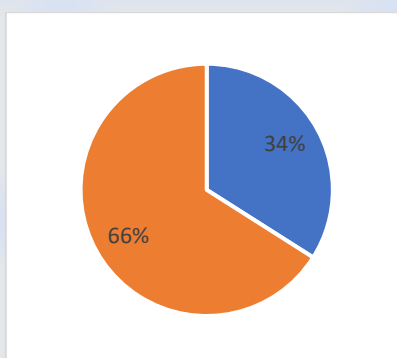
However, grades are only one aspect of the learning process. We see that the results of this question do not match the students' answers to the second question, "Do you find it difficult to pay attention in class if it is online?" or to question 8: "Did you have less desire to learn during online learning". Therefore, from the results we can judge the **good adaptability of the majority of students to the requirements of the new situation, but we cannot be sure that this corresponds to the preservation of the level of knowledge.**

4. Are your grades lower than they were before the online learning?

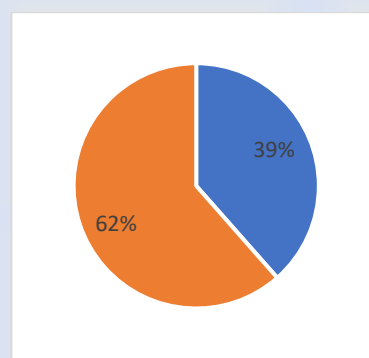
Bulgaria



Poland



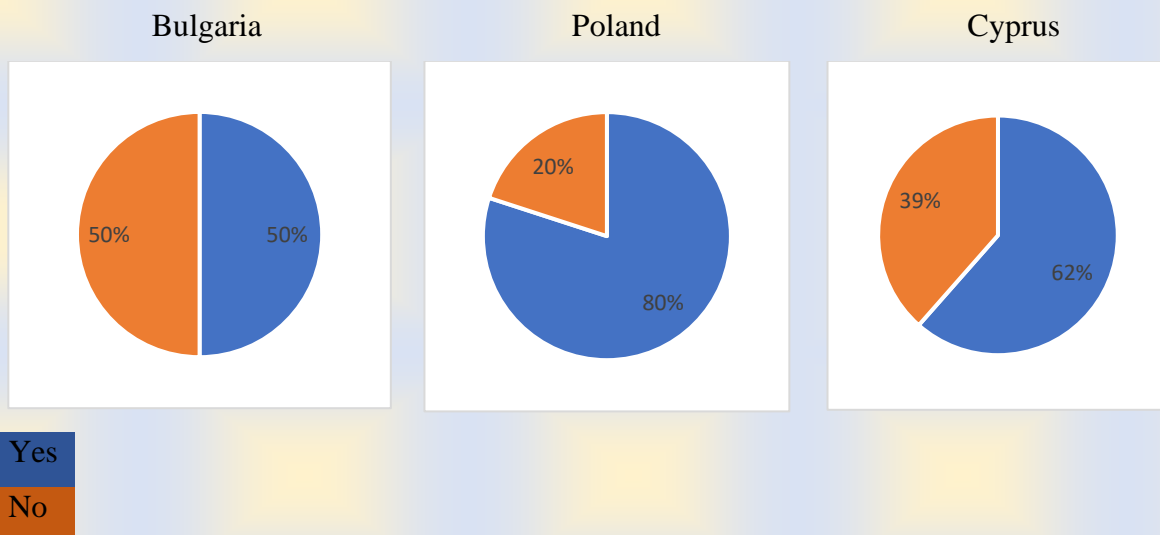
Cyprus



Yes  
 No

The fifth question addresses the feeling of isolation from the usual social environment at school, during distance learning. 64% of all respondents who completed the survey said that they felt more isolated from their friends at school. This negative consequence of the restrictions and the transition to an online school environment is felt most strongly by students in Poland (80%), while in Cyprus they are 62%, and in Bulgaria 50%. Although different, the numbers from all three countries are impressive, suggesting that for a large proportion of students, **online learning does not create a conducive environment for maintaining peer friendships at school**. Additional efforts are needed, including by teachers, to encourage contact between students to increase the proportion of those who feel connected to their classmates and to reduce feelings of isolation.

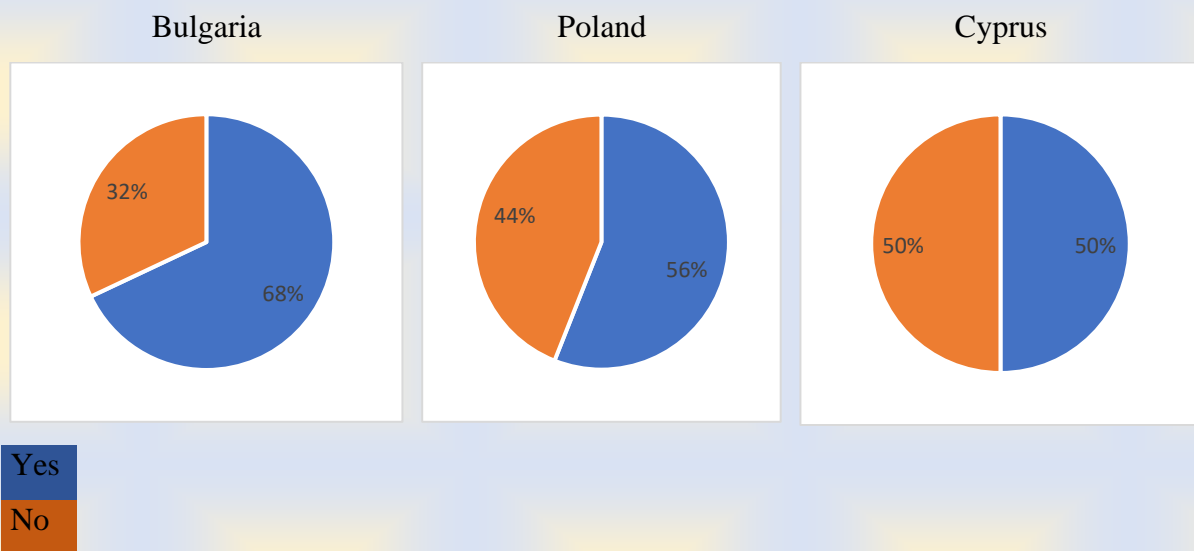
5. Did you feel more isolated from your friends at school during distance learning?



Yes  
No

The next question addressed the risks to physical well-being among students and asked if they had exercised less during the pandemic. Over half of all survey participants (58%) reported exercising less during this period, with results varying slightly across the three countries (see graphs below). The results show that the **majority of students experienced difficulties in maintaining their physical activity and sports engagement during online learning**. To a large extent, this is explained by the closure of schools and sports clubs in the period of the pandemic, but it is an important starting point for the development and inclusion of sports programs adapted for students in online learning into the daily school life.

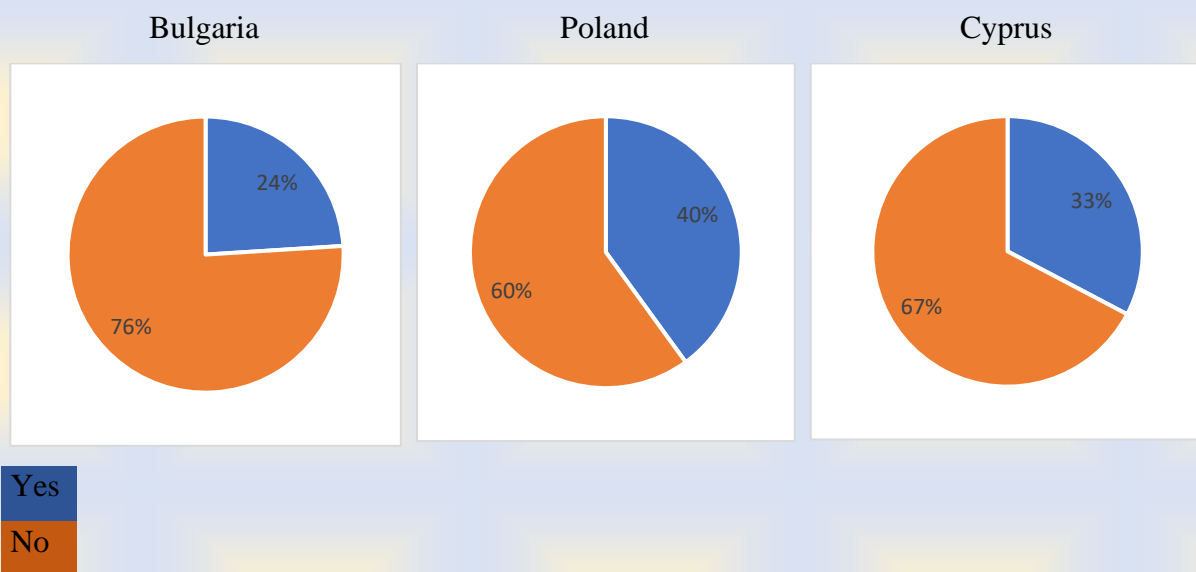
6. Did you exercise less during the pandemic?



Yes  
No

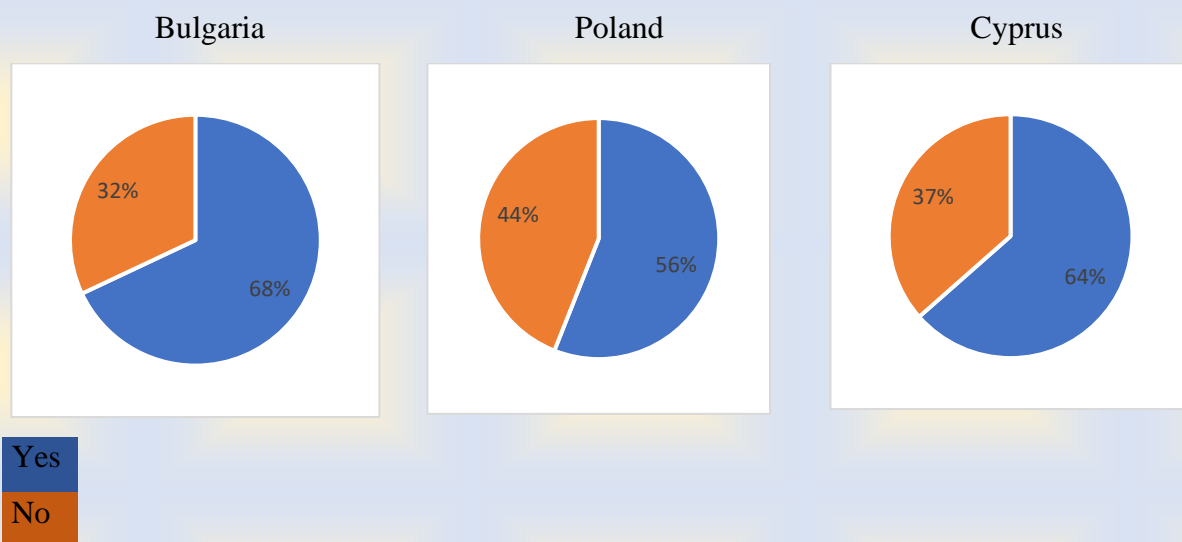
The seventh question also focuses on physical well-being. It assesses respondents' nutrition habits during the COVID-19 pandemic, and specifically whether they consumed more unhealthy foods. Unlike the answers to the previous question, this one shows that the majority of students have maintained their eating habits, with 32% of all of them sharing that they ate more unhealthy foods during the pandemic period. The share of students who have not worsened their diet is the highest in Bulgaria (76%), in Cyprus they are 67%, and in Poland they are 60%. Despite the positive results, we have to take into account that **one third of all students share that they have started to consume more junk foods while staying at home.** A balanced diet is very important, not only for the physical health of children and young people, but also for their mental health and overall well-being, and therefore special attention should be paid to promoting the maintenance of healthy eating habits among students, with a particular emphasis on periods of longer home stay.

7. Are you eating more unhealthy food than before the pandemic?



The eighth question reads: "Did you have less desire to learn during online learning?". Although the majority of respondents reported that their performance did not decay (see the answers to Question 4: Are your grades lower than before online learning?), the results related to learning motivation are not so positive. **63% of all respondents indicated that they felt less eager to learn during online learning.** This is very close to the results of the question that examined students' attention in class during the pandemic (Question 2), where 64% reported difficulty paying attention. Among students in the three countries, they were most affected by motivation problems in Bulgaria (68%) and Cyprus (64%), while in Poland this group was 56%, but still a majority. These results again call attention to **the need for targeted measures to address low levels of motivation and attention among students to supplement curricula when conducting online learning.** This should be a top priority in the work of educators, both in the teaching process and taken into account when preparing the teaching material.

8. Did you have less desire to learn during online learning?

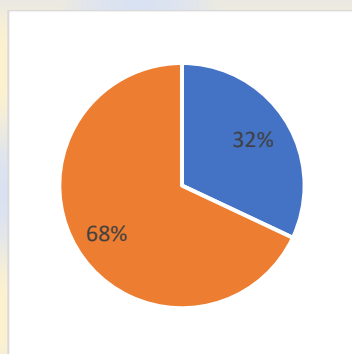


Yes  
No

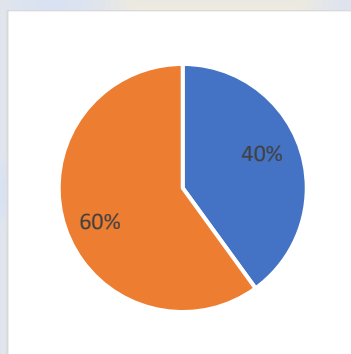
The ninth question tracks changes in the level of negative emotions among students during the pandemic. As explained earlier, it is linked to two other survey questions: 1. "Did you feel more stressed during the pandemic?" and 3. "Do you feel more nervous now compared to before the pandemic?" and aims to broaden and communicate in an appropriate way among students the important factors in the deterioration of mental health and well-being. According to the received answers to a question, 61% of all respondents do not consider that they experienced more negative emotions during the COVID-19 crisis. **However, a significant group of students (39%) consciously stated that the pandemic was a period saturated with more negative experiences.** These students needed extra support to deal with the emotional impact of the COVID-19 pandemic. In future periods of similar challenges, it will be of particular importance that their needs are adequately met within the framework of the education system, as an environment in which students reside on a daily basis - physically or online.

9. Did you experience more negative emotions during the pandemic?

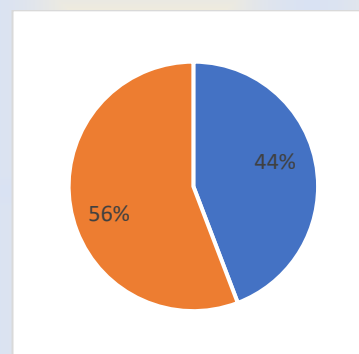
Bulgaria



Poland



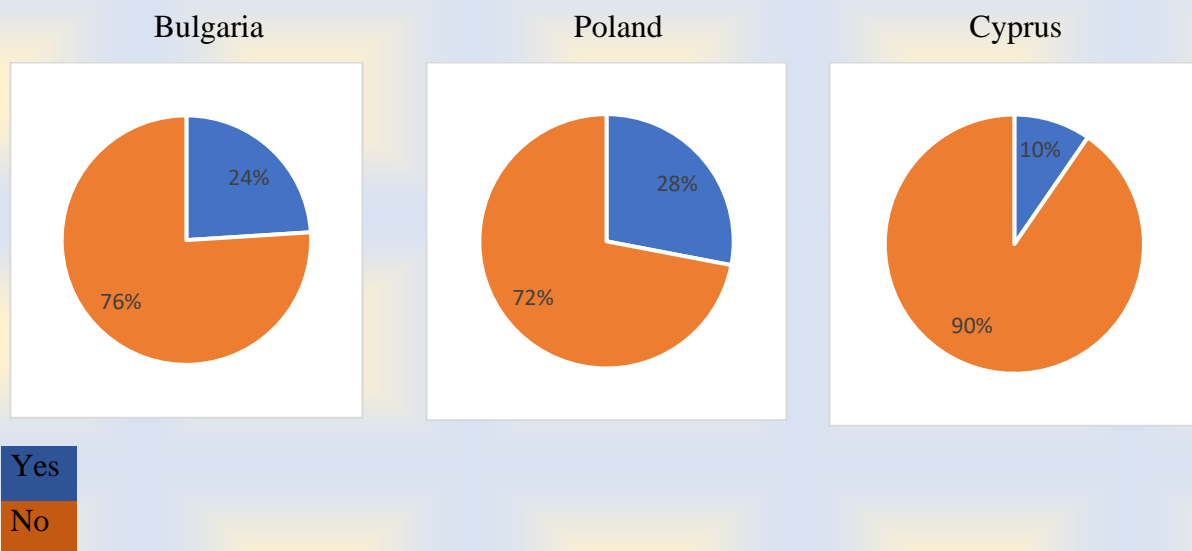
Cyprus





The next question assesses the quality of the relationship and communication with the teachers compared to a period of 2 years ago, through the students' point of view. 80% of all respondents do not report deterioration of relations and communication with their teachers, which in itself is an important precondition for academic success and well-being at school. The results are particularly impressive in Cyprus, where the figure reaches 90%. A comparison of the results in the three countries is presented below.

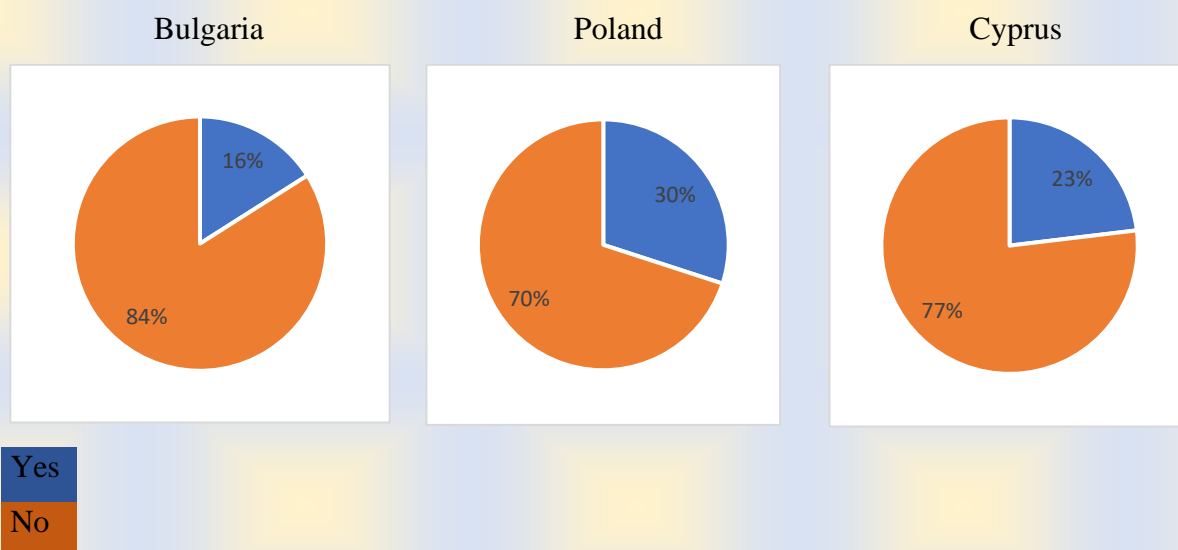
10. Do you feel that now you have a worse relationship and communication with your teachers compared to 2 years ago?



The next question is similar, but this time it is aimed at the changes in the quality of the relationship with classmates, compared to a period of 2 years ago. The results are close to those of the previous question and show that 79% of the participants do not feel a deterioration in their relationships and communication with their other classmates. This is most likely due to the fact that during the pandemic, students kept access to their natural environment thanks to the internet. This happened thanks to social networks and online communication channels/chats – although online students continued to communicate.

On the other hand, however, we must not forget about the results obtained from question 5." Did you feel more isolated from your friends at school during distance learning?", where 64% responded that they felt isolated. **It can be seen that, although available, online communication channels cannot provide sufficiently fulfilling relationships between students and ultimately a feeling of loneliness and isolation remains.**

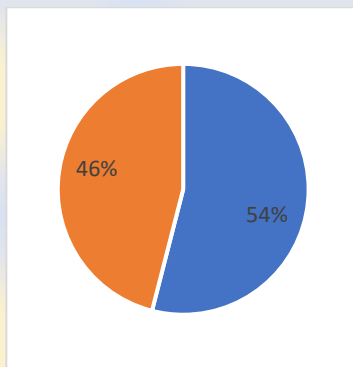
11. Do you feel that you now have a worse relationship and communication with your classmates compared to 2 years ago?



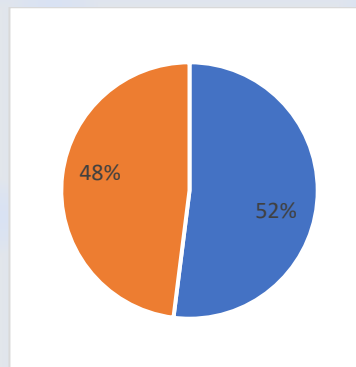
The twelfth question addresses students' feelings of anxiety about their health during the COVID-19 pandemic. The results from the three countries are extremely close (as can be seen from the graphs below) and show that 53% of respondents have lived with increasing concerns about their health during the pandemic. **We see that the majority of students need additional support to overcome their health concerns, which can be directly linked to their general well-being and mental health.**

12. Did you worry more about your health during the pandemic?

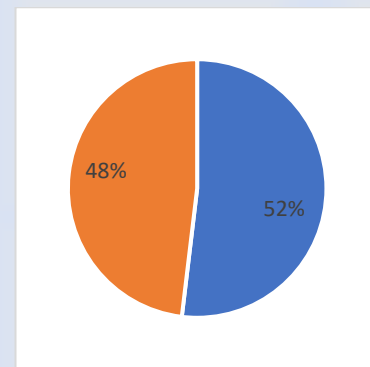
Bulgaria



Poland

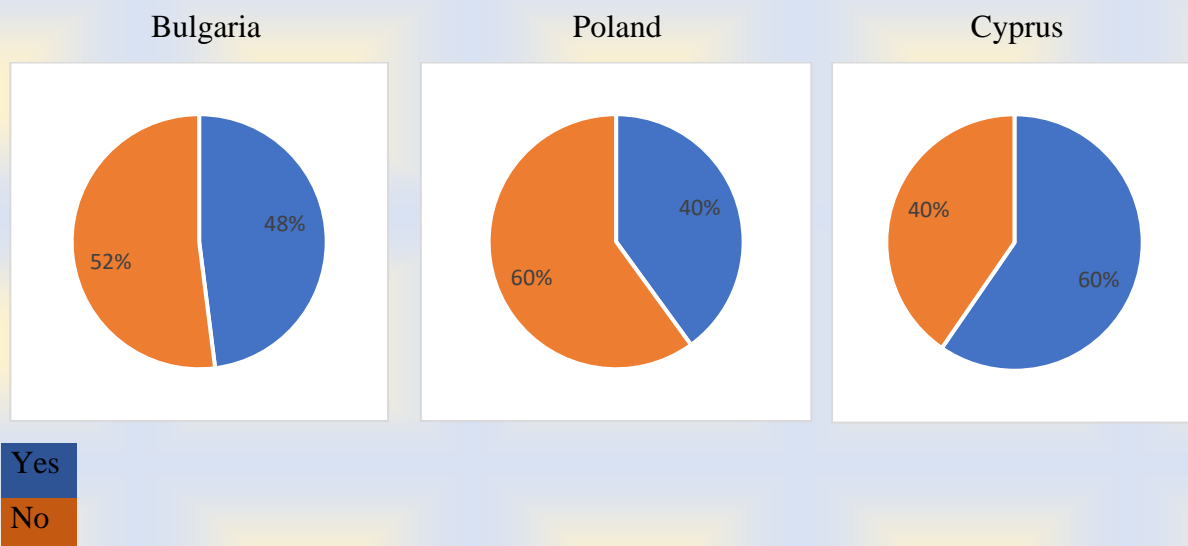


Cyprus



The next question explores another potentially negative emotional experience of students during online learning – concerns about their academic performance (school grades). **The results show that nearly half of the survey participants (49%) were worried about their grades during the period under review. This makes school stressful for a large proportion of students and, along with stress and other health concerns, can have a negative impact on their overall well-being.** Efforts are needed, including on the part of educators, to reduce anxiety about grades without affecting the quality of learning and teaching.

13. Did you worry about your grades during online learning?



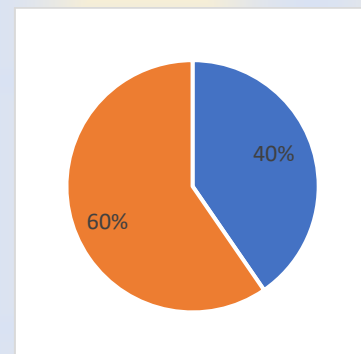
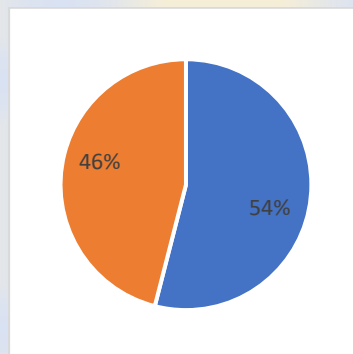
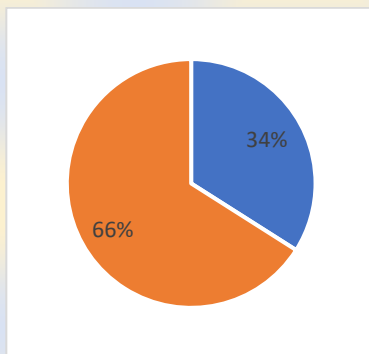
The last closed question is again aimed at the students' social environment. 43% of the participants say that they lost contact with some of their friends during the pandemic, with 54% in Poland, 40% in Cyprus, and 34% in Bulgaria. The results again draw attention to the quality of social contacts in an online environment and the difficulties children and young people face in maintaining and creating friendships at a distance.

14. Did you lose contact with some of your friends during the pandemic?

Bulgaria

Poland

Cyprus



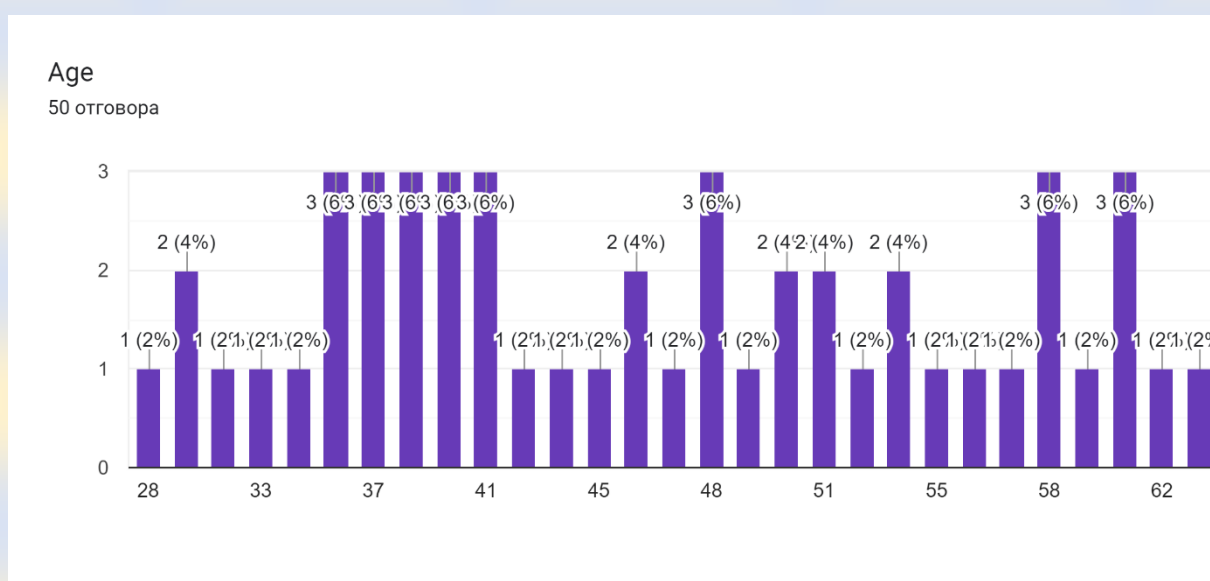
The last question is open and reads "Please share if you have any additional comments related to distance learning and the impact of the COVID-19 pandemic on you and your loved ones.". The answers contain a rich palette of diverse opinions describing the life of students in Bulgaria, Poland and Cyprus. What the students shared largely complements the analysis of the closed questions. However, the data collected are qualitative and cannot contribute to the comparison between the three countries. They help us, as researchers, to fully understand what children and young people are experiencing during this difficult period of testing for society as a whole. The specific answers can be found at the end of [the Analysis of the results of the student questionnaires](#) for each individual country - [Bulgaria](#) , [Poland](#) and [Cyprus](#) .

## 2. Analysis of the results of the survey among teachers

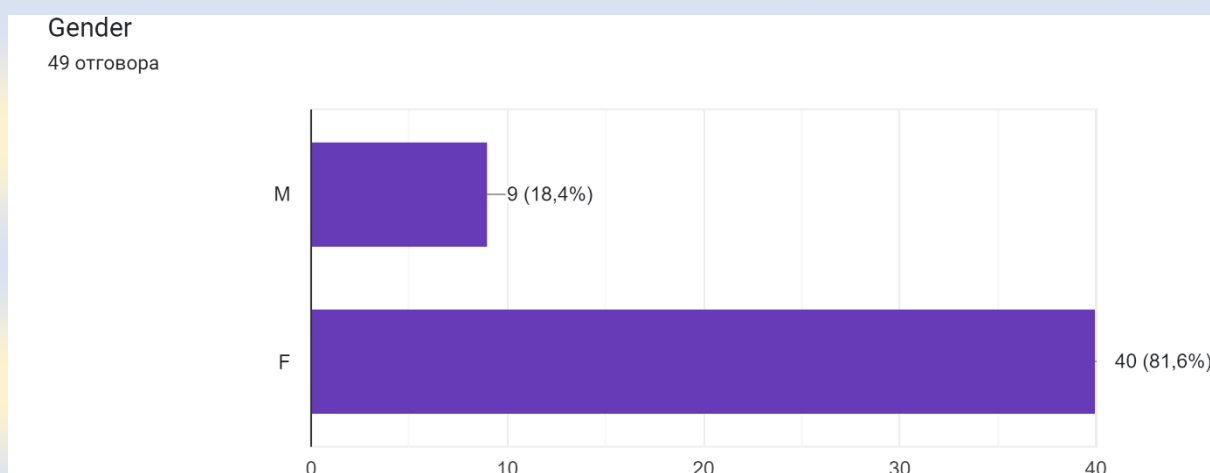
### 2.1. Analysis of the results from Bulgaria

The [Questionnaire for assessing the attitudes of Teachers on well-being and mental health and the consequences of distance learning](#) (Appendix 2) was completed by 50 teachers/educators "Hristo Botev" school in Bulgaria.

In terms of demographic profile, the sample is extremely diverse. The study participants were of different ages, ranging from 28 to 66 years, with different lengths of teaching experience.

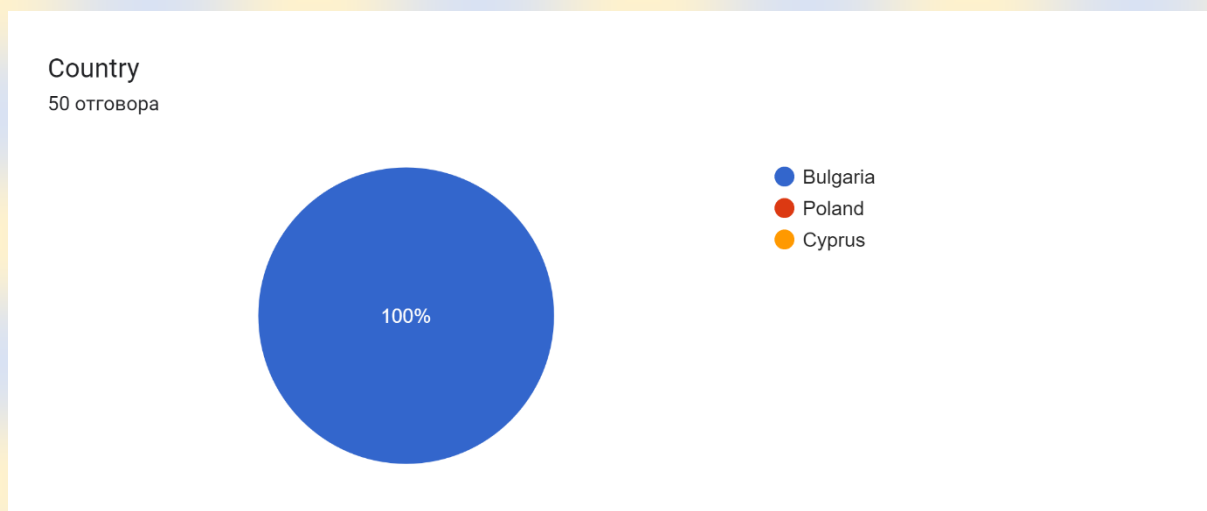


Regarding gender, the questionnaire was mostly completed by women (81.9%), while men were 18.4%. This is the traditional gender distribution in the teaching profession in Bulgaria, where the presence of women is usually dominant.

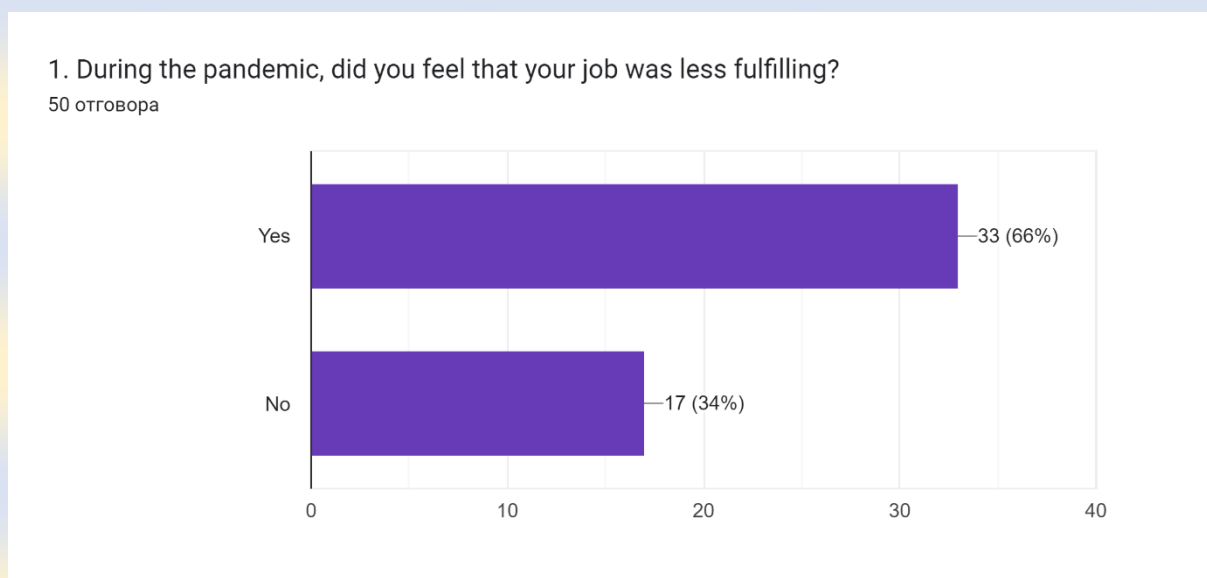


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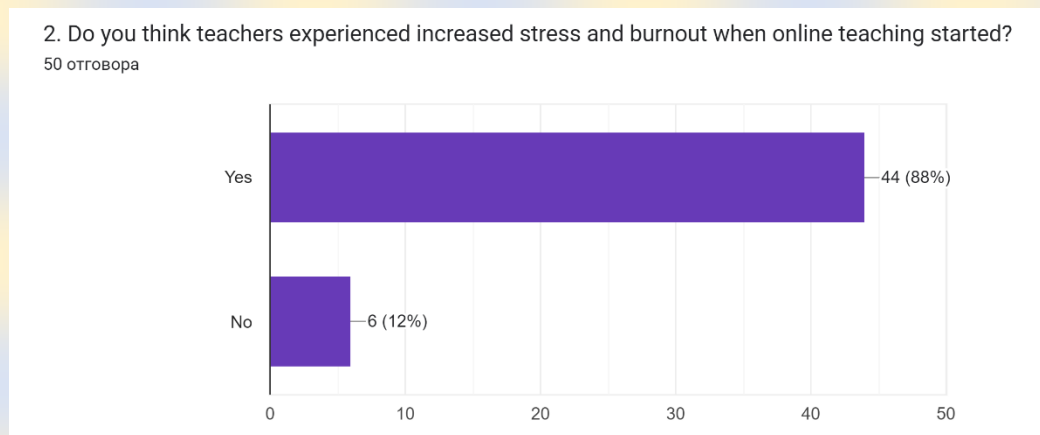
All (100%) participants are from Bulgaria.



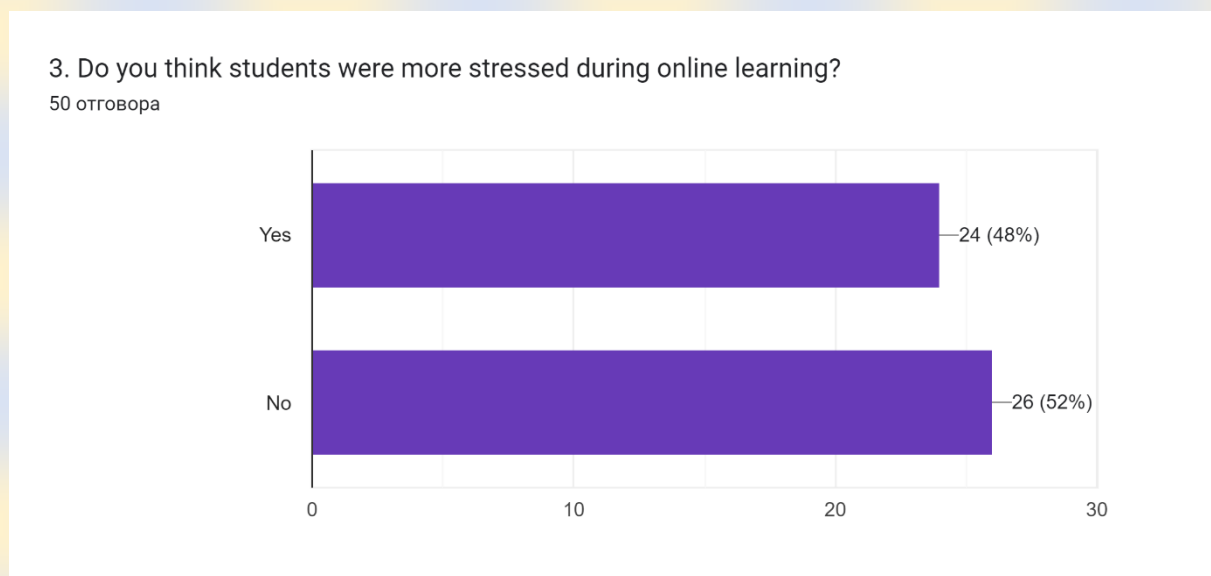
The first question in the main body of the questionnaire for Teachers assessed whether educators felt that their job was less fulfilling during the COVID-19 pandemic. The results showed that the majority of participants (66%) felt a lack of satisfaction in their work, while for 34% the degree of satisfaction was not lower during the online learning period. From these results, we can judge that distance learning has had a strong negative effect on the level of professional satisfaction among school teachers.



The second question focused on levels of stress and burnout in general among the teaching community in the online learning period. The results show that as many as 88% of respondents believe that teachers have experienced increased stress and burnout, while only 12% disagree with the statement that these levels have increased during the COVID-19 pandemic. This suggests that the majority of teachers need additional support from their respective educational institutions to successfully meet and deal with these negative emotional experiences.

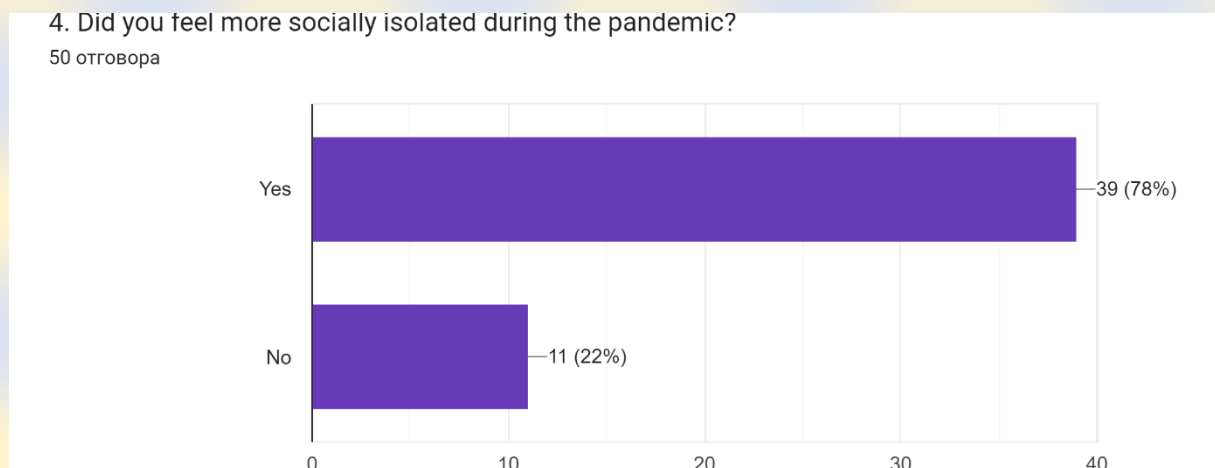


The next question assesses how teachers perceive their students' stress levels during online learning. The opinions of the participants are divided in two - 48% answered that students are more stressed during the pandemic, while for 52% this is not the case. The results show that a significant proportion of teachers believe that their students have experienced various negative emotional experiences that may have affected their well-being and mental health.

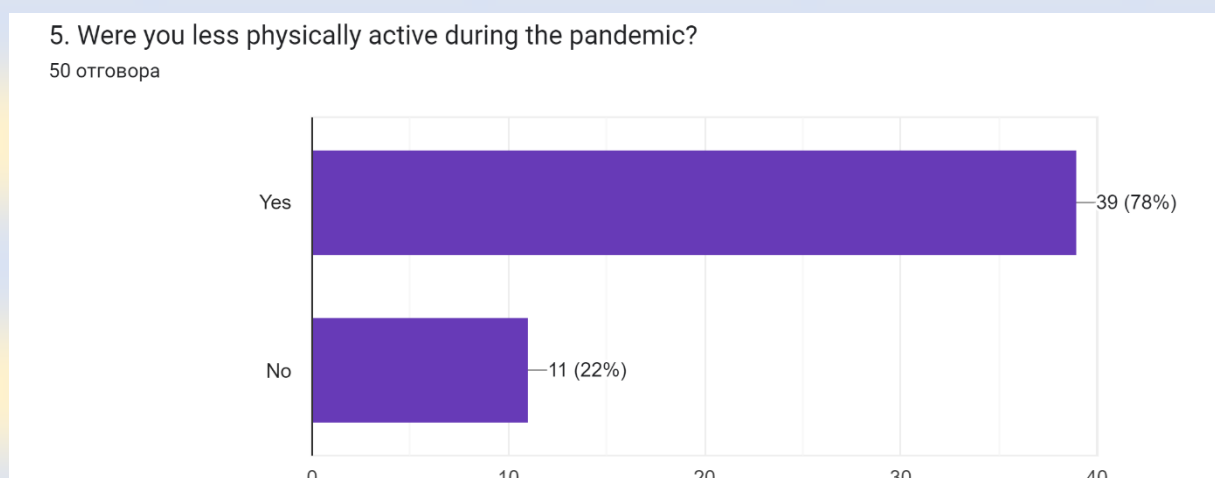




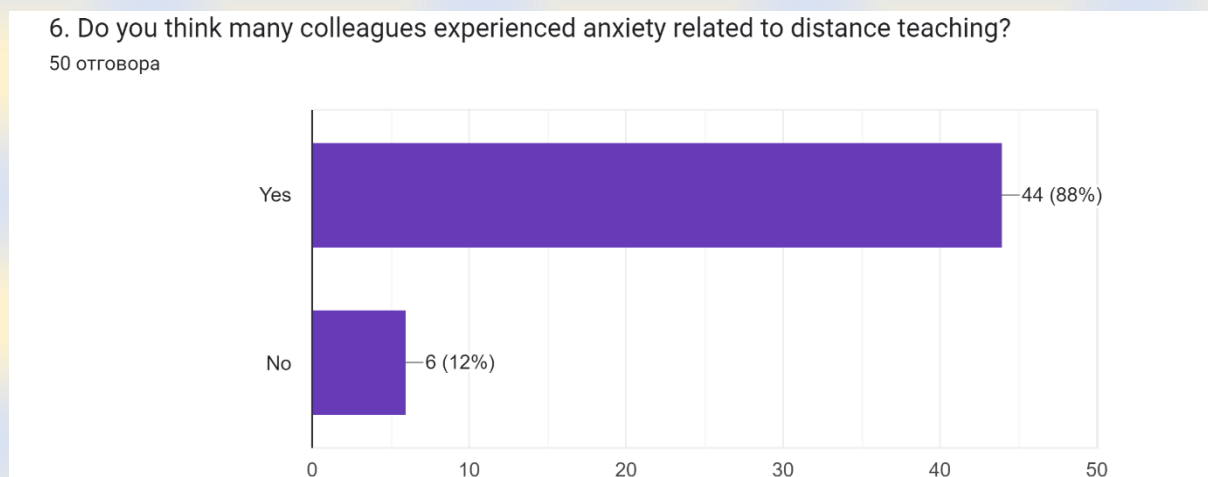
The fourth question deals with the social isolation of teachers during the COVID-19 pandemic and, respectively, the period of distance teaching. The results showed that the larger part of respondents felt more socially isolated (78%), and only 22% of them did not see any significant difference. This indicates that a substantial number of educators struggled in the social aspect of their lives possibly because of the restrictions during the pandemic (lockdowns, quarantines, school closures, lack of live interactions with other people, and other factors).



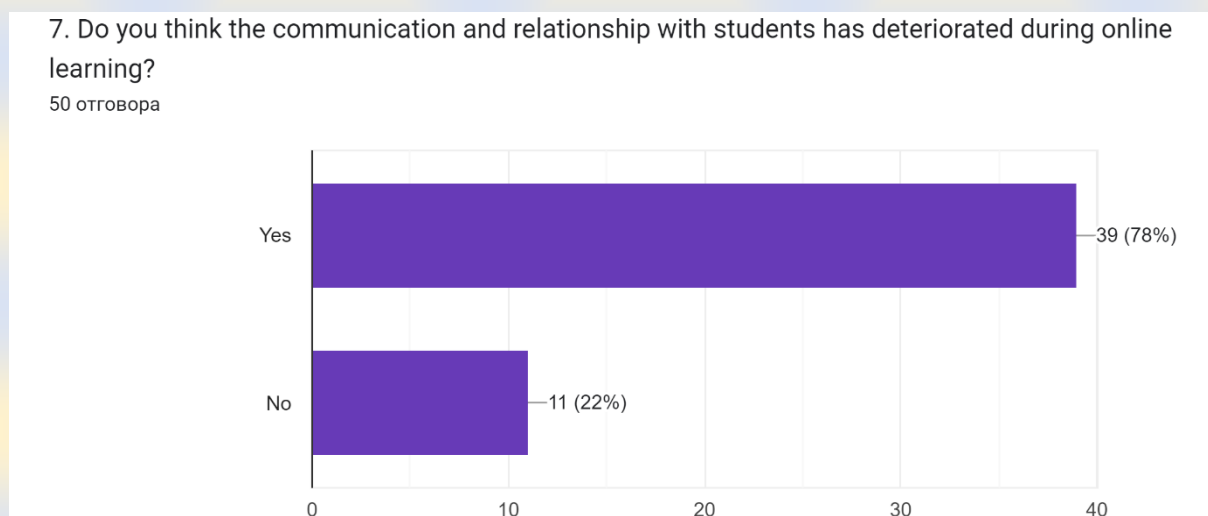
The next question examines the change in physical activity among teachers during the pandemic period. 39 respondents (78%) shared that they were less physically active during the COVID-19 pandemic, and only 22% managed to maintain the previous level (or improve it). This reveals that many educators found it difficult to motivate themselves to regularly engage in exercise and sports, did not find the opportunity, or simply did not have the time and energy during the distance learning period.



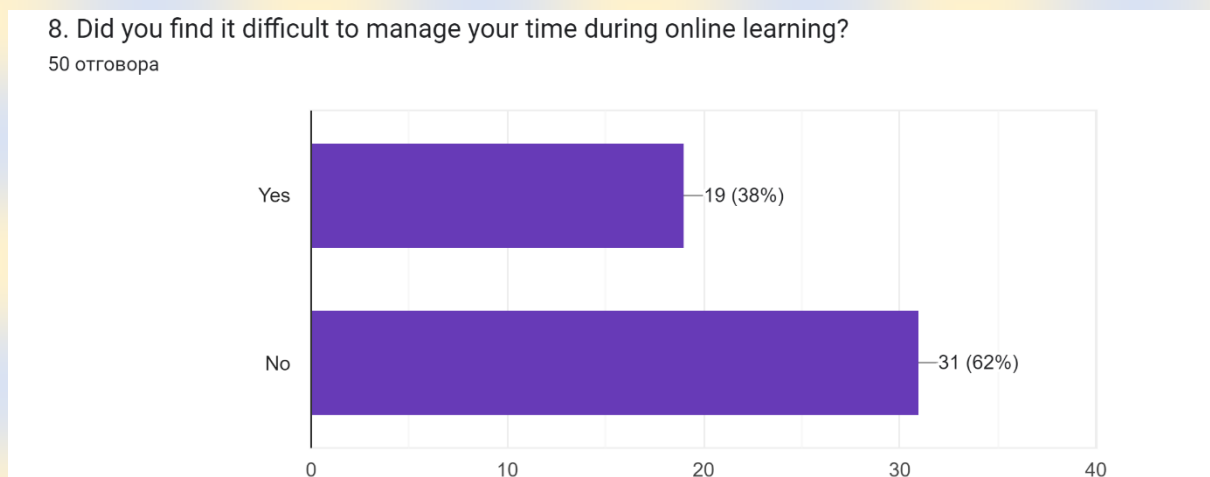
The sixth question asks teachers if they believe their colleagues have experienced anxiety related to distance learning. 44 of the educators questioned (88%) believe that their colleagues have had a similar negative experience, and only 12% think that this is not the case. The results clearly show that many teachers gave indications that during the distance learning period they struggle with anxiety and negative emotions due to the new challenges in their lives.



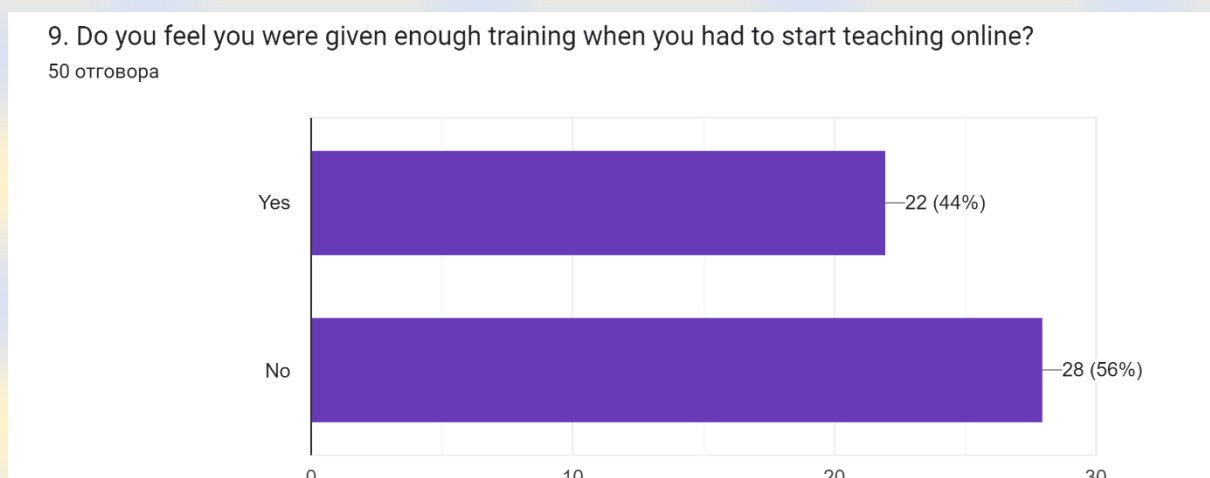
The seventh question focuses on the communication and relationship between teachers and their students during online learning. The majority of respondents (78%) stated that communication and relationships with their students have deteriorated during distance learning. Only 22% do not share that they have encountered such difficulties. It can be seen that online learning platforms have not been able to replace live contact in the classroom and provide sufficient opportunities for effective communication and maintaining the teacher-student relationship.



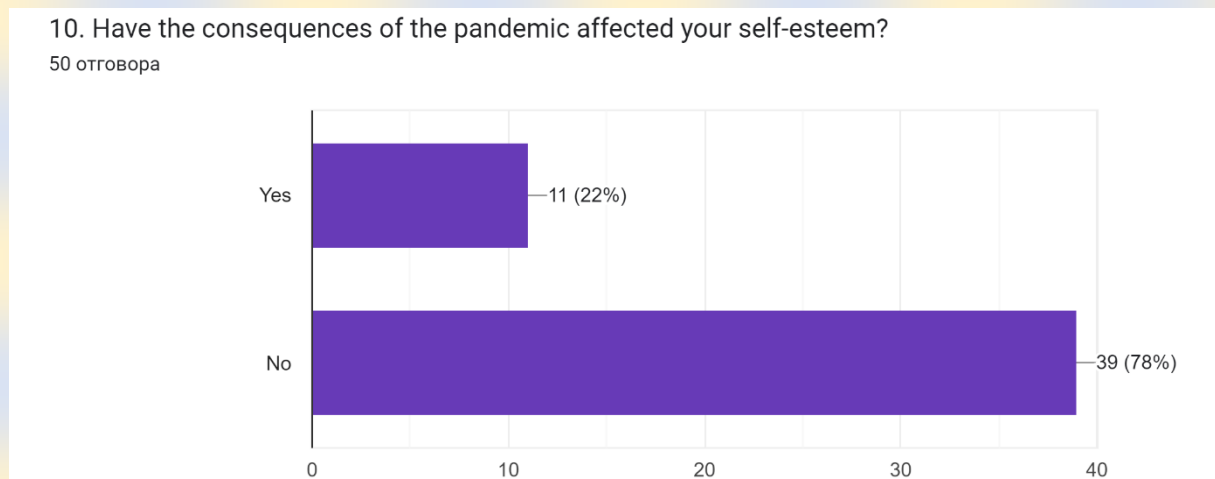
The next question evaluates whether teachers were able to manage their time effectively during the period of online learning. The data clearly shows that the majority of respondents (62%) experienced no difficulty in time management, whilst for 38% of them it was a challenging aspect. Evidently, part of the educators needs further support in improving their time management skills (especially, in the context of distance teaching, as it may occur again in the future).



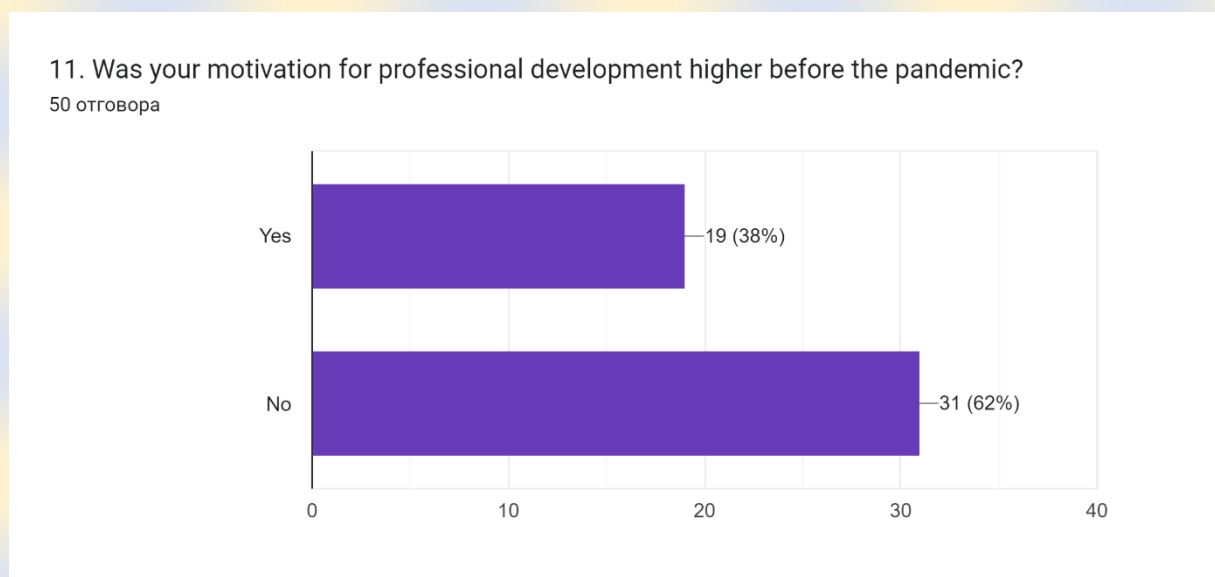
The subsequent question states “Do you feel you were given enough training when you had to start teaching online?”. The results are mixed – 56% answered “No” whilst 44% of participants replied “Yes”. It is evident that the majority of teachers did not receive sufficient support before the start of distance learning and felt inadequately prepared for this task. This is not unexpected, as the pandemic was an emergency situation in which education officials around the world did not have enough time to prepare accordingly.



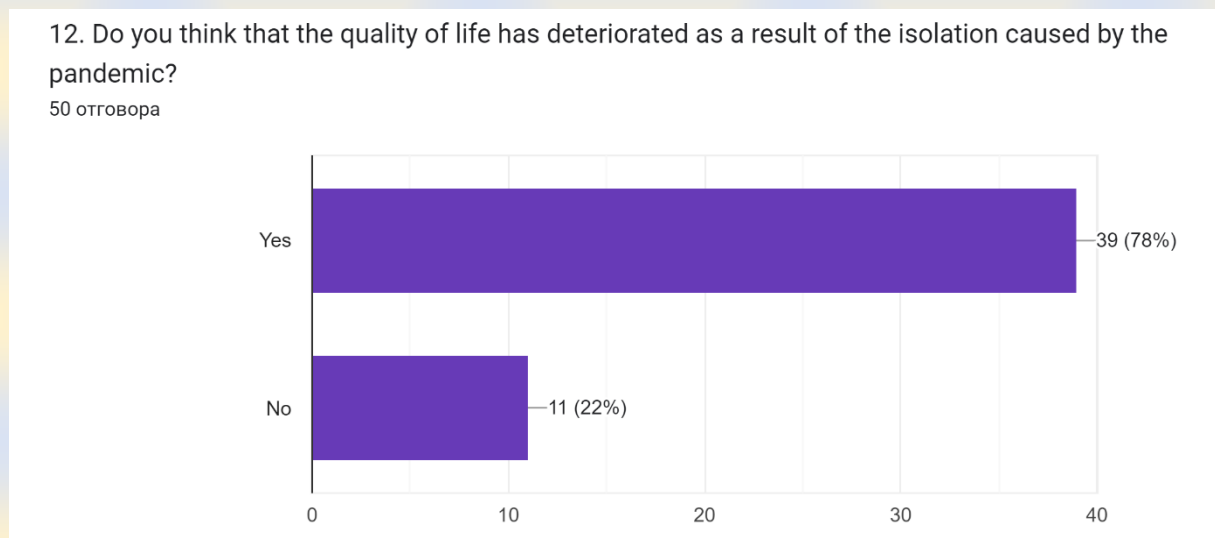
The tenth question evaluates if the consequences of the COVID-19 pandemic has had a negative impact on the self-esteem levels of teachers. The results show that 78% of educators did not experience a decrease in self-esteem, regardless of the consequences of the pandemic. Nevertheless, a small number of teachers (22%) shared that they feel less confident than before, which may be due to a number of factors – such as insufficient training or preparation for teaching online, lack of proper live communication between educators and students, and other.



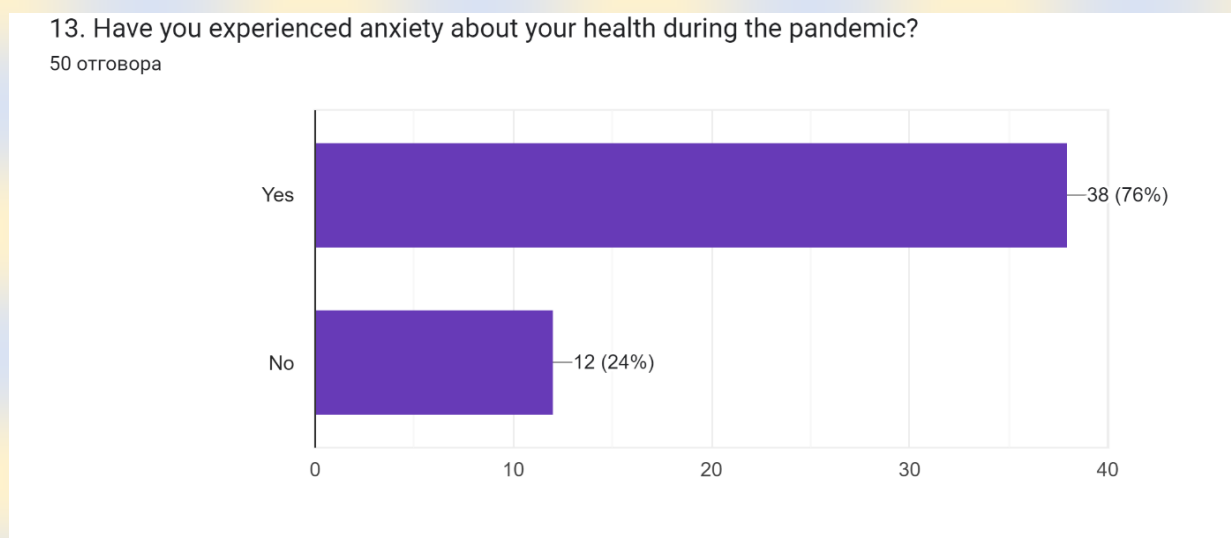
The next question reads "Was your motivation for professional development higher before the pandemic?". The results show that for 62% of teachers, motivation for professional development was not higher before the COVID-19 pandemic, so distance learning did not have a negative impact on their motivation levels. However, not a small number of educators (38%) share that they feel a difference.



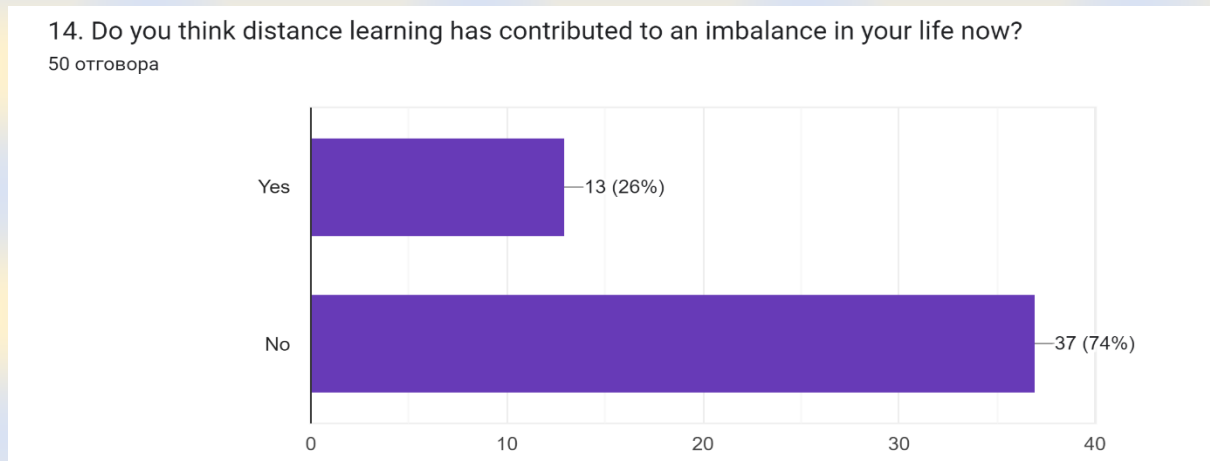
The twelfth question assesses whether teachers' quality of life has deteriorated due to isolation during the COVID-19 pandemic. The results can be described as negative, as 78% of respondents answered "Yes" while only 22% answered "No". This fact unequivocally shows that the pandemic situation and social isolation have a significant negative impact on the quality of life of educators.



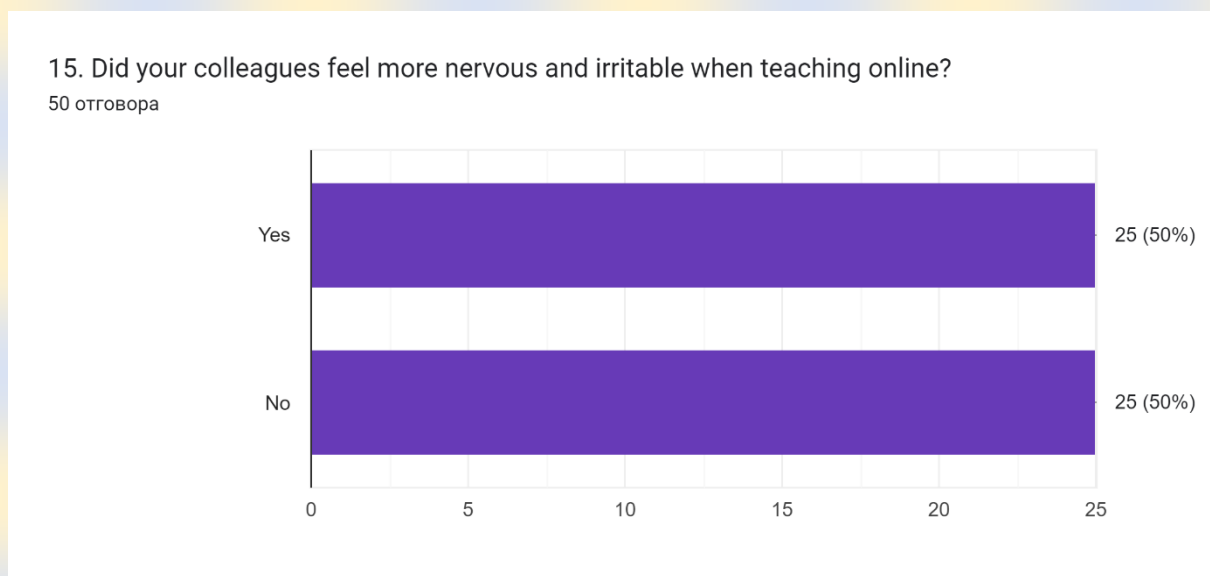
The next question concerns teachers' experience of health anxiety during the COVID-19 pandemic. Here the negative impact of the pandemic on the mental well-being of teachers is clearly shown – 76% of educators shared that they experienced anxiety about their health during the pandemic, and only 24% have not experienced such. This result is not unexpected but shows that educators need further support to deal with this negative emotional state.



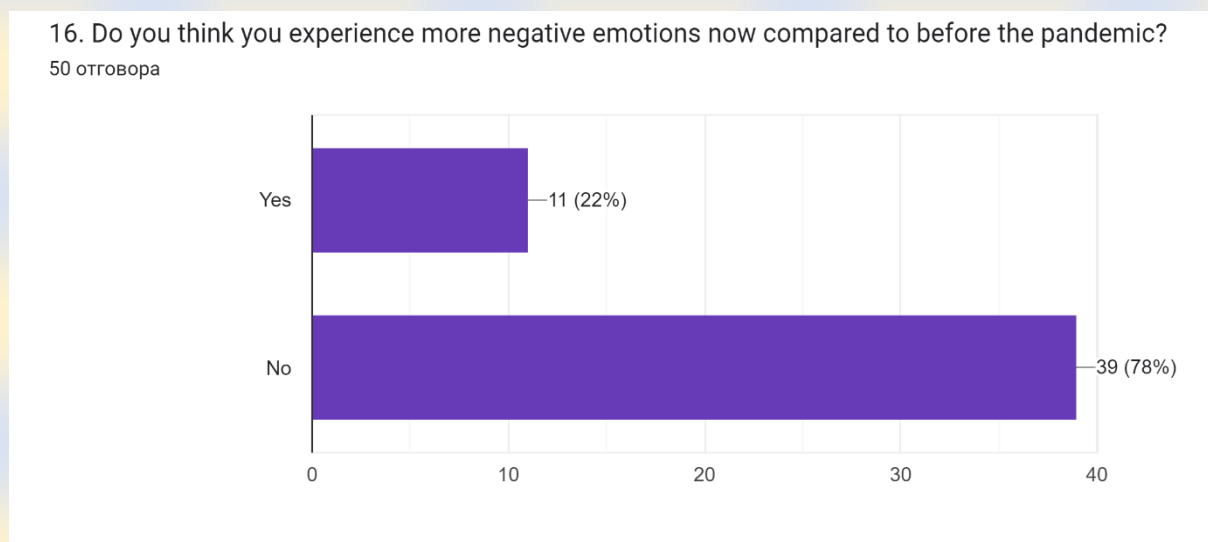
The 14th question reads: "Do you think distance learning has contributed to an imbalance in your life now?". According to the results, the majority of respondents (74%) answered with "No" and only 26% with "Yes". This demonstrates that most of the participants in the study have managed to achieve a good life balance during the period of distance learning and afterwards.



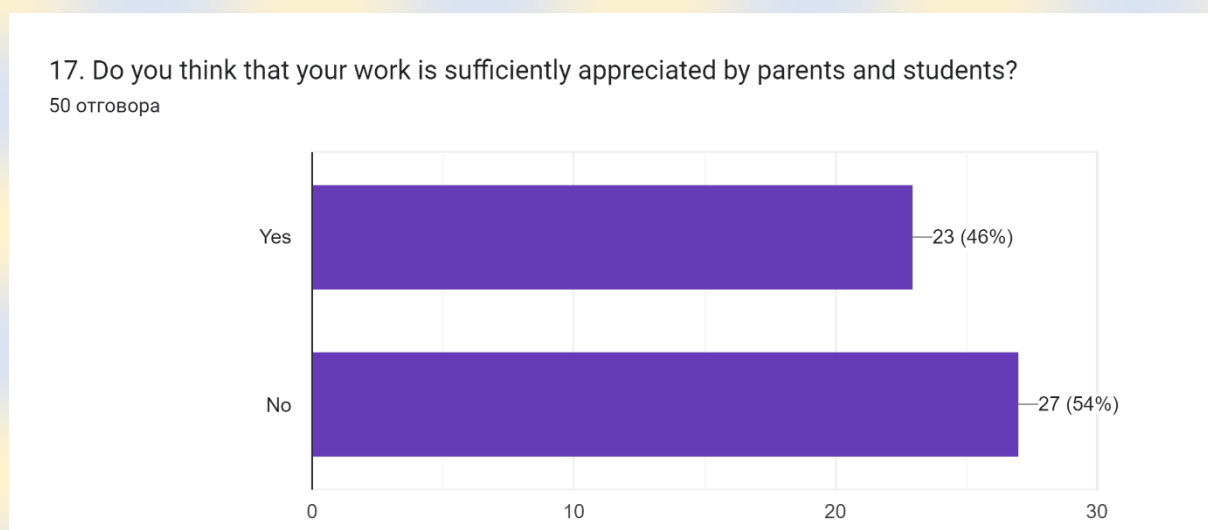
The 15th question reads: "Did your colleagues feel more nervous and irritable when teaching online?". The results showed that half of the respondents (50%) believe that their colleagues experienced increased levels of nervousness and irritability during online teaching, whilst the other half of participants have not observed such tendency in their co-workers. This indicates that a substantial part of teachers may have struggled emotionally during distance teaching due to the increased work demands which caused them significant distress.



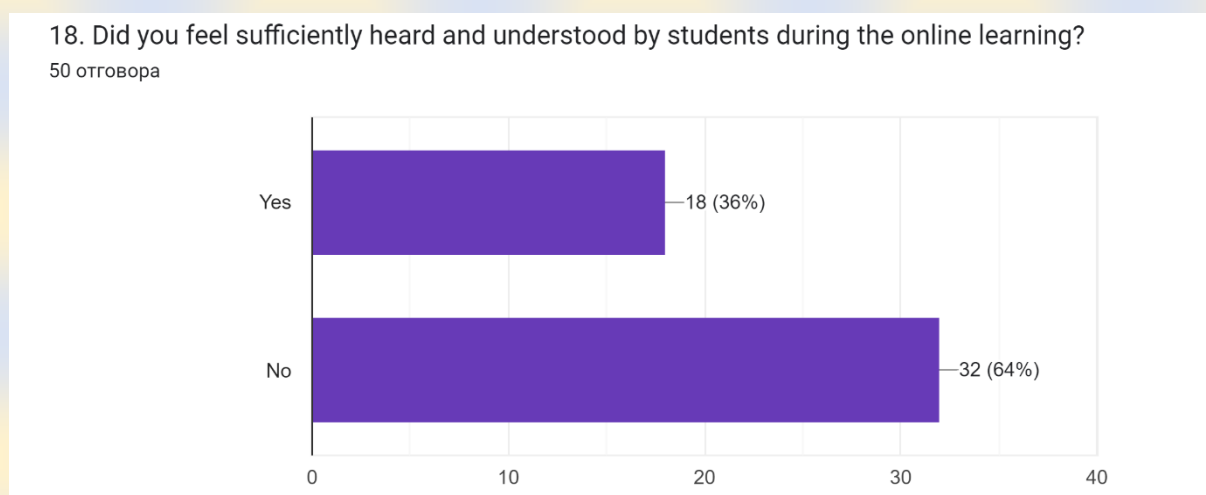
The next question measures whether educators experienced more negative emotions now compared to before the COVID-19 pandemic. The majority of teachers (78%) responded that they no longer felt negative feelings, while only 22% were of the opposite opinion. From these results, it appears that educators manage to maintain a more optimistic outlook despite the demands of the unprecedented situation.



17th question is focused on the perceived evaluation of teachers' work by students and their parents. The results are diverse - 54% of respondents believe that their work is not sufficiently appreciated by the aforementioned groups, whilst 46% are of the opposite opinion. Evidently, there is an issue with teachers having their work efforts not recognized enough by parents and students, which may be due to lack of face-to-face communication during distance learning.

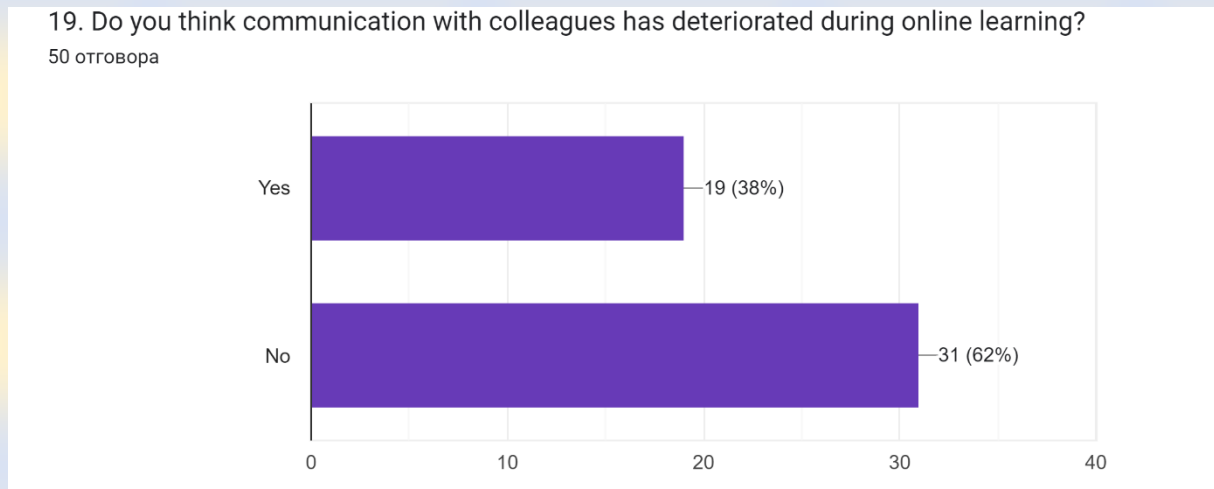


The next question reads: "Did you feel sufficiently heard and understood by the students during the online learning?". More than half of the respondents (64%) shared that they did not feel sufficiently heard and understood by the students during online learning. Only 36% of them are of the opposite opinion. These results add to the understanding of weakened communication with students and reveal problems with interaction and relationships between teachers and students that were negatively affected by the new format of the learning environment.



The last closed-ended question deals with the communication of teachers with their colleagues and whether it has deteriorated during online learning. The results here are good – 62% believe their interaction with co-workers has not been negatively impacted during distance teaching, whilst only 38% think otherwise. Nevertheless, 38% is not a small percentage and additional attention should be paid to the way educators communicate in the context of online learning, and how they could improve this aspect.





The last 20th question (which is open-ended) stated: “Please share if you have additional comments related to distance learning and the impact of the COVID-19 pandemic on you and your close ones.” 9 participants (18%) left an additional comment. Their opinions are extremely open and comprehensive and give a clear idea of the whole spectrum of negative emotions that the teachers have gone through. The answers received are:

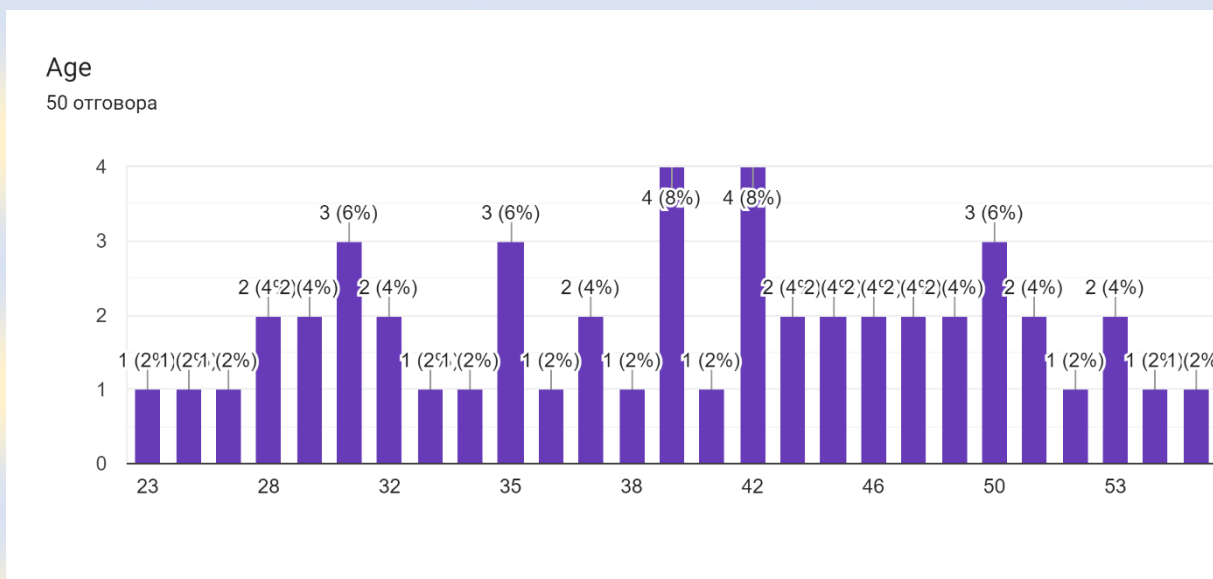
- *„There was no pandemic. The criteria about announcing a pandemic were changed as it was all a conspiracy to keep several billion people closed at home. The death was not from the "virus" but from the experimental liquids called vaccines, which people got “.*
- *„The pandemic made people closed and some still can't interact with others as before“.*
- *„The pandemic and the online education left durable mark in me. The recovery from them would be a long process. “*
- *„Distance (online) learning wasn't effective, as the teachers didn't have control over the students.“*
- *„Distance learning wasn't effective and the COVID-19 pandemic influenced me and my family in a negative way.“*
- *„Distance learning according to me was not good. I hope we never experience the so called "isolations". It lead to no good! For no one! “*
- *„Distance learning was useless and stressful. The results are close to 0. Distance learning has a future but it needs time for both students and teachers. “*
- *„Only students who wanted were working during the distance learning.“*
- *„The teachers were not trained on how to teach online“.*

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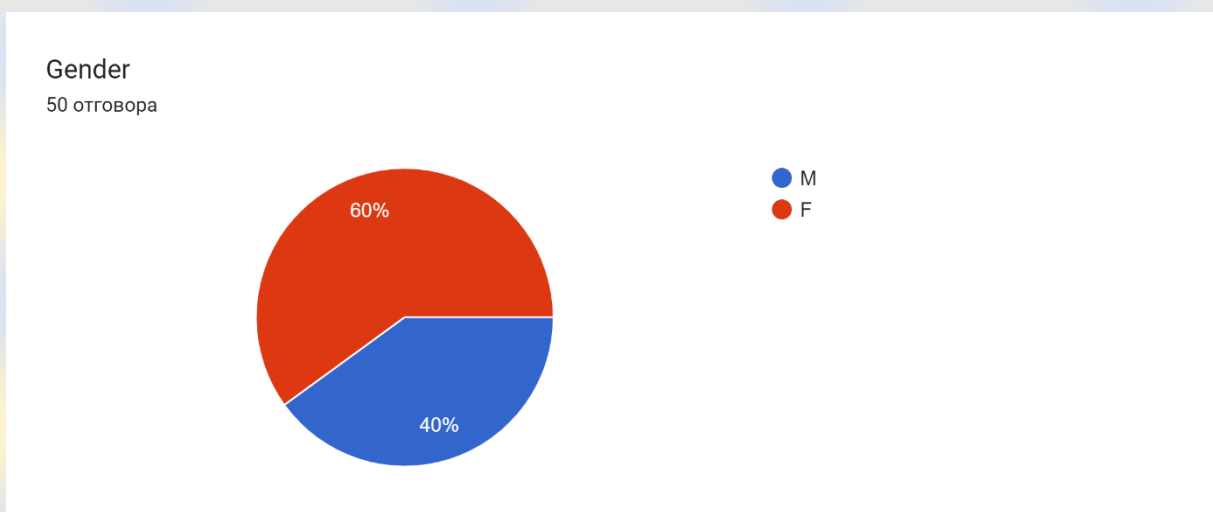
## 2.2. Analysis of results from Poland

The Questionnaire for assessing the attitudes of Teachers on well-being and mental health and the consequences of distance learning (Appendix 2) was completed by 50 teachers/trainers/educators from WSBINOZ, Poland.

Regarding the demographic profile of the study participants, they were of different ages, ranging from 23 to 60 years old, making the sample very diverse in terms of years of professional teaching experience.

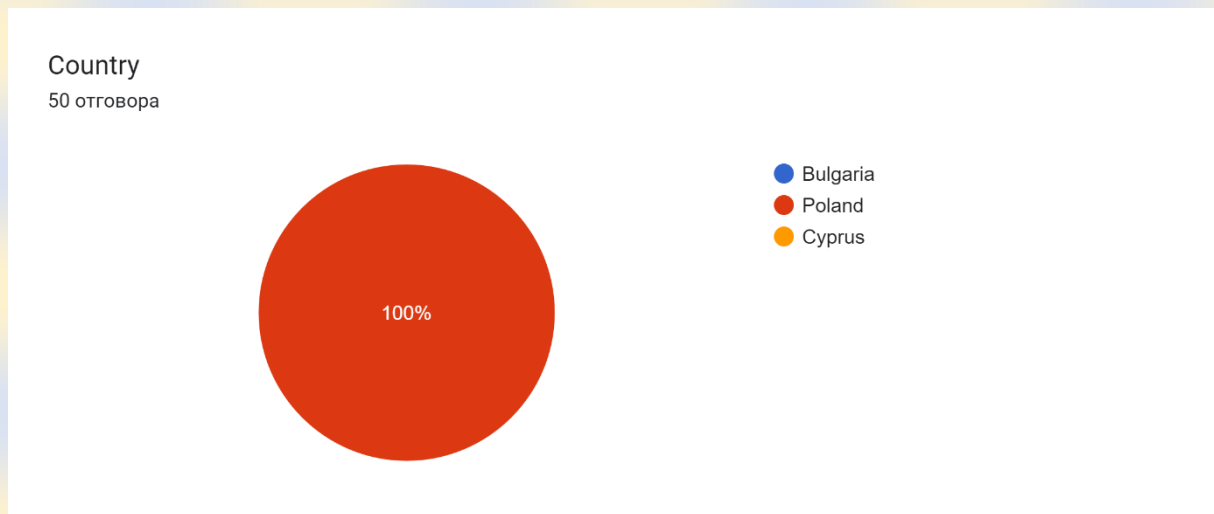


As regards gender, the surveyed teachers/trainers were mostly female (60%), while 40% were male. This is typical for the teaching profession, in which women tend to outnumber men.

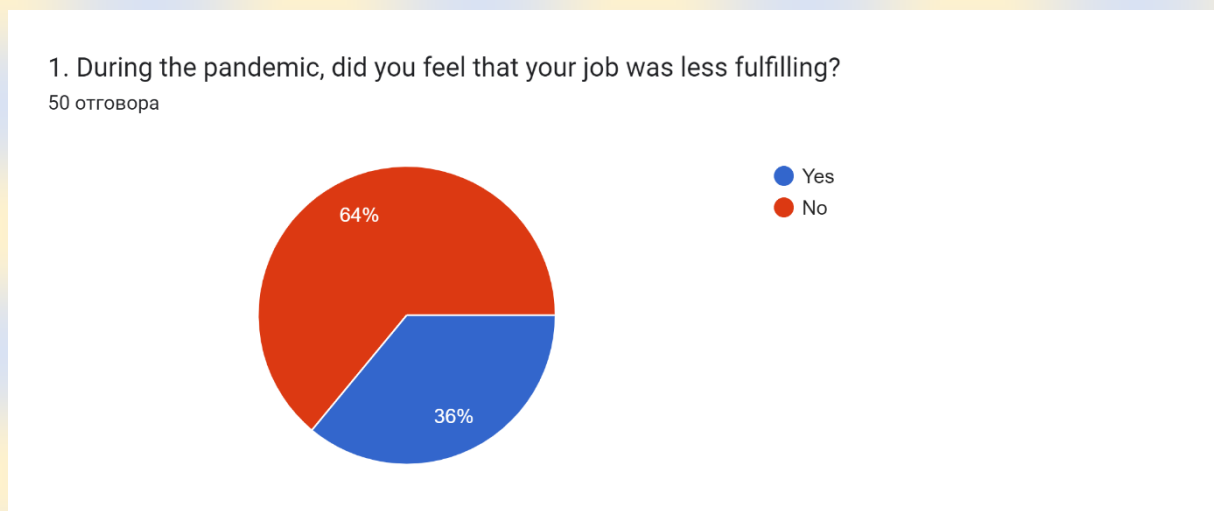


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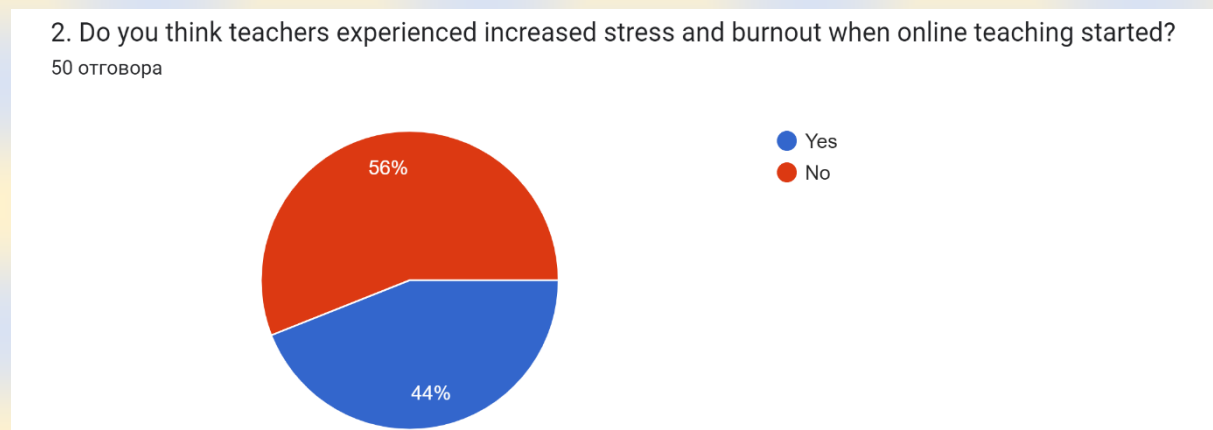
In addition, 100% of the participants are from Poland.



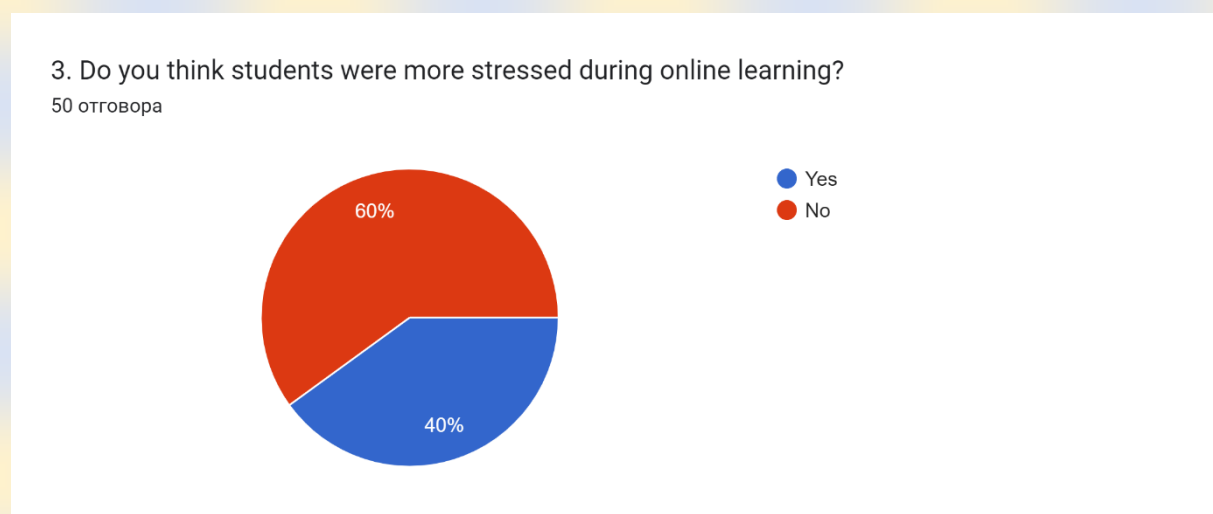
The first question of the questionnaire for Teachers evaluated whether trainers felt that their job was less fulfilling during the pandemic. The results showed that the larger part of participants (64%) did not experience any significant change in that regard, whilst 36% of respondents felt that their job was less fulfilling than before. This shows that more than 1/3 of teachers/educators were not satisfied with their teaching careers during the pandemic.



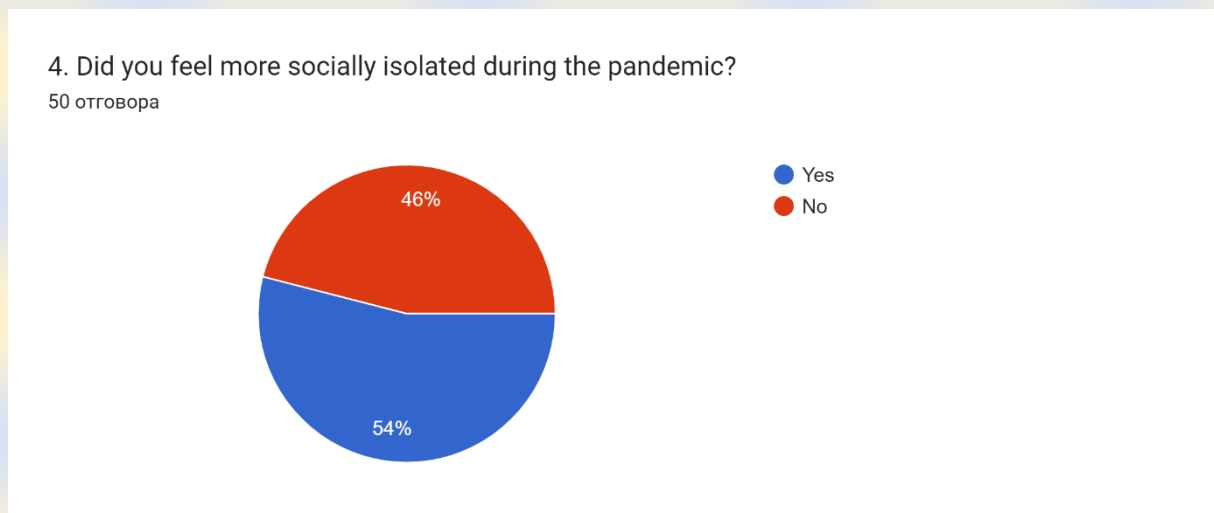
The second question examines the levels of stress and burnout experienced by teachers during online teaching. The question refers to teachers in general and is not directed at the respondents personally. Here the results are rather mixed – 56% of respondents do not believe that trainers have experienced increased levels of stress and burnout, while 44% believe the opposite. This clearly shows that a large share of teachers do not have developed mechanisms and need targeted support from their educational institutions to deal with negative changes in stress levels and burnout during online teaching.



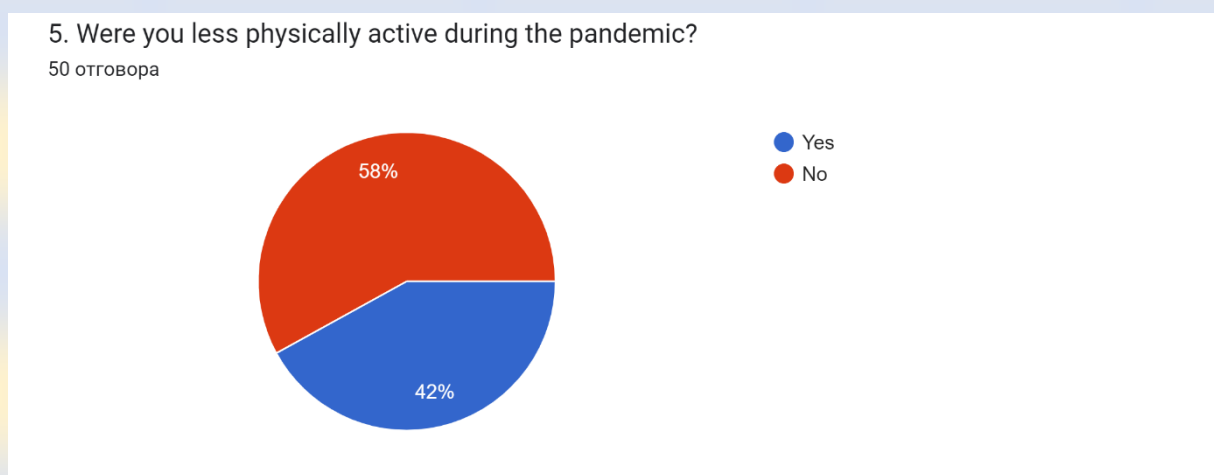
The third question focused on whether teachers believed students were more stressed during online learning. 40% answered "Yes" and 60% answered "No". This shows that even in an online environment, a large proportion of teachers were able to indicate increased levels of stress among students, which is likely to have a subsequent negative impact on their general well-being and mental health for both groups.



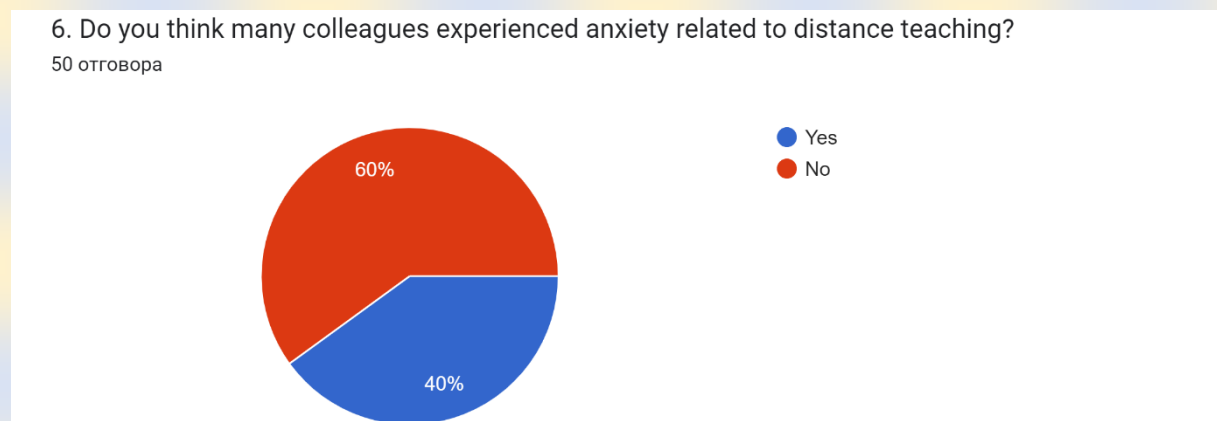
The fourth question evaluates whether teachers felt more socially isolated during the pandemic and distance teaching. The results again were mixed- more than half of respondents (54%) shared that they experienced increased social isolation during that period, whilst 46% did not feel such change. This shows that a large number of educators had difficulty in their social lives possibly because of the social restrictions which occurred during the COVID-19 pandemic.



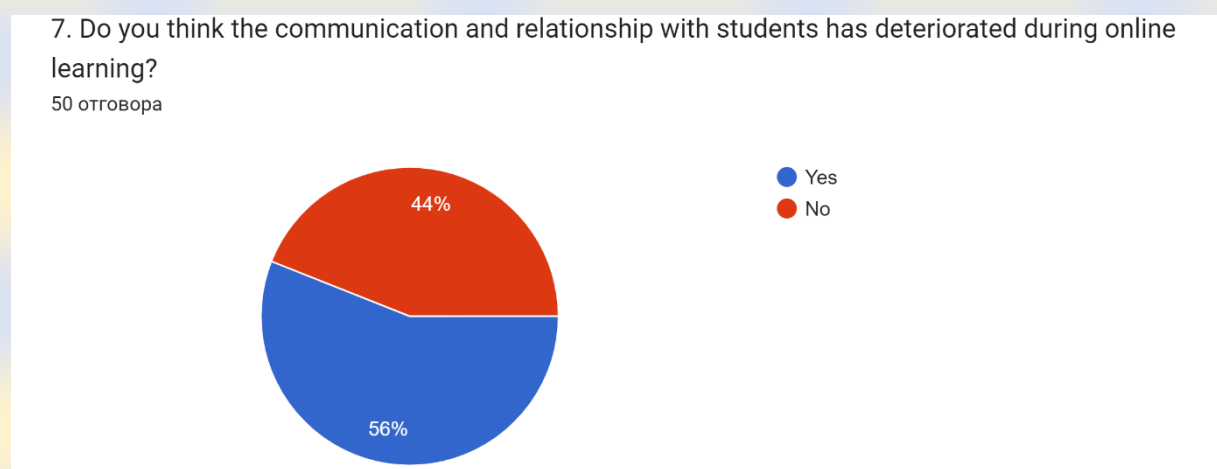
The fifth question was “Were you less physically active during the pandemic?”. Here, the results showed that more than half of respondents (58%) maintained their previous levels of physical activity, whilst 42% experienced a negative change in this regard. This reveals that a substantial part of educators found it more challenging to engage regularly in physical exercise during the pandemic and distance teaching, which as a final result exposes them to an increased risk of physical health deterioration, with corresponding negative consequences that it also brings this deterioration to mental health and well-being.



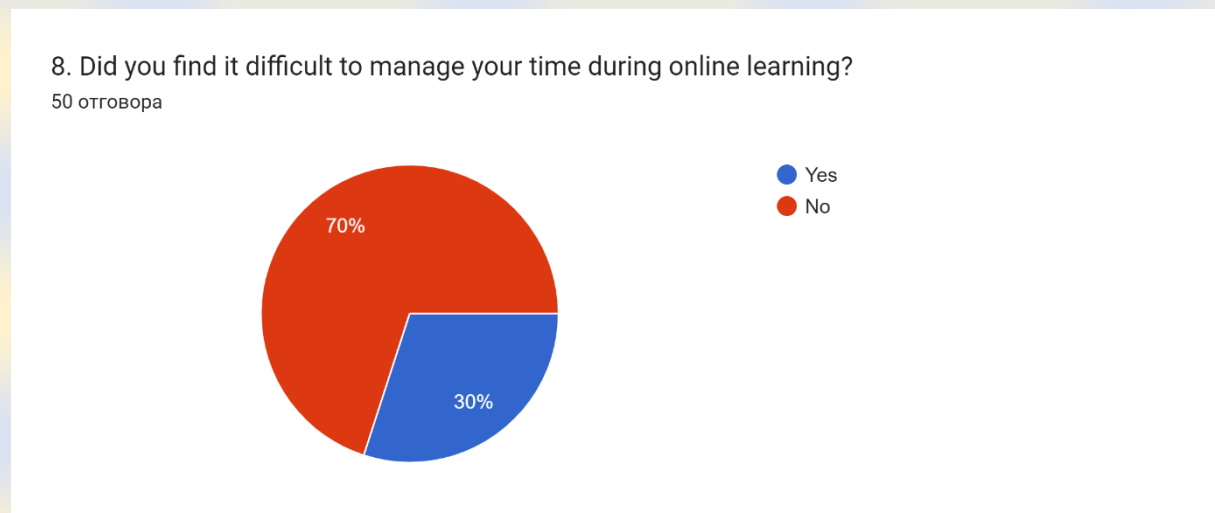
The next question focused on whether teachers think that their colleagues experienced anxiety related to distance teaching. The question is again not personal, but aimed at the entire teaching community. According to the results from the questionnaire, 60% of respondents believe their colleagues did not experience such a negative emotion during distance teaching. However, 40% of participants were of the opposite opinion. This indicates that still a substantial part of teachers dealt with anxiety during the period of distance teaching, and were in need of additional support.



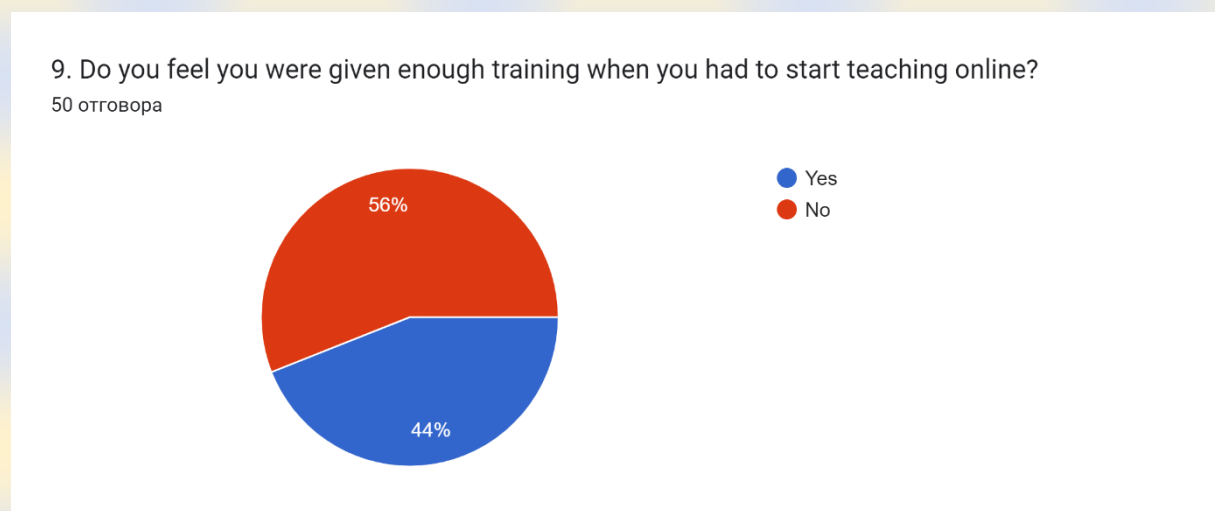
The seventh question is related to the communication aspect and relationship between teachers and students during online learning. Unfortunately, more than half of respondents (54%) shared that the communication and relationship with their students have deteriorated during the period of online learning. The smaller part (44%) did not experience such difficulties with their learners. The data show that the larger part of educators did not manage to communicate with their students in an effective way, probably due to the limitations of the online learning format in terms of lack of live interaction.



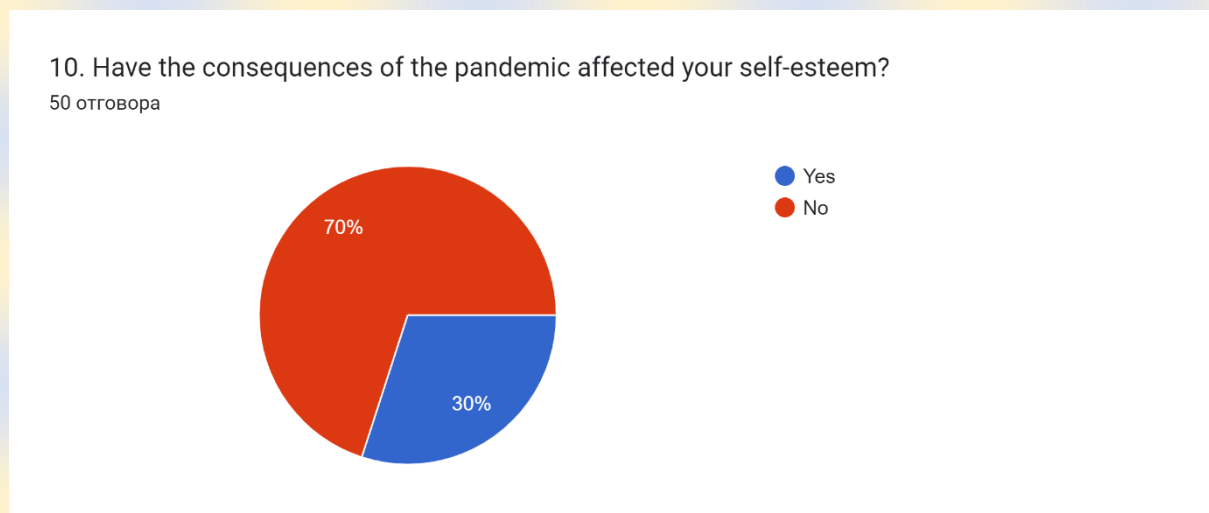
The eighth question assesses if teachers/ educators managed their time effectively during online learning. The results indicate that the majority of participants in the survey (70%) did not experience any difficulty related to time management, whilst only 30% struggled in this aspect. These 30% need additional support to build soft skills for effective distribution of daily duties and time management, especially when working in an electronic environment.



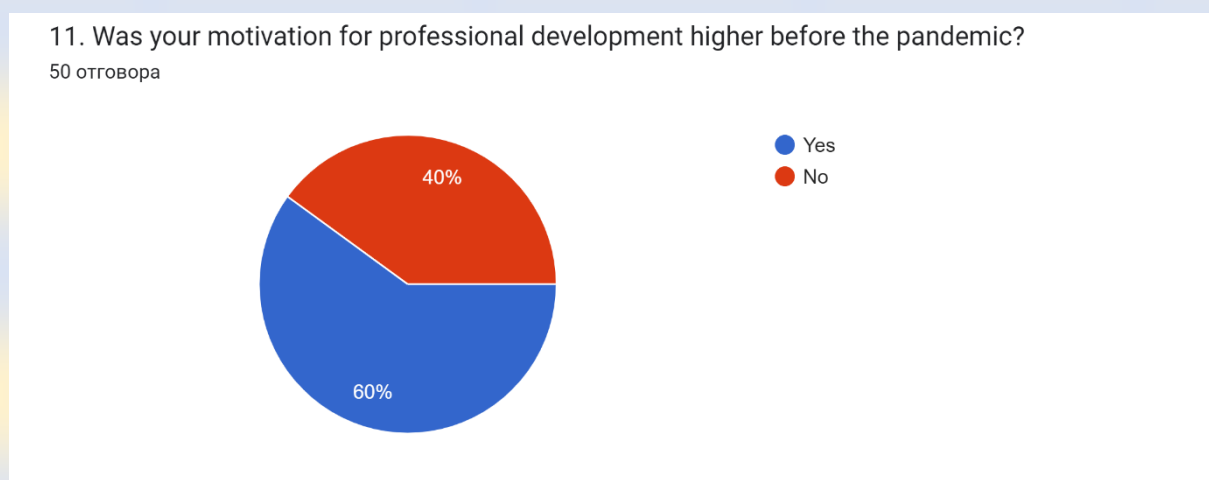
The ninth question was “Do you feel you were given enough training when you had to start teaching online?”. The results were mixed – 56% answered negatively whilst 44% of respondents answered positively. It is clear that more than half of the teachers were not given enough training before the start of online teaching and they felt not sufficiently prepared. This is not surprising, because the COVID-19 pandemic was an unprecedented circumstance, in which educators from different countries did not have sufficient time for adequate preparation.



The tenth question focuses on whether the effects of the pandemic have negatively affected the self-esteem levels of educators/teachers. 70% of teachers have not felt the negative impact of the pandemic on their self-esteem levels. However, part of the respondents (30%) shared that they felt less confident than before the period of online learning, which can be explained by various factors - insufficient training and/or preparation for distance learning, lack of live interaction with the trainees and others.

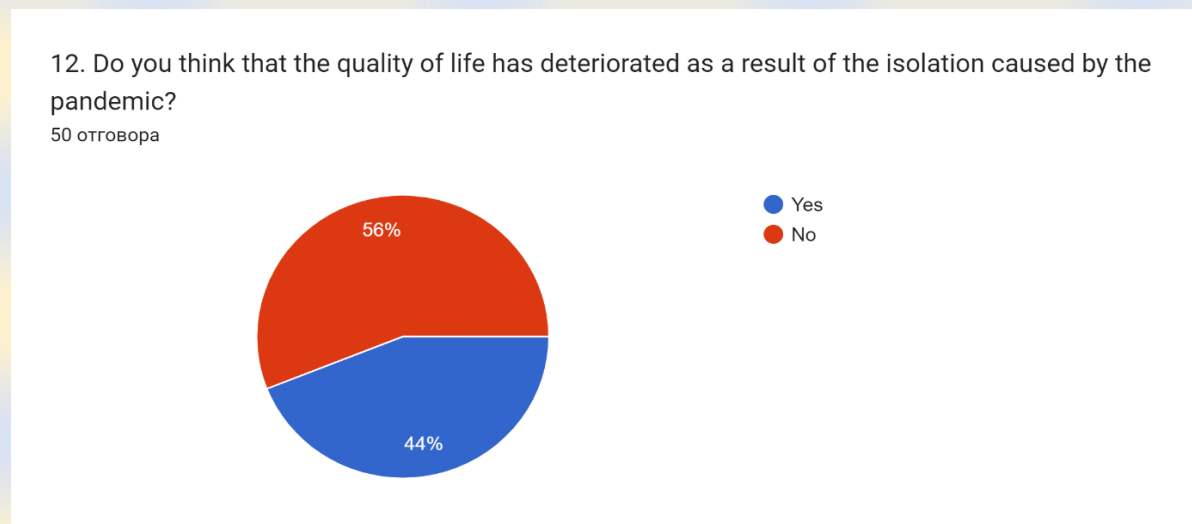


The eleventh question was “Was your motivation for professional development higher before the pandemic?” The results show that for the larger part of teachers (60%), motivation for professional development was higher before the pandemic, thus distance teaching had affected negatively their motivation levels. Nevertheless, 40% of educators did not experience any significant difference in this aspect.

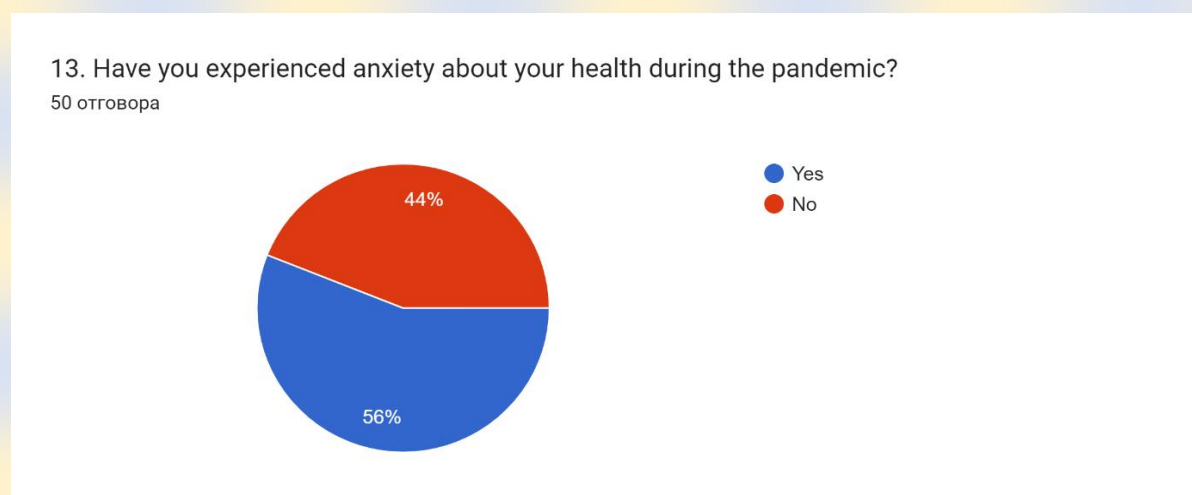




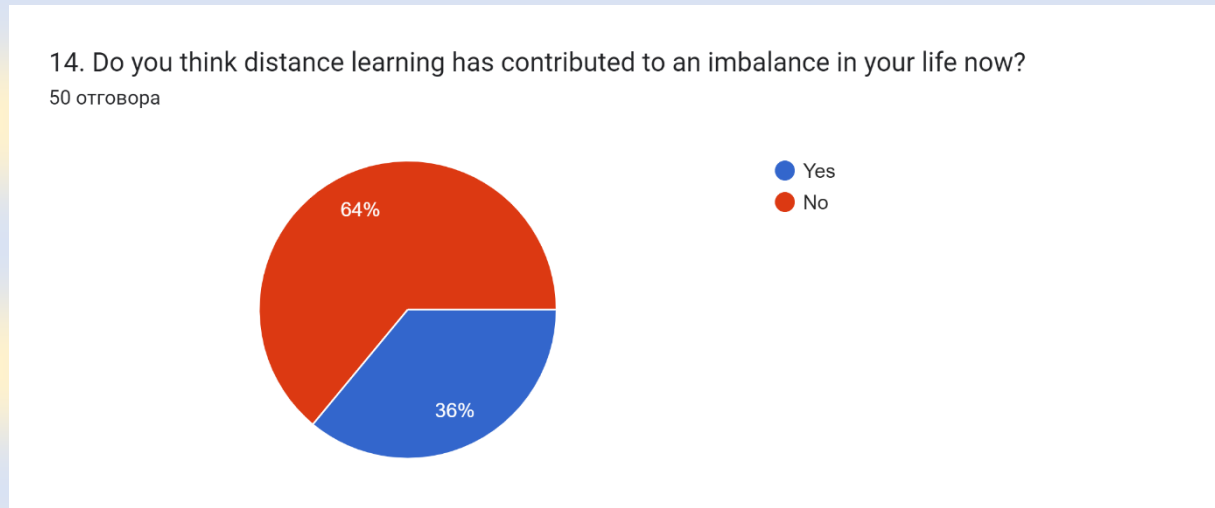
The next question assesses whether teachers' quality of life has been negatively affected by the isolation caused by the pandemic. Opinions of the respondents are divided into two - more than half (56%) answered with "No", while 44% gave a positive answer. This shows that for almost half of the teachers, social isolation due to the pandemic has negatively affected their quality of life.



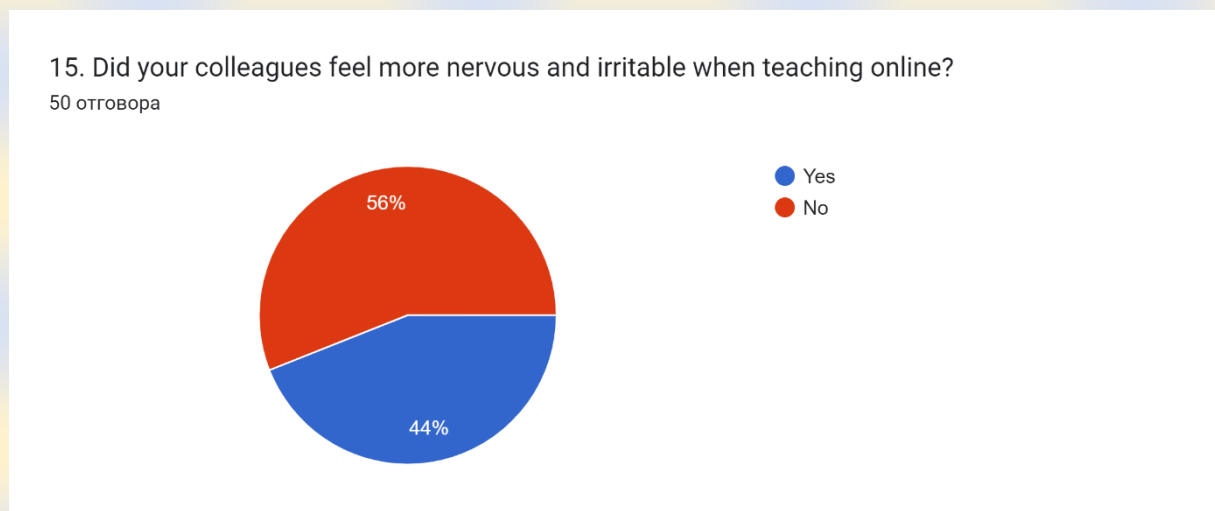
The subsequent question focuses on teachers' health concerns during the pandemic. Here, the results show the negative impact of the pandemic on the mental health of more than half of the teachers - 56% of the teachers said they experienced anxiety about their health during the pandemic, and 44% did not say they experienced such a challenge. This shows us that educators need additional support to help them deal with health anxiety in such situations.



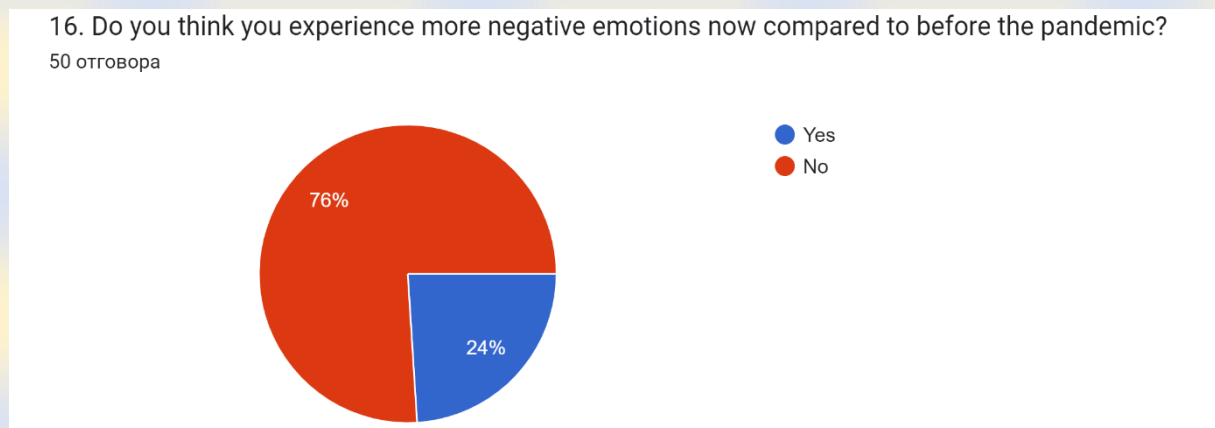
The fourteenth question was: “Do you think distance learning has contributed to an imbalance in your life now?”. According to the results, the majority of respondents (64%) answered “No” and only 36% answered “Yes”. This shows that most of the respondents managed to achieve a good personal balance during this completely new and highly challenging life situation.



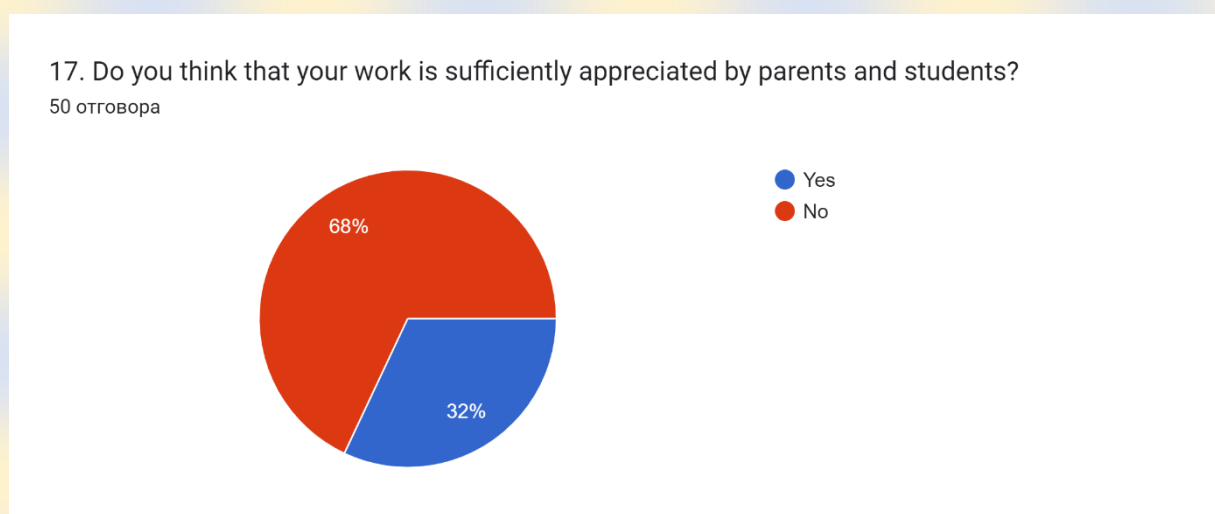
The 15<sup>th</sup> question was: “Did your colleagues feel more nervous and irritable when teaching online?”. A little more than half of respondents (56%) stated that their colleagues did not experience increased nervousness and irritability whilst teaching online, whilst 44% of participants observed such a negative change in their colleagues. This indicates that a significant proportion of teachers have witnessed their colleagues struggle with increasing nervousness and emotional discomfort during online learning, possibly due to multiple lifestyle changes and increased work demands in the pandemic situation.



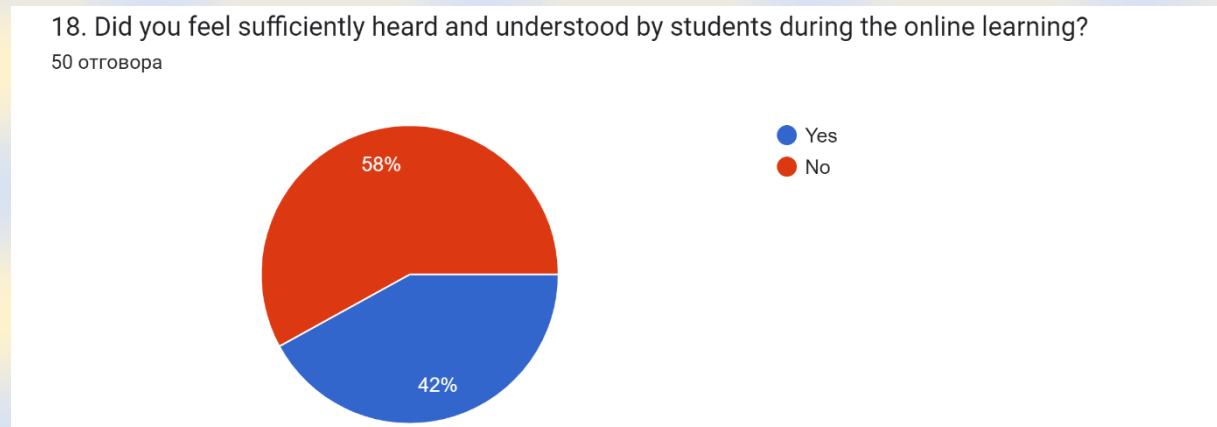
The 16<sup>th</sup> question assesses whether teachers experienced more negative emotions now compared to before the pandemic. The majority of teachers (76%) stated that did not have more negative feelings, whilst only 24% had difficulties in the emotional aspect. This indicates that the larger part of educators maintained their emotional well-being despite the pandemic and online teaching.



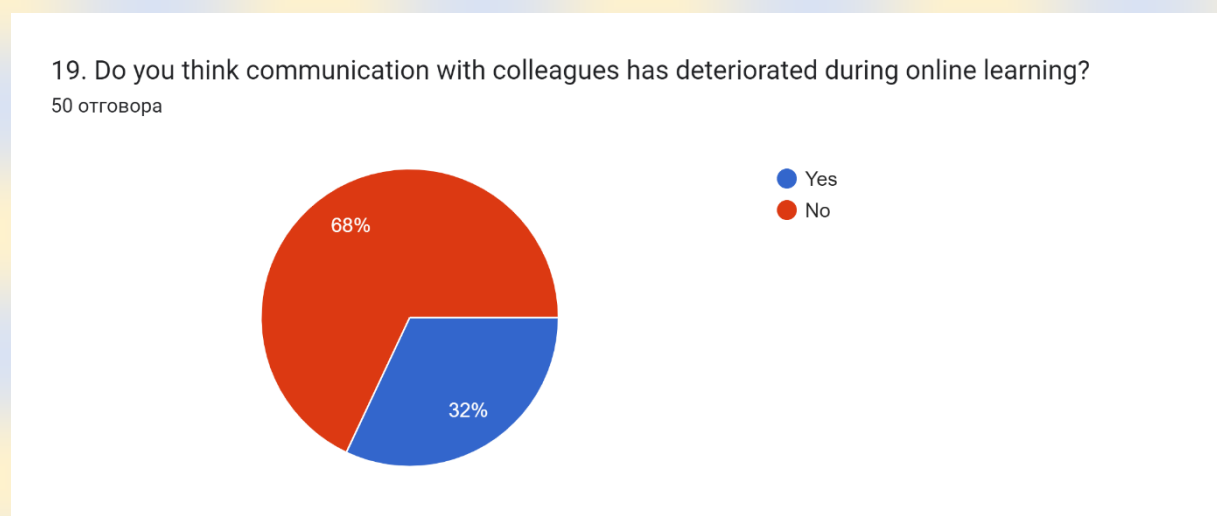
The 17<sup>th</sup> question evaluated whether teachers thought that their work was sufficiently appreciated by students and their parents. The results showed that 68% of respondents think that their work was not sufficiently appreciated by the abovementioned, whilst 32% were of the opposite opinion. Clearly, there is a problem with teachers having their efforts not recognized enough by students and their parents, which may be caused by a lack of live interaction during online learning.



The 18<sup>th</sup> question was: “Did you feel sufficiently heard and understood by students during the online learning?”. 42% of respondents shared that they did not feel sufficiently heard and understood by students during online learning. However, 58% of them did not experience such a challenge. These results indicate that for some teachers, the interaction with students was negatively impacted by the online learning environment.



Nineteenth a question focuses on the communication of teachers with their colleagues in the period of online learning. The results here are rather positive – 68% share that their interaction with colleagues has not been negatively affected during online learning, while 32% are of the opposite opinion. 32% is a significant proportion of educators and this calls for further efforts to improve the aspect of communication between teachers.



Finally, **the 20<sup>th</sup> question** (which was open-ended) was: “Please share if you have additional comments related to distance learning and the impact of the COVID-19 pandemic on you and your close ones.” Only one participant (2%) provided an answer:

- *“Question no 16 not clear enough,,*

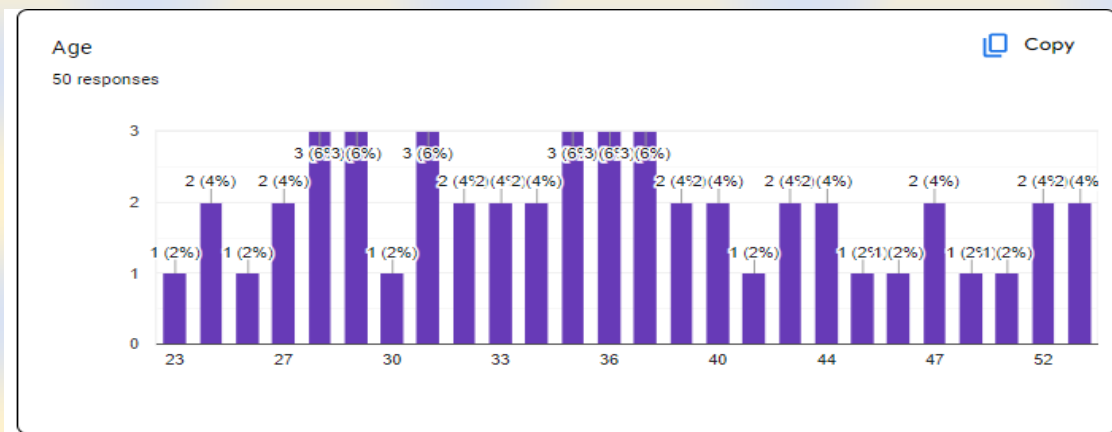
Researchers’ Note:

Question 16 focused on whether teachers experienced more negative emotions now compared to before the pandemic. The question aims to compare the levels of such emotions in the present day to those experienced before the COVID-19 pandemic and the distance/online teaching period. The purpose was to establish whether the pandemic and online teaching has had a negative impact on the emotional well-being of teachers (results showed that for 24% of respondents it had).

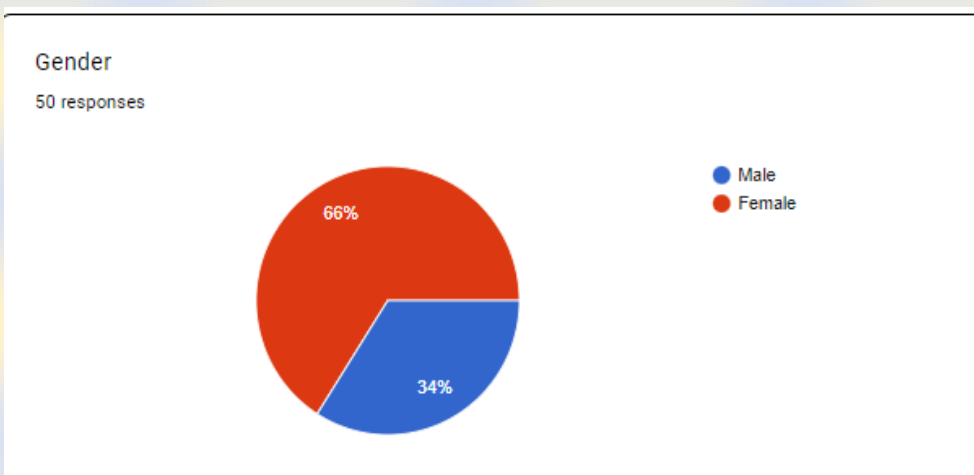
### 2.3. Analysis of results Cyprus

[The Questionnaire for assessing the attitudes of Teachers on well-being and mental health and the consequences of distance learning](#) (Appendix 2) was completed by 50 teachers/educators from IMS Private School in Cyprus.

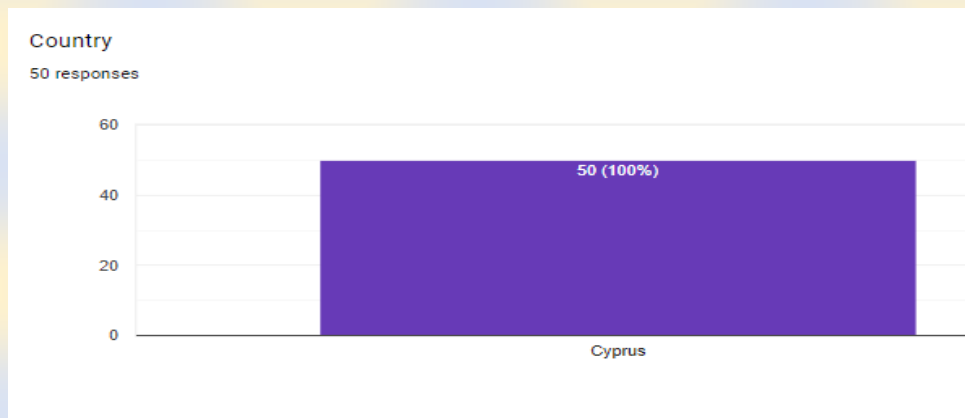
Regarding the demographic profile, the study participants were of different ages, ranging from 23 to 54 years, with varying lengths of work experience.



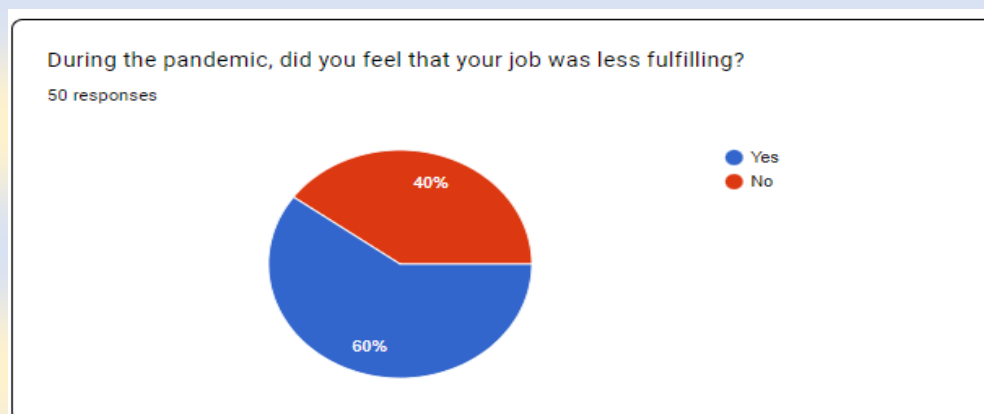
The teachers who completed the survey were mostly women (66%), while 34% were men. This distribution is not unusual for the teaching profession, where women tend to outnumber men.



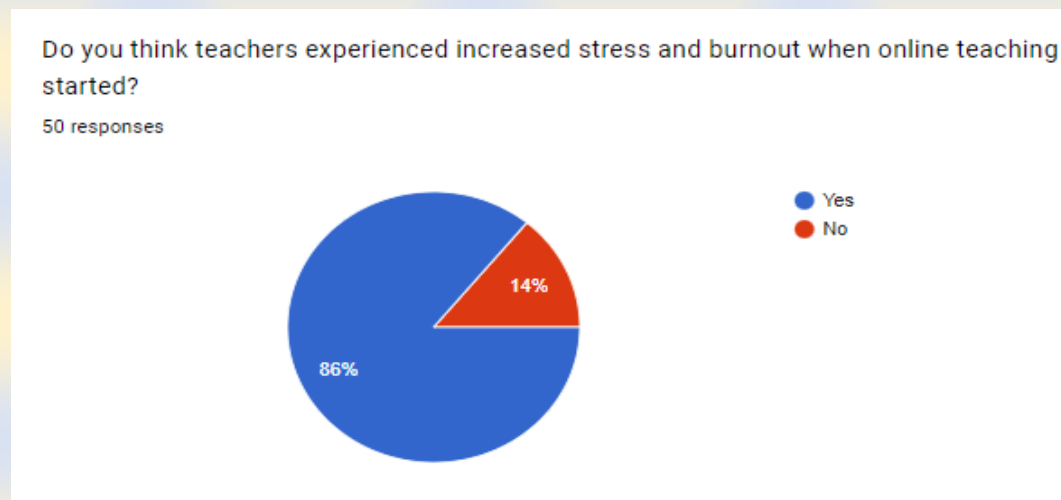
Also, 100% of participants are from Cyprus.



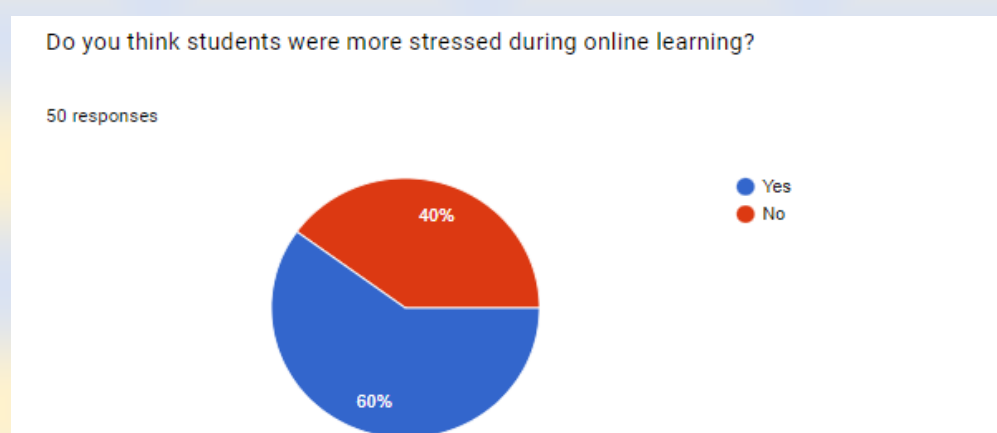
The first question in the main body of the questionnaire for Teachers assessed whether educators felt that their job was less fulfilling during the COVID-19 pandemic. The results indicated that the majority of participants (60%) had such a lack of fulfillment at their work, whilst 40% did not. This shows that online learning has had a negative impact on the professional satisfaction of the majority of teachers.



The second question addresses the levels of stress and burnout among teachers in the online learning period. The majority of respondents (86%) believe that teachers have experienced increased stress and burnout, while only 14% find no change in these areas. The result clearly shows that teachers need targeted support measures from their respective educational institutions to deal with these negative emotional experiences.

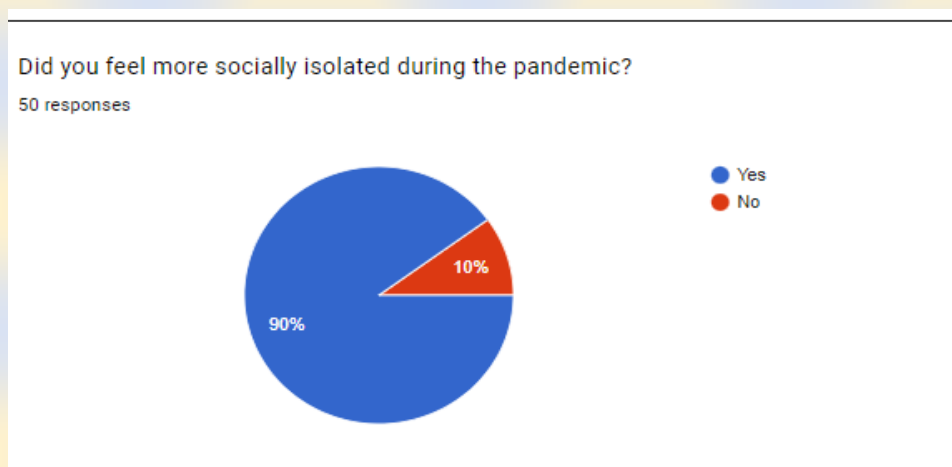


The third question assesses the level of stress among students during online learning, through the eyes of their teachers. According to 60% of those who completed the survey, students were more stressed during the period of online learning, and according to the remaining 40%, this was not the case. The results show that a significant proportion of teachers believe that their students have had negative emotional experiences that may have affected their well-being and mental health.

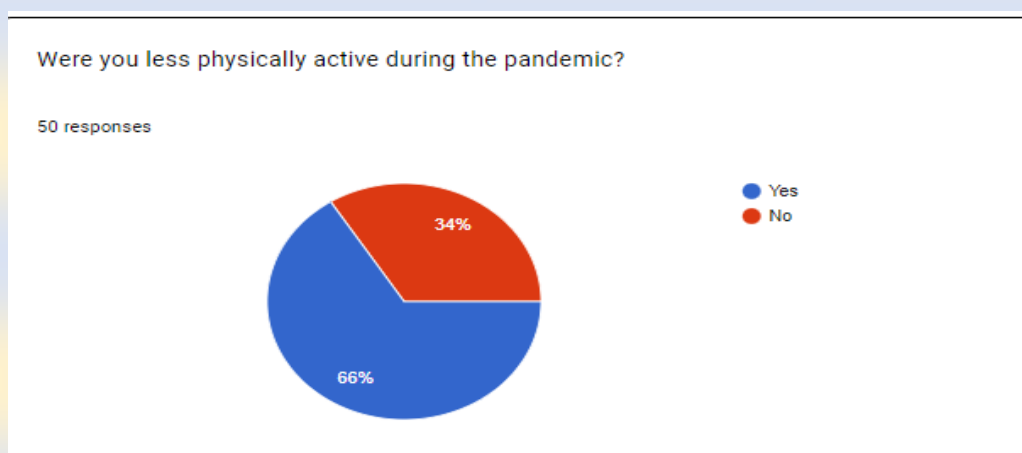




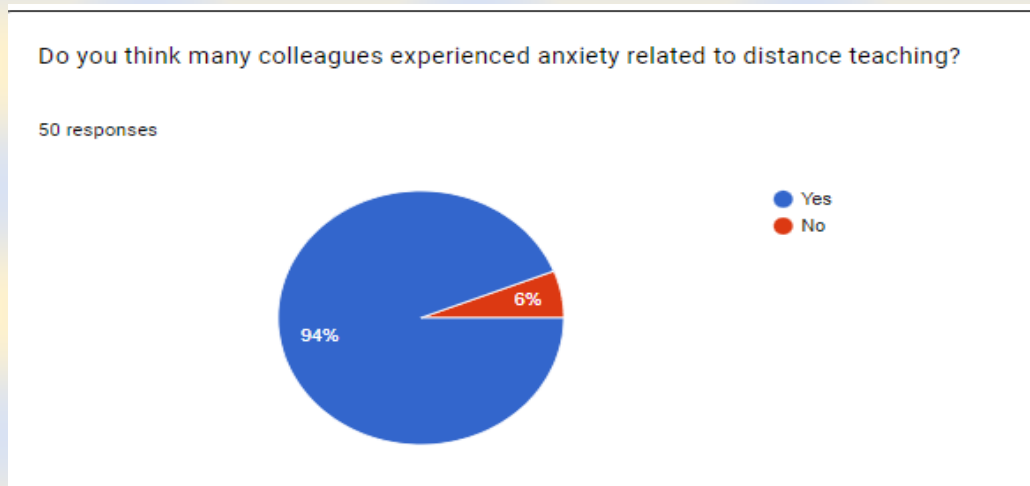
The next question deals with the social isolation of teachers during the COVID-19 pandemic and, respectively, the period of distance teaching. The results showed that the larger part of respondents felt more socially isolated (90%), and only 10% of them did not see any significant difference. This indicates that the vast majority of educators have struggled with challenges of a social nature, influenced by the negative consequences of the COVID-19 pandemic such as lockdown, quarantine, school closures, lack of live interactions with colleagues, loved ones and relatives.



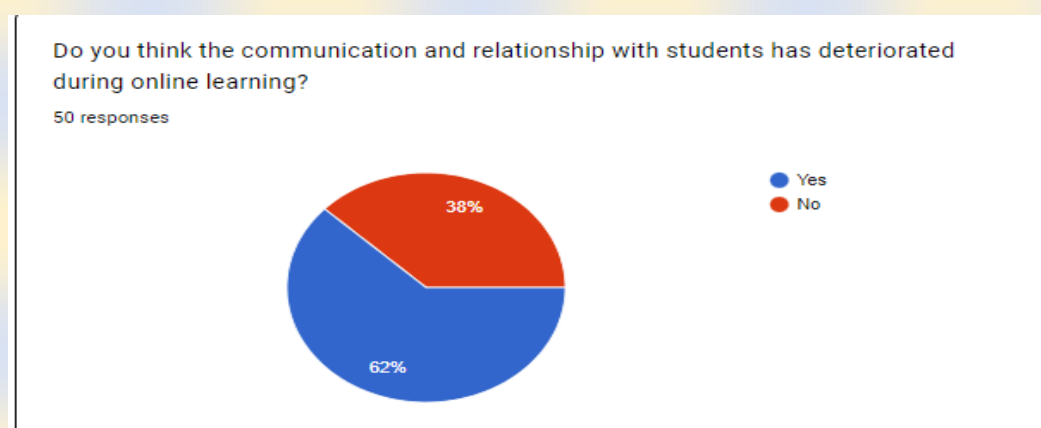
The next question examines changes in physical activity among educators during the pandemic. The results showed that 66% of the participants were less physically active during this period, with only 34% able to maintain their level. This can be explained by the lack of motivation and time, as well as the closed sports centers during the pandemic. However, the final result speaks of an increased risk of deterioration of physical health for the majority of teachers.



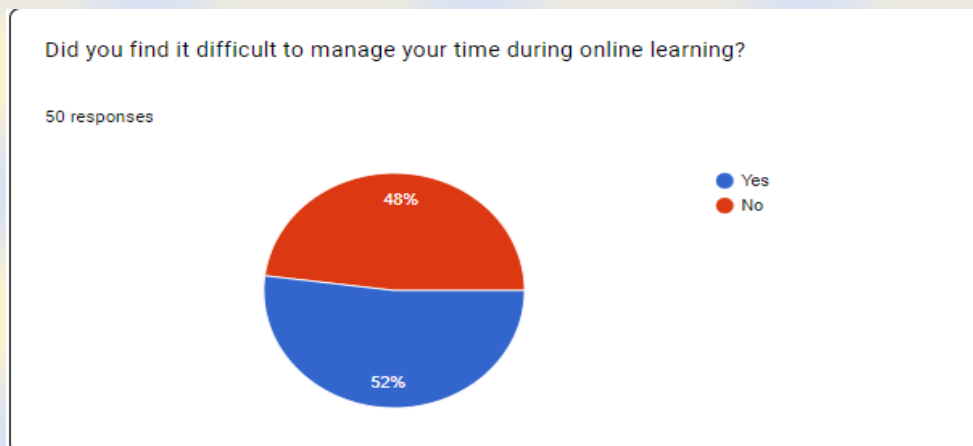
The sixth question is about whether teachers believe that their colleagues experienced anxiety related to distance teaching. 94% agree that their co-workers had such a negative experience, and only 6% disagreed. This clearly shows that many teachers indicated that they were struggling with negative emotions during the period of distance teaching, and were very anxious due to the novel situation.



The seventh question concerned the communication and relationship between teachers and their students during online learning. Unfortunately, the majority of respondents (62%) stated that the communication and relationship with their students deteriorated during distance teaching. Only 38% did not encounter such difficulties. This reveals a worrying statistic that educators were unable to interact with their students in an effective manner due to the limitations posed by the online learning format (lack of live/face-to-face interaction).



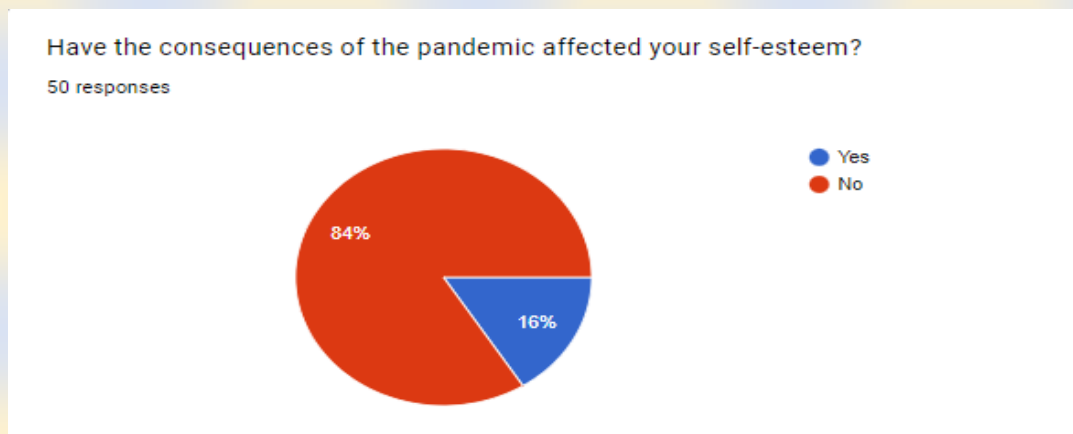
The next question evaluates whether teachers were able to manage their time effectively during the period of online learning. The data reveal almost an even split, 52% of the respondents experienced no difficulty in time management, whilst for 48% of them it was a challenging aspect. Evidently, part of some educators needs further support in improving their time management skills.



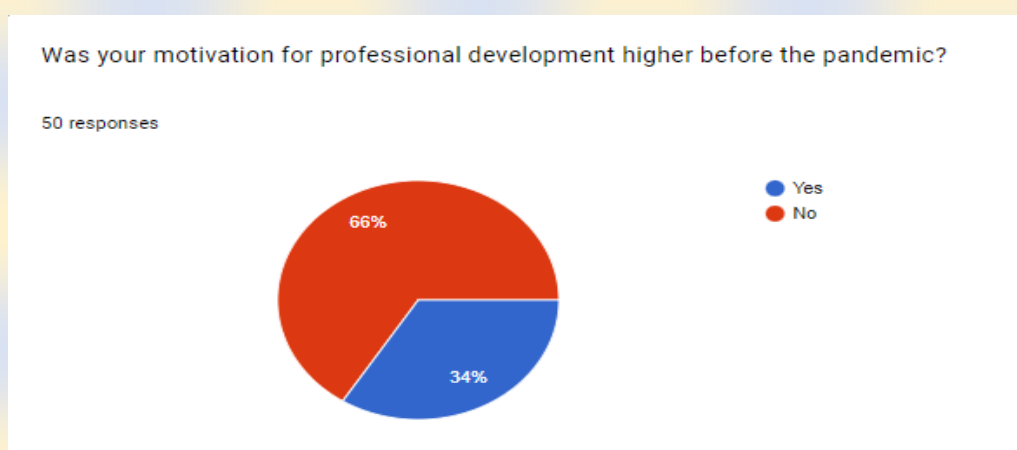
The subsequent question states “Do you feel you were given enough training when you had to start teaching online?”. 62% answered “No” whilst 38% of participants replied “Yes”. It is evident that the majority did not receive enough support prior to the beginning of distance teaching and felt underprepared for this task. This is not unexpected, as the pandemic was an emergency situation, in which educational staff from all over the world did not have enough time to prepare accordingly and adapt.



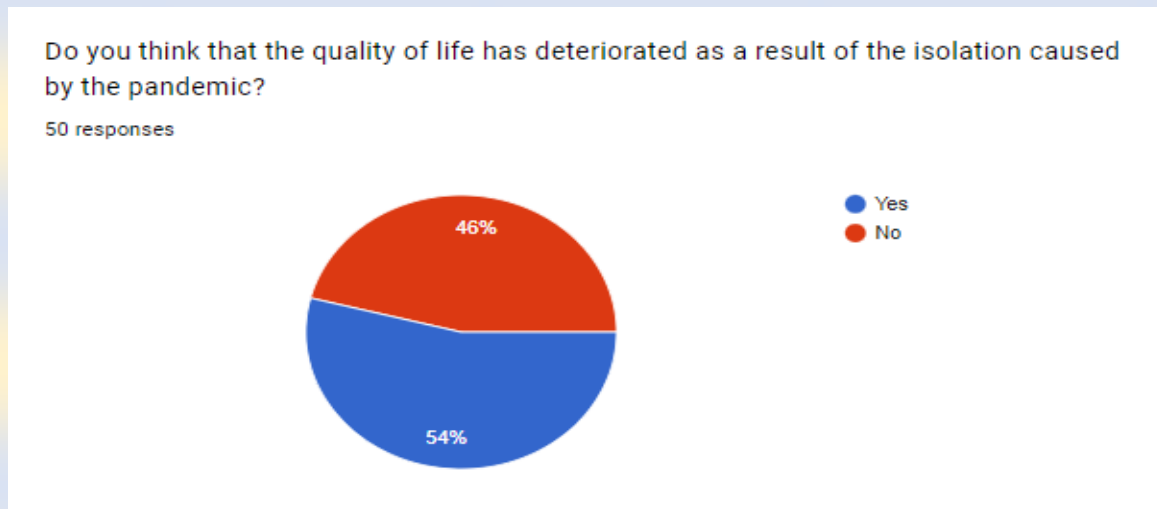
The tenth question evaluates if the consequences of the COVID-19 pandemic have had a negative impact on the self-esteem levels of teachers. The results are very good – 84% of educators did not experience a decrease in self-esteem, regardless of the consequences of the pandemic. Nevertheless, a small number of teachers (16%) shared that they feel less confident than before, which may be due to a number of factors – such as insufficient training or preparation for teaching online, lack of proper live communication between educators and students, and others.



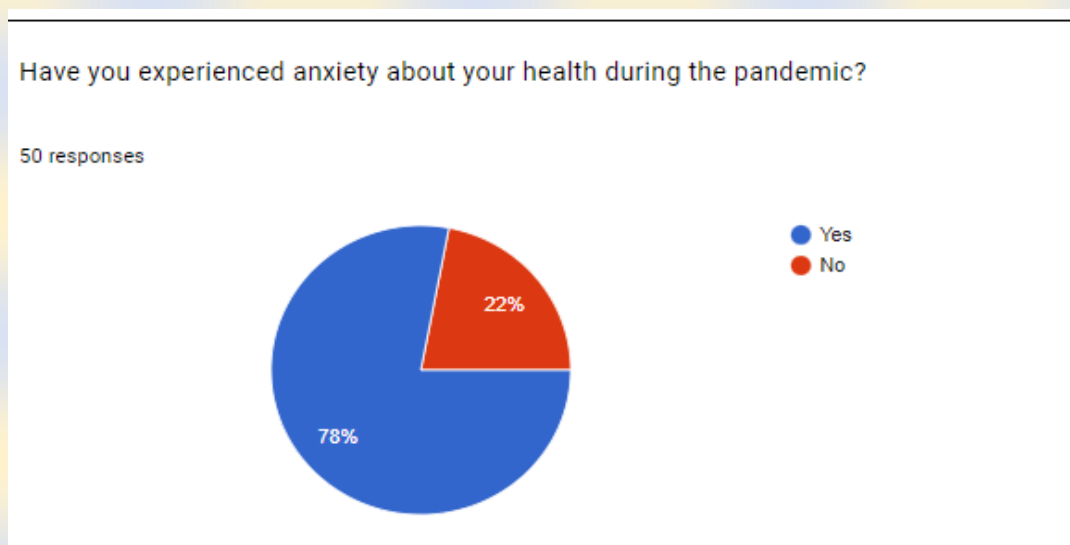
The eleventh question states “Was your motivation for professional development higher before the pandemic?” The results indicate that for 66% of teachers, their motivation for professional development was not higher before the COVID-19 pandemic, thus distance learning has not had a negative impact on their levels of motivation. However, 34% of educators shared that they felt a difference.



The twelfth question assessed whether teachers' quality of life deteriorated because of the isolation during the COVID-19 pandemic. The results were mixed since 54% of respondents answered "Yes", and 46% answered "No". It is safe to assume that the pandemic situation and the social isolation had a substantial negative impact on the quality of life of many educators.

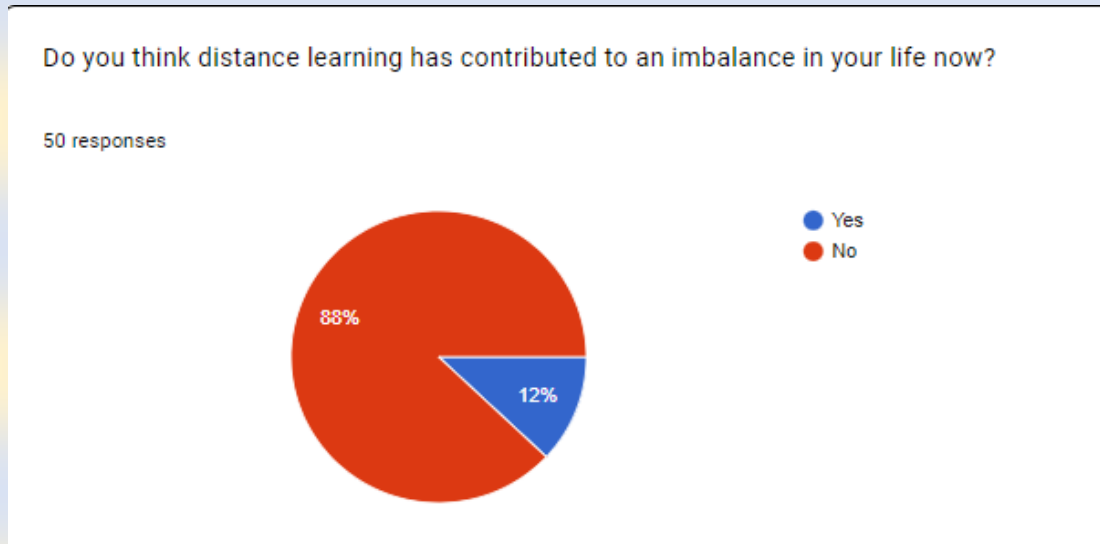


The next question concerns teachers' experience of health anxiety during the COVID-19 pandemic. Here the negative impact of the pandemic on the mental well-being of teachers is clearly shown – 78% of educators shared that they experienced anxiety about their health during the pandemic, and only 22% have not experienced such. This result is not unexpected but shows that educators need further support to deal with this negative emotional state.

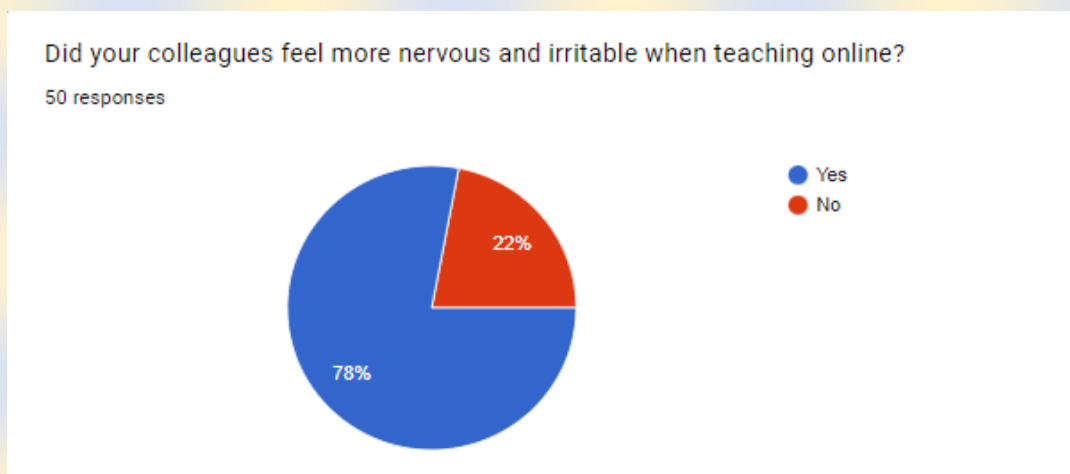


Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

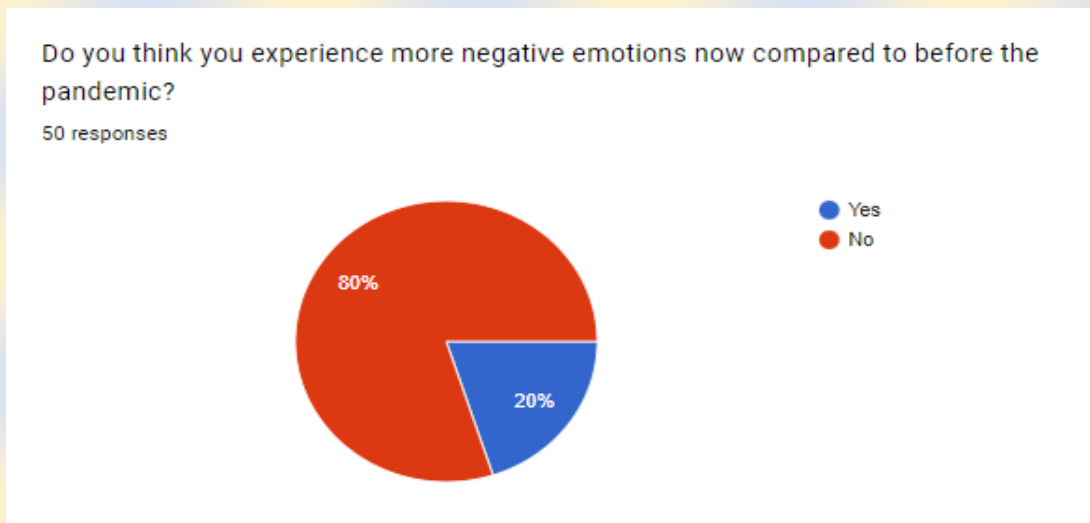
The fourteenth question reads: "Do you think distance learning has contributed to an imbalance in your life now?" The majority of respondents (88%) found no such connection, with only 12% answering "Yes". This demonstrates that most of the participants in the study have managed to achieve a good life balance during the period of distance learning and afterwards.



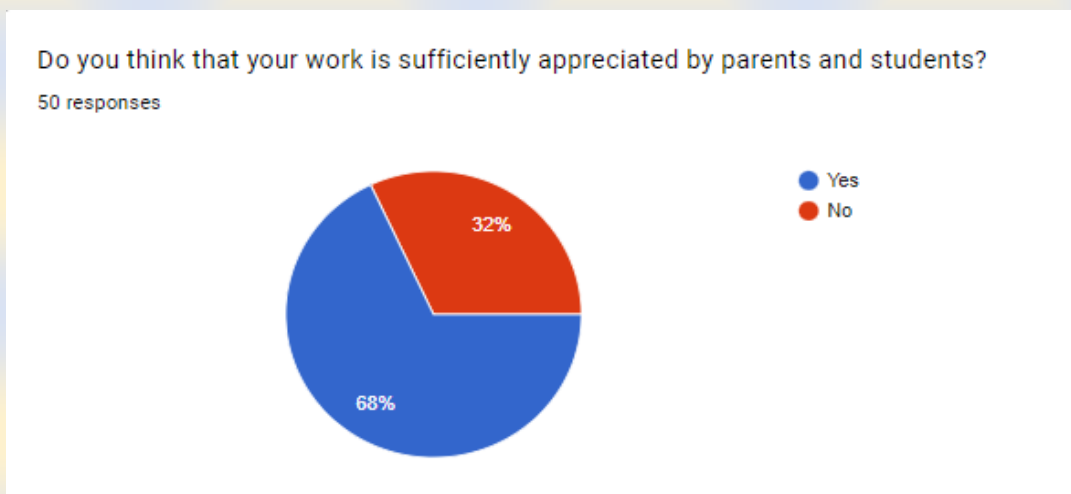
The next question asks, "Did your colleagues feel more nervous and irritable when teaching online?". 78% believe that their colleagues experienced increased levels of nervousness and irritability during online teaching, whilst only 22% of participants have not observed such a tendency in their co-workers. This shows that a large proportion of teachers showed signs of nervousness and irritability visible to their colleagues even in an electronic environment.



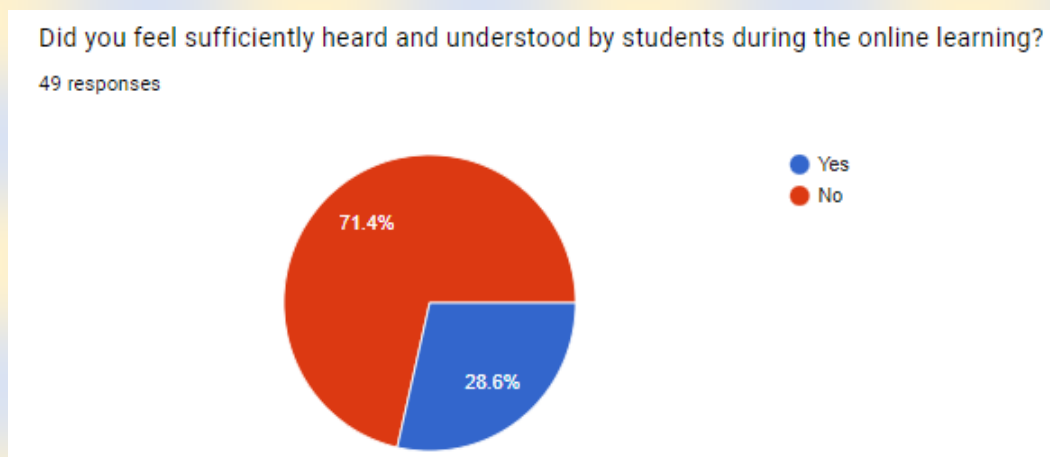
The sixteenth question is similar to the previous one, but it focuses on the personal experiences of the respondents. It measures whether educators experienced more negative emotions now compared to before the COVID-19 pandemic. Most of the teachers (80%) responded that they did not experience more negative feelings, whilst only 20% were of the opposite opinion. This shows that the majority of educators maintained a more optimistic outlook despite the demands of the unprecedented situation.



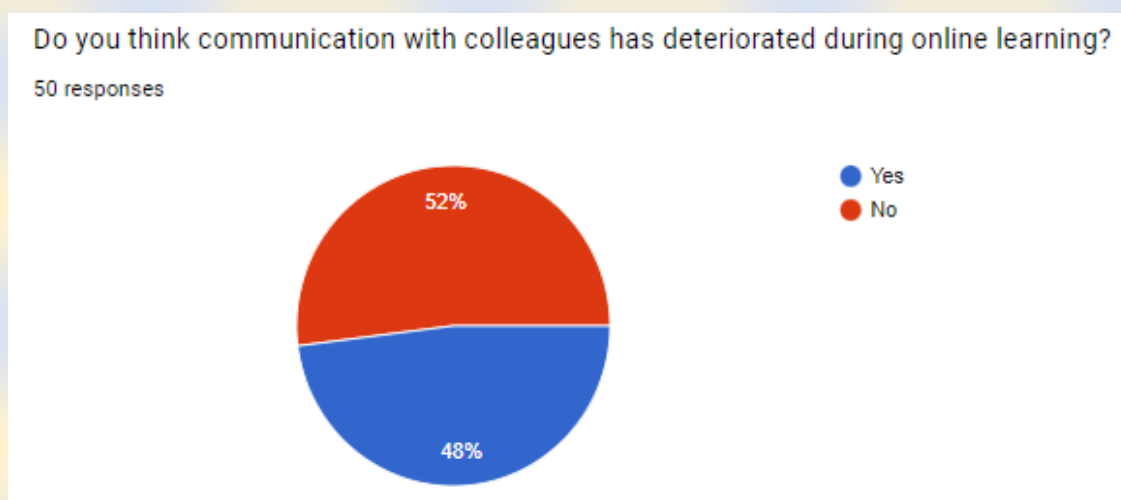
The next question focused on the appreciation of the work of teachers by students and their parents. According to the results, 68% of respondents believe that their work is valued by the above groups, while 32% are of the opposite opinion. The share of the second group, which believes that the efforts of teachers are not sufficiently recognized by parents and students, is significantly smaller.



The next teacher survey question reads: "Did you feel sufficiently heard and understood by the students during online learning?" The majority of respondents (71,4%) shared that they did not feel sufficiently heard and understood by the students during online learning. Only 28,6% of them are of the opposite opinion. These results reveal issues with the interaction and relationship between teachers and students which has been negatively impacted by the new format of the learning environment.



The last closed-ended question deals with the communication of teachers with their colleagues and whether it has deteriorated during online learning. The results here are mixed – 52% believe their interaction with co-workers has not been negatively impacted during distance teaching, whilst 48% think otherwise. These results suggest that additional attention should be paid to the way educators communicate in the context of online learning, and how they could improve this aspect.





The last question of the survey is open and reads: "Please share if you have additional comments related to distance learning and the impact of the COVID pandemic on you and your loved ones." 9 of the respondents took the opportunity to add their opinion on the topics covered. From their answers, it is easy to see the difficulties they have gone through as educators and professionals in this difficult time of the COVID-19 pandemic. However, there are also analyzes and proposed solutions that can be used to counteract the negative consequences in future similar crises. The answers are presented here:

- *“Students have become more into technology and they are more easily distracted after this period. Also, it has been noticed that the students do not have the stamina or the motivation to study as well as they do not know how to study. They constantly need support.”*
- *“People are scared of much more things compared to before COVID-19. Bacteria are now a threat for people.”*
- *“The students should keep their cameras on as they are more likely to engage in the procedure”*
- *“It was a challenging period.”*
- *“Teachers that are older and not tech savvy experienced more difficulties during the pandemic, in my opinion.”*
- *“Everybody tried their best to adapt to the consequences of pandemic. I think everybody did a good job!”*
- *“I believe social isolation during the pandemic had a negative impact on everyone.”*
- *“Students struggled to follow the topics covered online. It's just not the same.”*

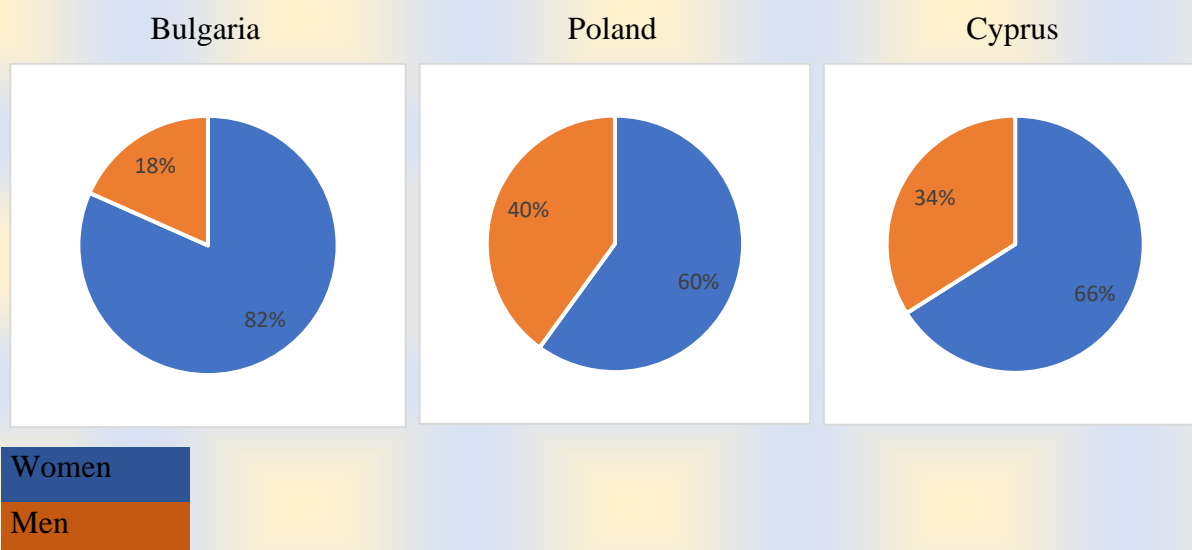
## 2.4. Comparative analysis and summary of the results from Bulgaria, Poland and Cyprus

After the individual analyzes of the results by country obtained from the student questionnaires, in this chapter we make a general analysis and comparison of the results. Although the results of most questions differ, they draw similar trends, which are observed with varying strength in the three countries. On the other hand, for single questions we notice significant differences in the distribution of answers between countries and in this sense, it would not be correct to use averaged values for the analysis. Another thing that is striking is the similarity of answers between teachers from Bulgaria and Cyprus and the often-different distribution of answers from Poland.

As part of our study, a total of 150 teachers completed [Questionnaire for assessing the attitudes of teachers on well-being and mental health and the consequences of distance learning](#) (Appendix 2). 50 of all respondents were from Bulgaria, 50 from Poland and 50 from Cyprus. They were aged between 23 and 66 years, with the upper age in Bulgaria being 66 years, in Poland 60 years, and in Cyprus 54 year. The lower age for Bulgaria was 28, and for Poland and Cyprus 23.

Regarding the gender of the respondents, women are 69% and men 31% of the total sample. Demographic features such as gender were not taken into account in the selection of participants, but the final result corresponds to the typical distribution of genders in the teaching profession, where women dominate.

### Gender distribution of study participants



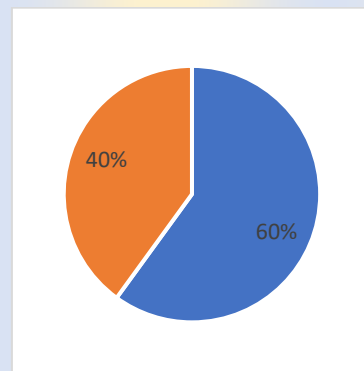
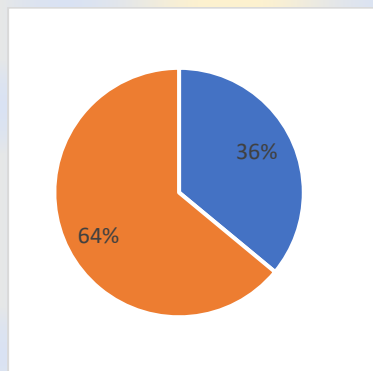
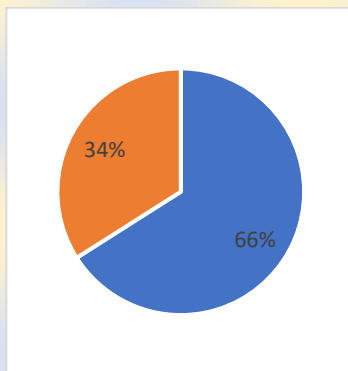
The first question in the main part of the questionnaire assesses whether teachers feel that their work is less fulfilling during the COVID-19 pandemic. While in Bulgaria and Cyprus, respectively, 66% and 60% of teachers share that they experienced lower satisfaction in their work during the pandemic, for Poland this share is only 36%. However, we can summarize that **distance learning in general has had a negative effect on school professionals**, which has affected a significantly larger share of teachers in Bulgaria and Cyprus. Even so, in all three countries measures are needed to examine risk factors and effectively counter them to maintain levels of job satisfaction among teachers, especially in times of crisis.

1. During the pandemic, did you feel that your job was less fulfilling?

Bulgaria

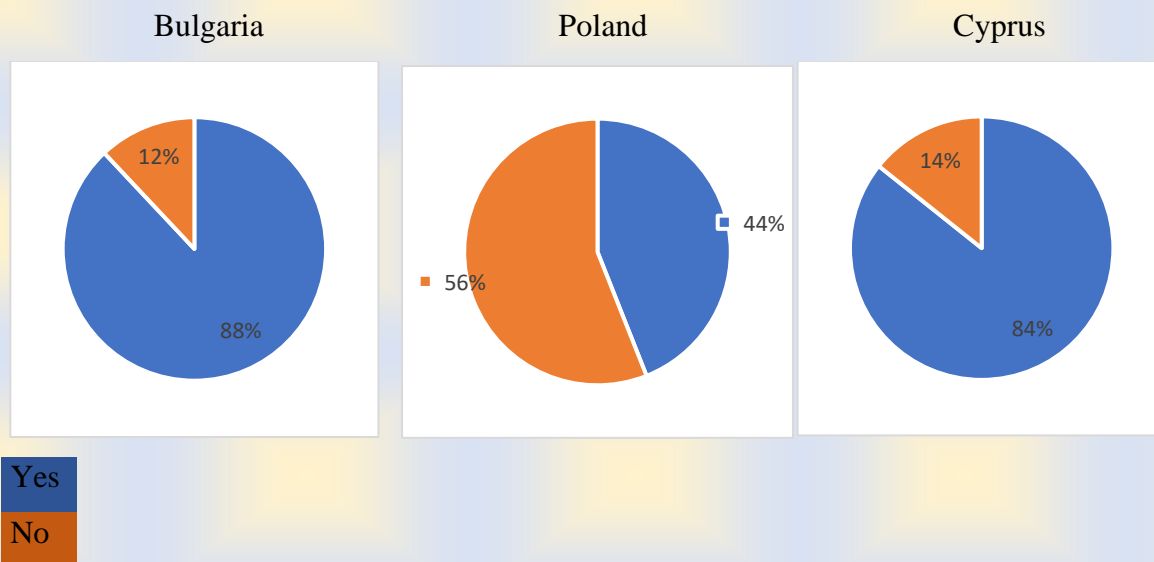
Poland

Cyprus



The second question explored levels of stress and burnout among teachers during online teaching by asking respondents about their observations among their colleagues. A large share of survey participants in Bulgaria (88%) and Cyprus (84%) believes that during the pandemic, teachers have struggled with increased levels of stress and burnout. In Poland, the share is twice as small (44%), but still significant. Given that 72% of all respondents reported **higher levels of stress and professional burnout among teachers**, the results from all three countries show that targeted measures with the widest possible reach by educational institutions are needed to support all teachers to meet and successfully deal with these negative emotional experiences in periods of distance learning.

2. Do you think teachers experienced increased stress and burnout when online teaching started?



Yes  
No

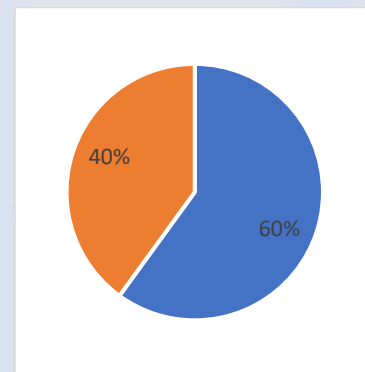
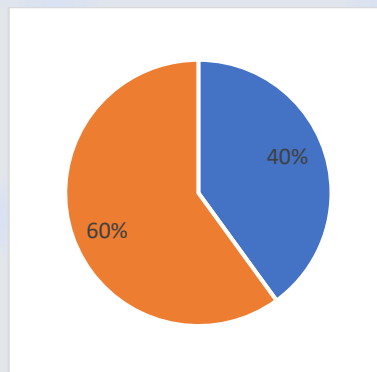
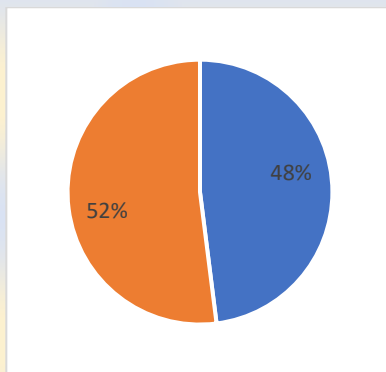
The third question assesses how teachers perceive their students' stress levels during online learning. In this case, the answers between the individual countries are rather close, with the opinions being divided into two. A total of 49% of all questionnaire respondents believed that **students were more stressed during online learning**. When compared to the answers to the previous question measuring stress levels among their colleagues, for each country it was seen that according to the respondents, **teachers were a group more affected by stress during the pandemic than students**.

3. Do you think students were more stressed during online learning?

Bulgaria

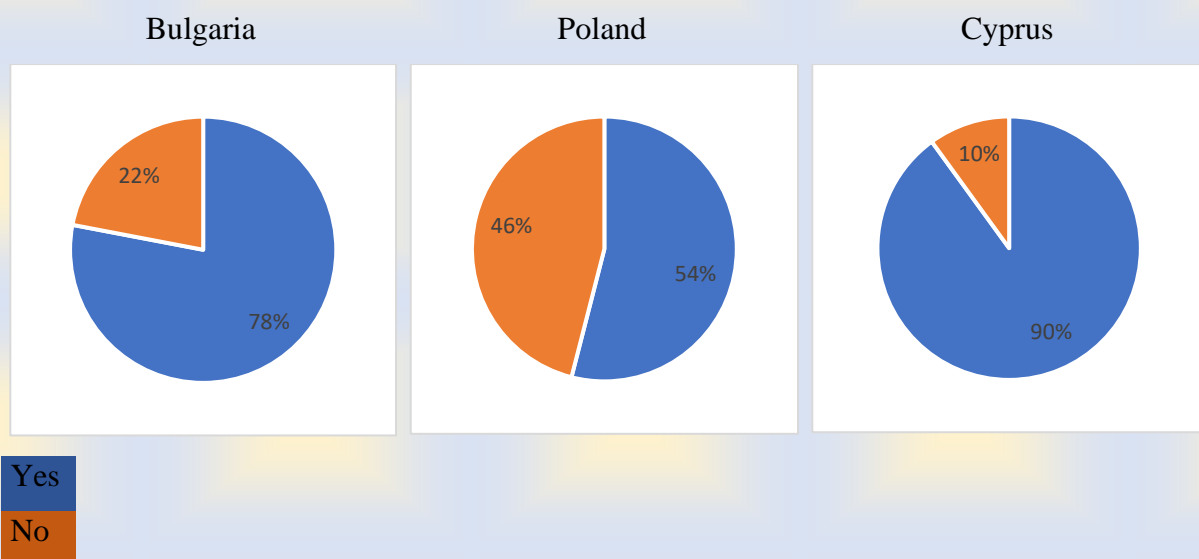
Poland

Cyprus



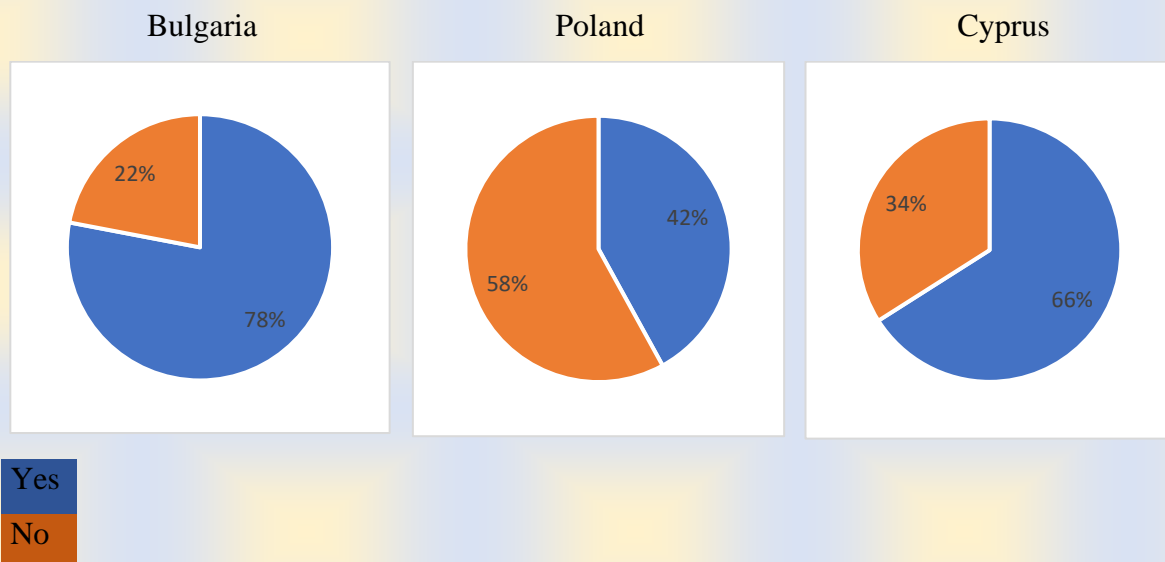
The next question examines the sense of social isolation among respondents during the pandemic. The majority of participants in each of the countries (74%) shared that **they felt more socially isolated** during the COVID-19 pandemic, with 78% in Bulgaria and 90% in Cyprus the relevant sample. Although in Poland this group is 54%, it is a majority and we can draw a general conclusion that during the distance learning and the pandemic, a significant part of the teachers faced challenges of a social nature. The explanation of these results is most likely due to the anti-epidemic measures introduced throughout Europe, which sharply limited social contacts. One such measure, along with the quarantine, restriction of movement, etc., was the physical closure of schools and the introduction of distance learning, which sharply deprived teachers of their natural social environment. Apart from contacts with their friendly environment, teachers were also deprived of contacts with colleagues and students.

4. Did you feel more socially isolated during the pandemic?



The fifth question investigated the change in physical activity among teachers during the pandemic period. A significant proportion of respondents in Bulgaria (78%) and Cyprus (66%) shared that they were less physically active, while in Poland this share was 42%. It can be seen that due to a number of reasons, such as closed sports clubs, lack of time and motivation, the **pandemic period has a negative impact on the level of physical activity among teachers, especially in Bulgaria and Cyprus.** In the future, in similar situations, additional measures are needed to encourage physical activity and sports, not only among students, but also among teachers, due to the risk of deterioration of their physical health and the consequences of this on their general well-being.

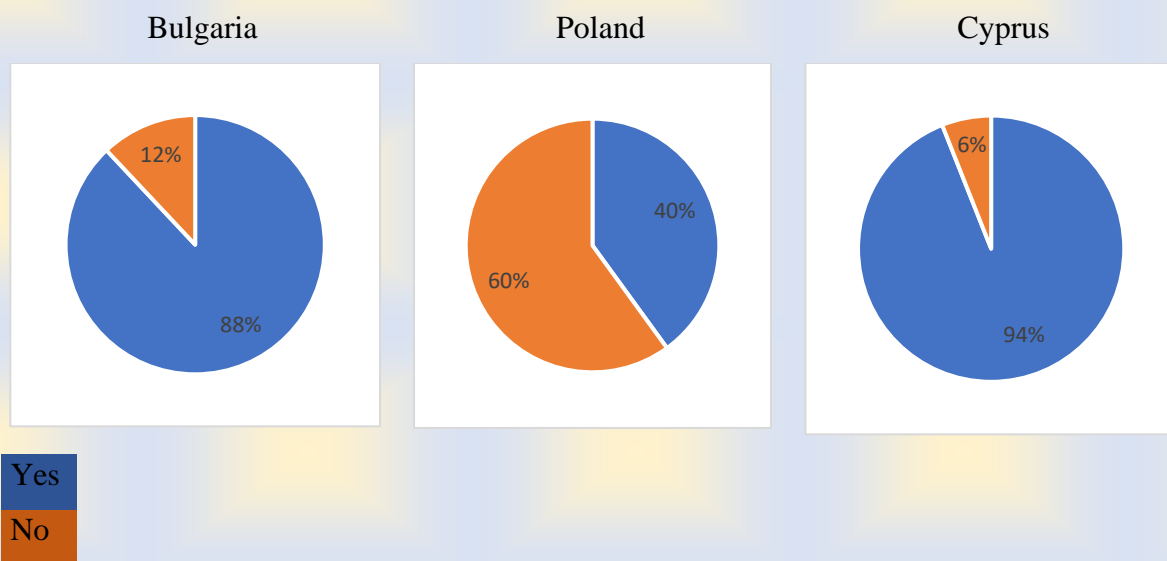
5. Were you less physically active during the pandemic?





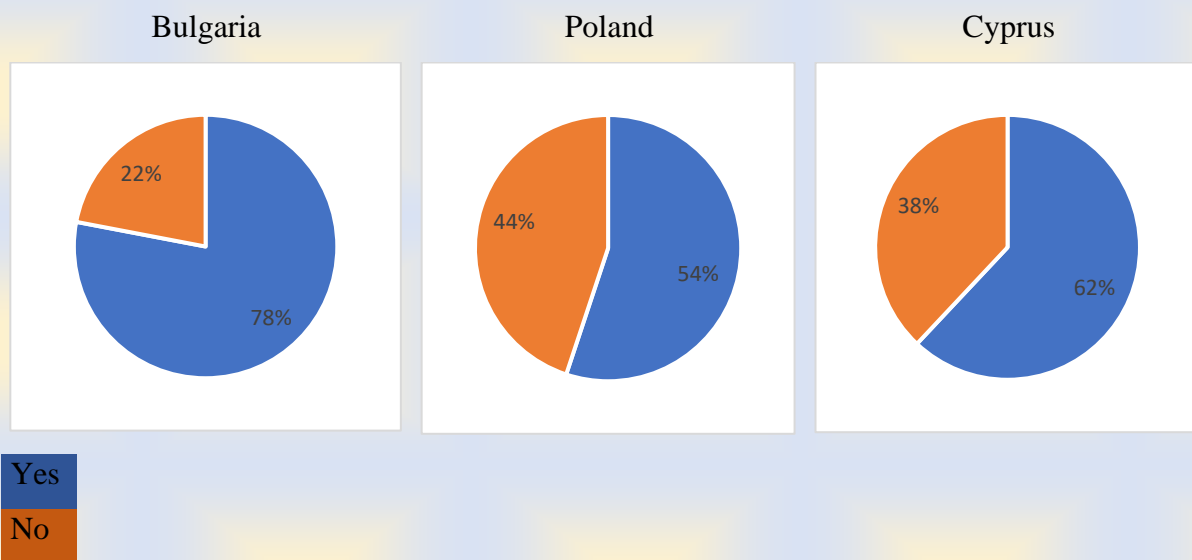
The sixth question again explores the negative effects of distance learning and the pandemic on the emotional state of teachers and is very close to the second question "Do you think teachers experienced increased stress and burnout when online teaching started?". However, the sixth question addressed anxiety levels. The distribution of responses to both questions is similar. Large majorities in Cyprus (94%) and Bulgaria (88%) believe that **teachers have experienced anxiety related to distance learning**, while in Poland this proportion is only 40%.

6. Do you think many colleagues experienced anxiety related to distance learning?



The next question is aimed at the quality of the relationship and communication with students during the pandemic. The majority of respondents from all three countries reported **poor communication with their students during online learning**, with a combined share of 65% of all survey participants. It can be seen that, although an alternative in crisis situations, according to teachers, **online learning platforms have not been able to replace live contact in the classroom** and provide sufficient opportunities for effective communication and maintaining the teacher-student relationship.

7. Do you think the communication and relationship with students has deteriorated during online learning?



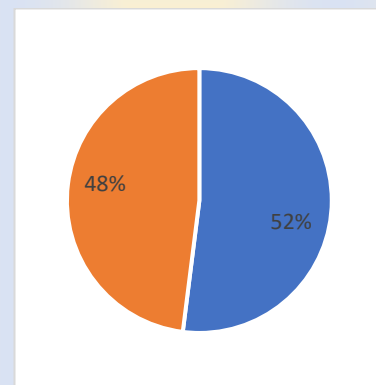
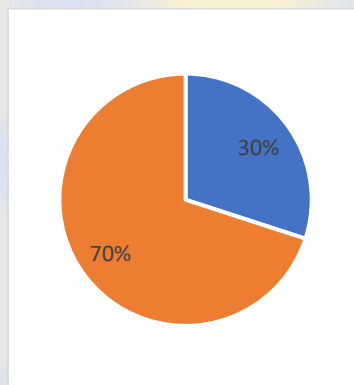
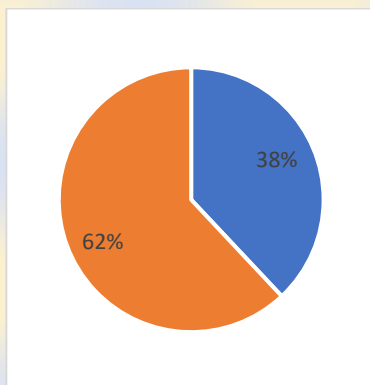
The next question addresses the potential time management difficulties for teachers during online learning when both learning and teaching took place at home. Although most of the participants (60%) do not share about such challenges, we must pay attention to the fact that in Cyprus 52% had difficulty with the distribution of their duties in time during the online training, in Bulgaria 38%, and in Poland 30%. The results show that there is **a group among teachers who, although not a majority, need support to improve their soft skills related to time allocation and management**, especially when working from home and in an online environment.

8. Did you find it difficult to manage your time while studying online?

Bulgaria

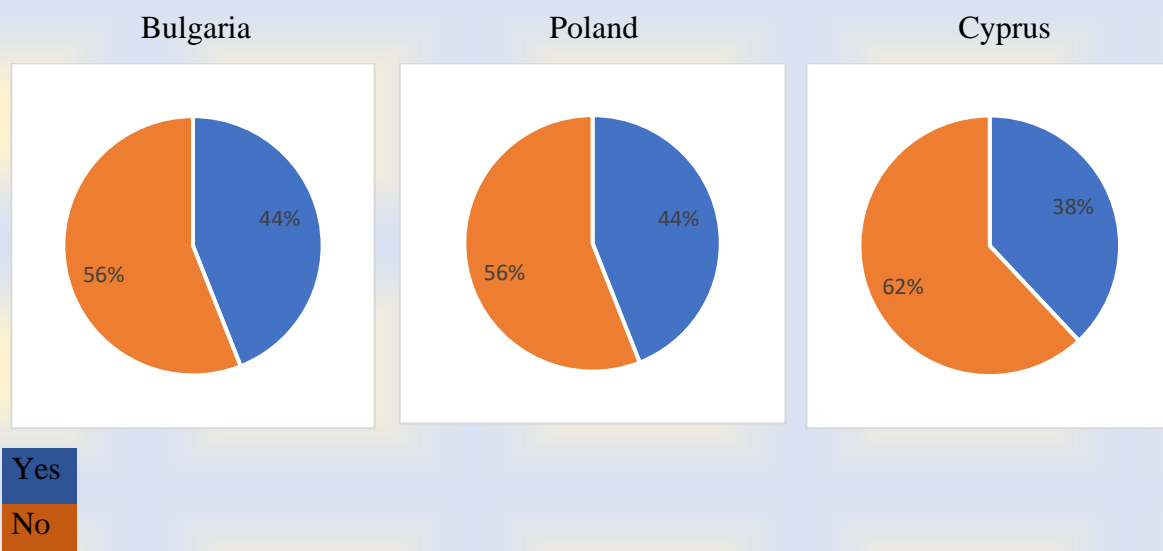
Poland

Cyprus



The ninth question focuses on teachers' preparation for online teaching. This is one of the questions where the distribution of the responses from the three countries is almost identical, as can be seen from the graphs below. On average, **58% of all teachers reported that they did not receive sufficient training before the start of distance learning** and were more likely to feel unsupported and insecure in their workplace at that point. This situation can easily be explained by the emergency measures related to the COVID-19 pandemic, to which everyone in society had to quickly adapt. Such a measure was also the unplanned and unexpected closing of schools and the introduction of online learning and teaching. Some of the respondents left comments on the topic in the last open-ended question, where they shared about the need for additional training, especially for their older colleagues: *"Teachers that are older and not tech savvy experienced more difficulties during the pandemic, in my opinion."* (opinion from Cyprus) and *"Teachers were not trained how to teach online"* (opinion from Bulgaria).

9. Do you think you were given enough training when you had to start teaching online?



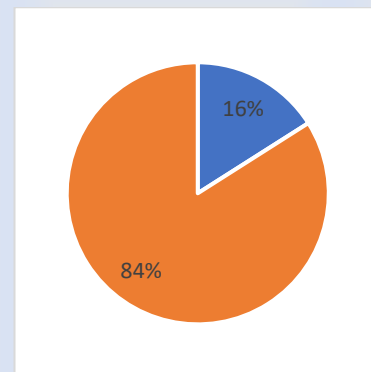
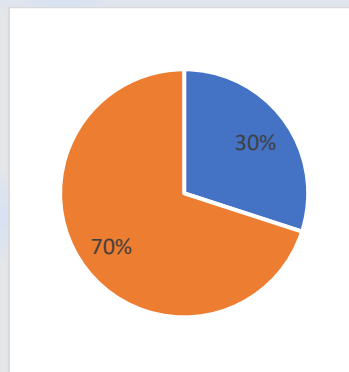
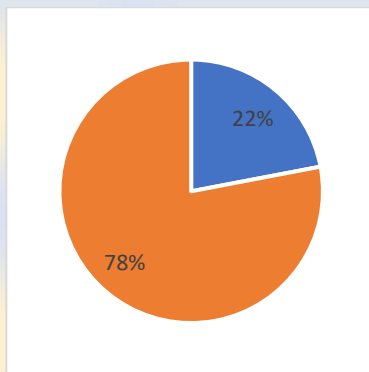
The tenth question assesses whether the consequences of the COVID-19 pandemic have had a negative impact on teachers' self-esteem levels. The results from Bulgaria, Poland and Cyprus are also similar, with an average of 77% of all participants sharing that they did not feel a decrease in self-esteem, regardless of the consequences of the pandemic. However, a **minority of teachers (23%) believe they feel less confident than before**, which may be due to a number of factors – such as insufficient training or preparation for online teaching, lack of appropriate live communication between teachers and students, and other.

10. Have the consequences of the pandemic affected your self-esteem?

Bulgaria

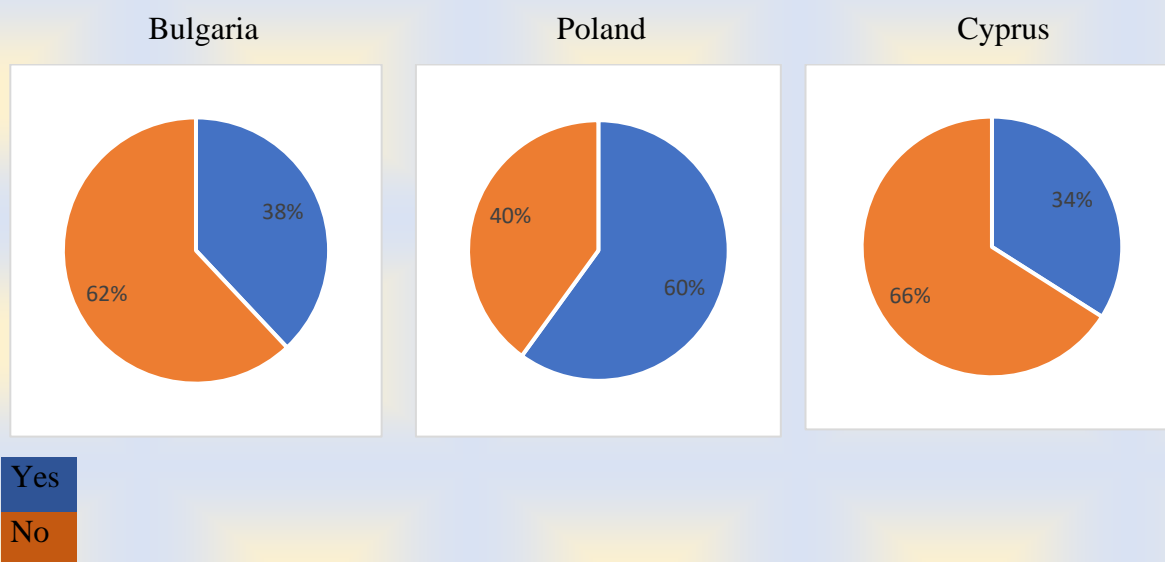
Poland

Cyprus



The next question examines changes in motivation for professional development during the pandemic period among teachers. The majority of participants from Poland (60%) shared a decrease in motivation during the period of online teaching, while in Bulgaria and Cyprus this group was significantly smaller, 38% and 34% respectively. In times of societal crisis, such as the COVID-19 pandemic, the motivation for professional development as a priority can easily be displaced at the expense of more basic needs. However, we notice that **there is a strong motivation among teachers for professional development regardless of the stress and strain that the pandemic has brought.**

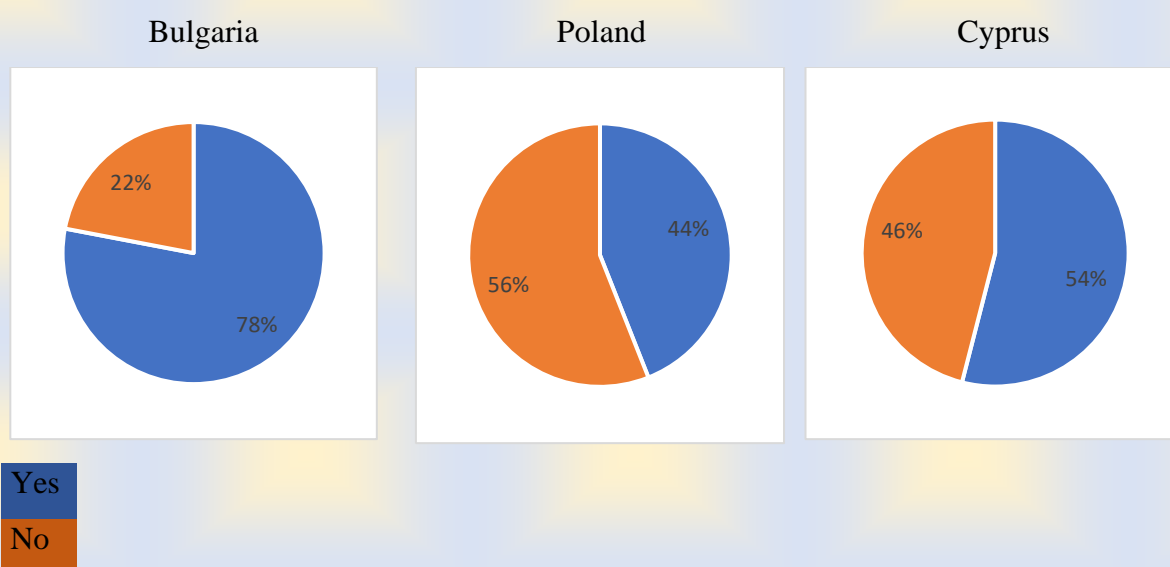
11. Was your motivation for professional development higher before the pandemic?



Yes  
No

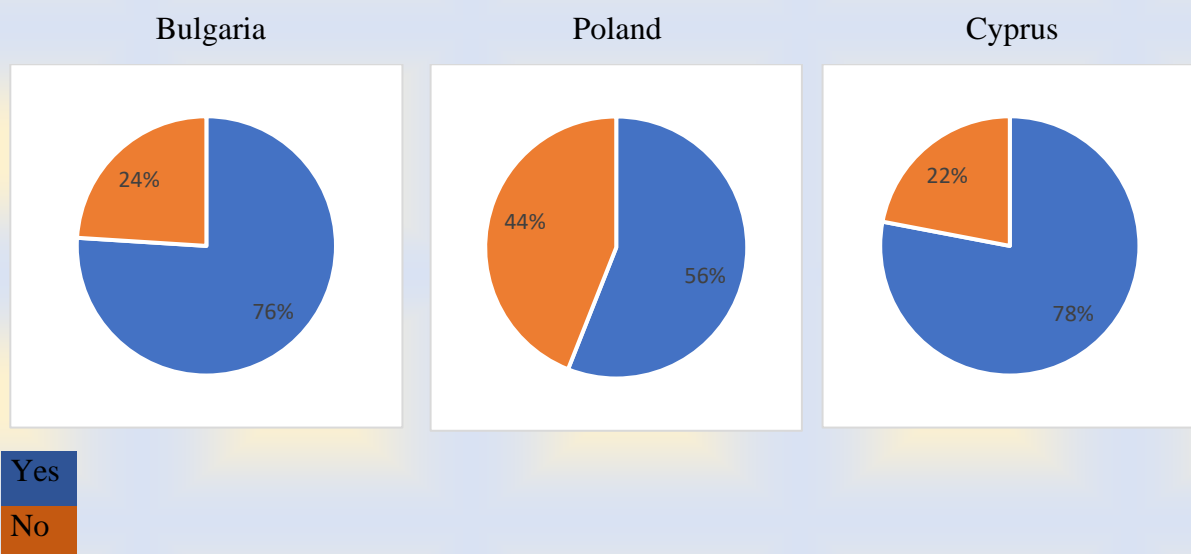
The twelfth question assesses whether teachers' quality of life has deteriorated due to isolation during the COVID-19 pandemic. The largest share of teachers in Bulgaria (78%) shares a deterioration in the quality of life as a result of isolation. In Cyprus this share is 54% and in Poland 44%. Based on these results, it can be assumed that the **pandemic situation and social isolation have had a significant negative impact on the quality of life of many educators.**

12. Do you think the quality of life has deteriorated as a result of the isolation caused by the pandemic?



The thirteenth question focuses on teachers' concerns about their own health during the COVID-19 pandemic. An impressive majority of the participants in the study from Bulgaria and Cyprus share about experienced health anxiety (respectively 76% and 78%). In Poland, the share of this group is smaller, but still prevails (54%). Given the pandemic situation in the three countries and the whole of Europe, the result is expected and shows that **teachers need additional support to deal with this negative emotional state.**

13. Have you experienced health anxiety during the pandemic?

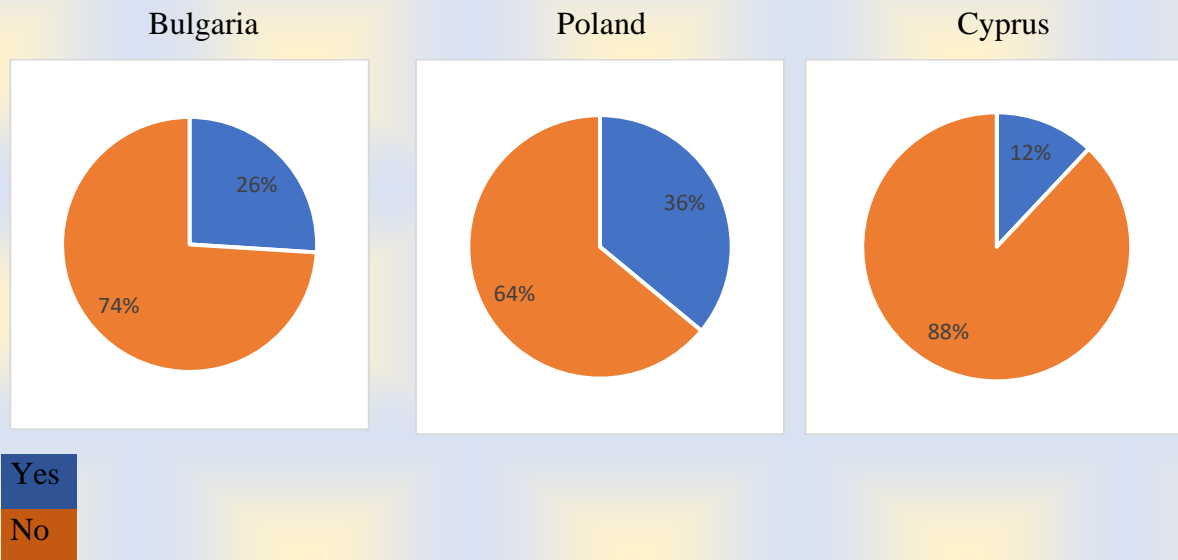


Yes  
No



The next question examines the impact of distance learning on teachers' life balance. Most of the participants (75%) do not consider that distance learning has contributed to a disturbed life balance. **This shows that most of the teachers, despite the challenges, managed to achieve a good life balance during the distance learning period.**

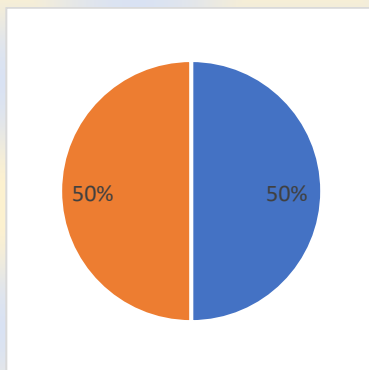
14. Do you feel that distance learning has contributed to an imbalance in your life now?



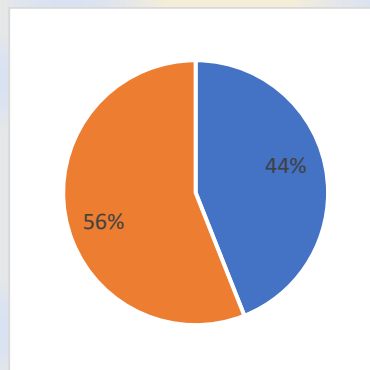
The fifteenth question asks, "Did your colleagues feel more nervous and irritable when teaching online?". The graphs below show that there is a wide variation in responses between countries. **Regardless of the specific figures and differences between Bulgaria, Poland and Cyprus, it is clear that a significant proportion of teachers showed signs of nervousness and irritability visible to their colleagues even in an electronic environment.**

15. Did your colleagues feel more nervous and irritable when teaching online?

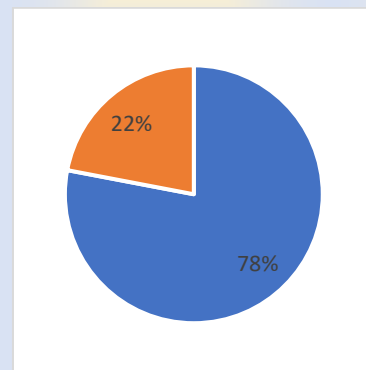
Bulgaria



Poland



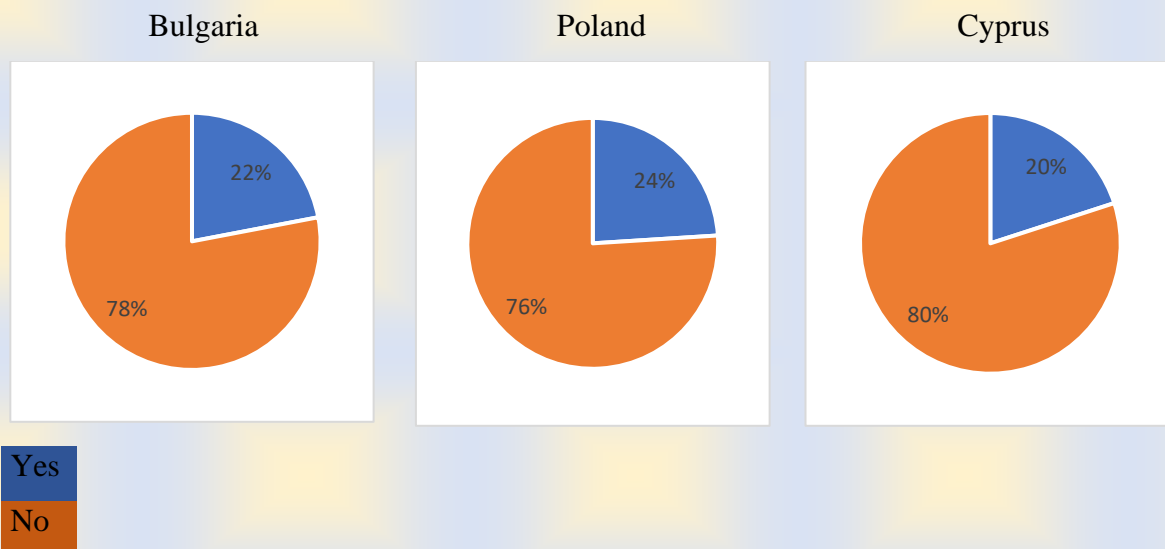
Cyprus



Yes  
No

The next question is aimed at the personal experiences of the respondents and the level of negative emotions compared to the period before the pandemic. The distribution of responses between individual countries is very close and shows that, on average, 78% of all survey participants do not believe that negative emotions were more prevalent during the pandemic. These responses largely diverged from the responses to the more general questions, which focused on teachers' observations of their colleagues (rather than themselves). From this we can judge that when introducing themselves and speaking in the first person, the teachers try to maintain a more optimistic vision, which may, however, diverge from their actual emotional state.

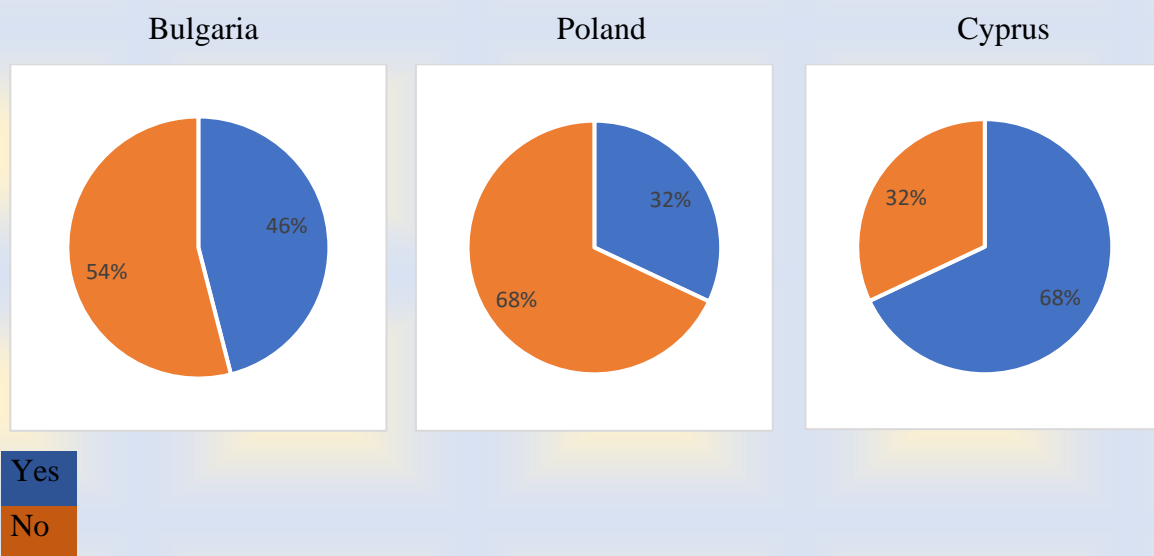
16. Do you think you experience more negative emotions now compared to before the pandemic?



Yes  
No

The seventeenth question focuses on the perceived assessment of teachers' work by students and their parents. Responses from the three countries varied. While in Cyprus 68% of participants believe that their work is appreciated by parents and students, in Bulgaria this share is 46%, and in Poland only 32%, which shows that the majority in both countries feel unappreciated at their workplace. These results are an indicator of problems or potential problems with the interaction and relations between individual stakeholders at school that have been negatively affected by the new learning environment.

17. Do you think that your work is sufficiently appreciated by parents and students?

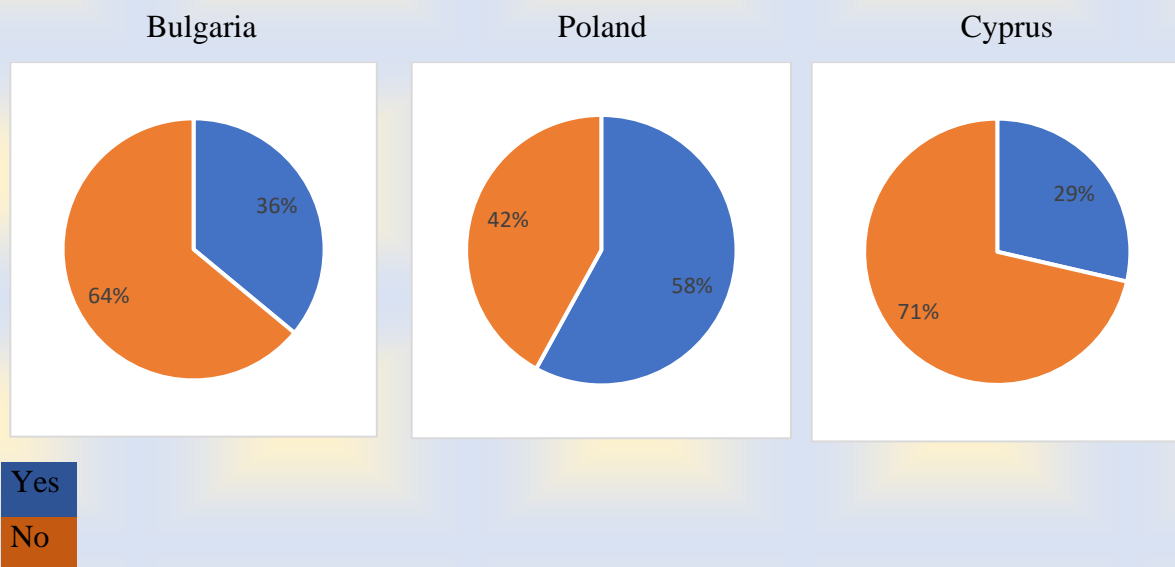


Yes  
No

The next question is directly aimed at the quality of communication with students during online learning. Only 29% of teachers in Cyprus and 36% in Bulgaria say that they felt heard and understood by students during online teaching. In Poland, 42% share hearing problems. These results add to the understanding of weakened communication with students and reveal problems with interaction and relationships between teachers and students that have been negatively affected by the new format of the learning environment and largely confirm the findings of question 7: "Do you think that the communication and relationship with the students has deteriorated during online learning?".

We complete the topic with one of the comments from Bulgaria, left on the last open question: *"Only students who wanted were working during the distance learning."*

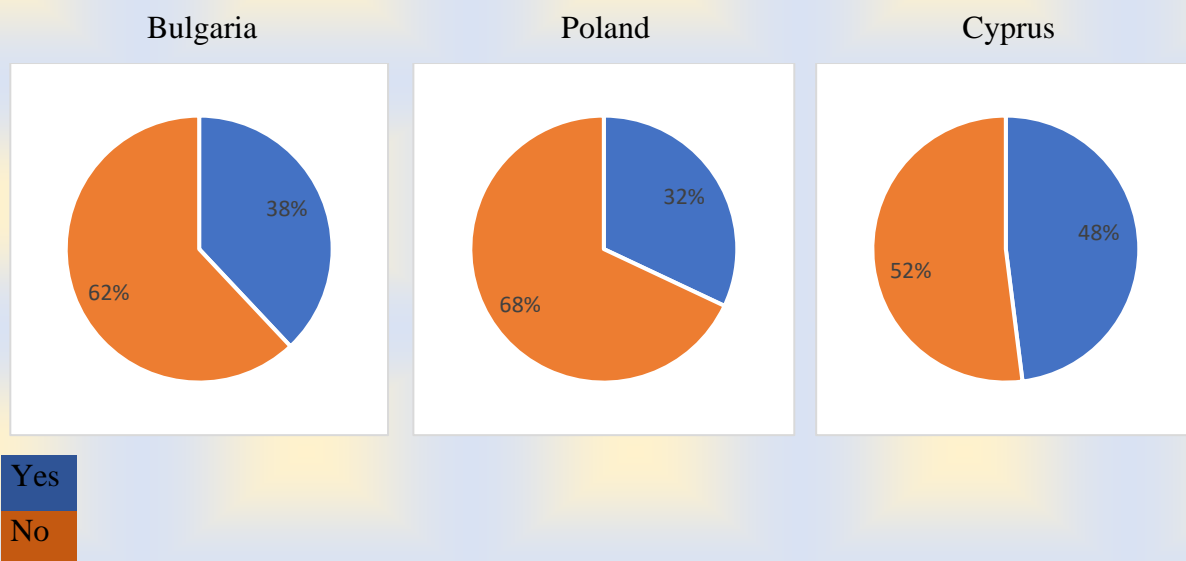
18. Did you feel sufficiently heard and understood by the students during the online learning?



Yes  
No

The last closed question affects teachers' communication with their colleagues and whether it has deteriorated during online learning. The results varied, but in all three countries the majority of participants felt that they had managed to maintain good communication with their colleagues. However, 39% were of the opposite opinion, which is a significant share and calls for further attention to be paid on how educators communicate in the context of online learning and how they could improve this aspect.

19. Do you think communication with colleagues has deteriorated during online learning?



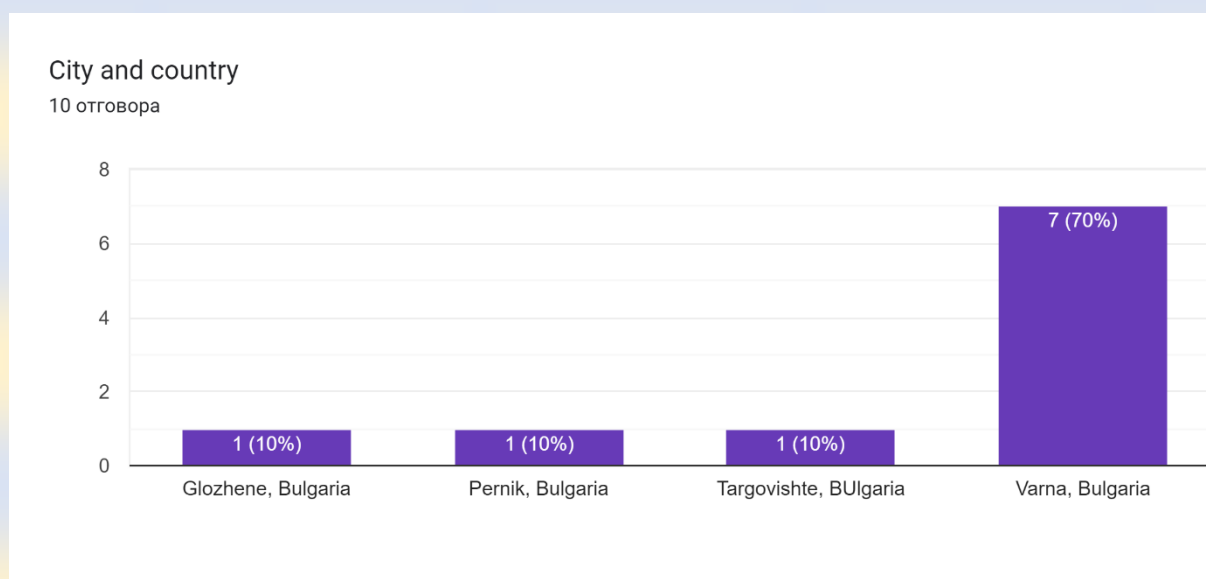
The last question is open and reads: "Please share if you have additional comments related to distance learning and the impact of the COVID pandemic on you and your close ones". Participants from all three countries left comments that, as qualitative data, add to the general picture of the problem, but are not statistically significant and cannot be compared quantitatively.

### 3. Analysis of the results of the survey among training/educational organizations outside the partnership

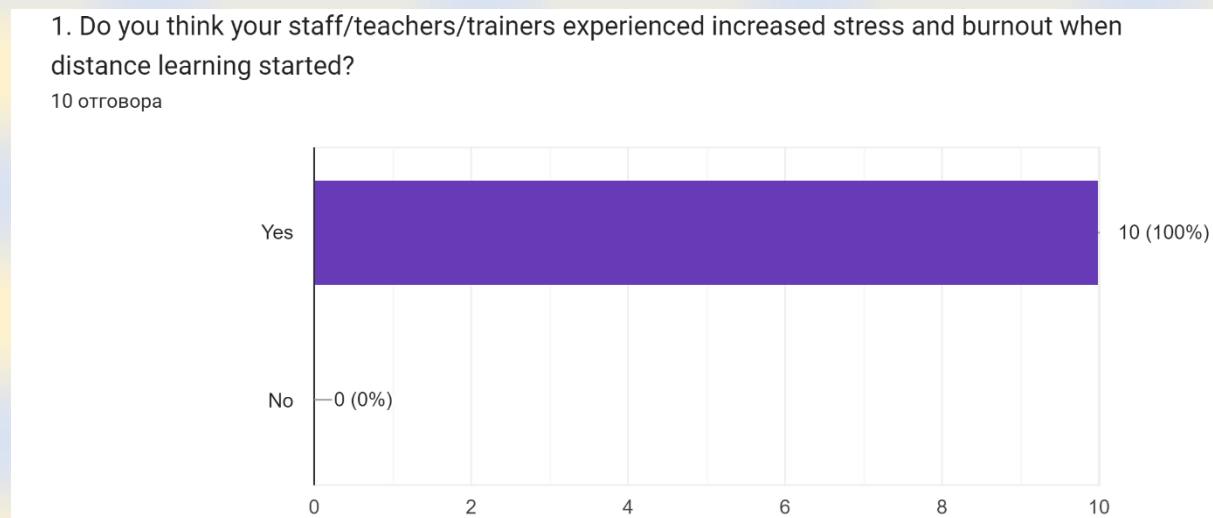
#### 3.1. Analysis of the results from Bulgaria

In Bulgaria, [Questionnaire for training organizations outside the partnership to assess the consequences for students and teachers of e-distance learning](#) (Appendix 3) was completed by representatives of 10 educational organizations: Integral, Ivan Vazov Primary School, 10th Secondary School Aleko Konstantinov, Hristo Botev Secondary School, 3rd Secondary School Petko Rachov Slaveikov, Vasil Drumev Secondary School, Yordan Yovkov Secondary School, Tsar Simeon I Secondary School, Classroom Daga-DD and Montessori Private School.

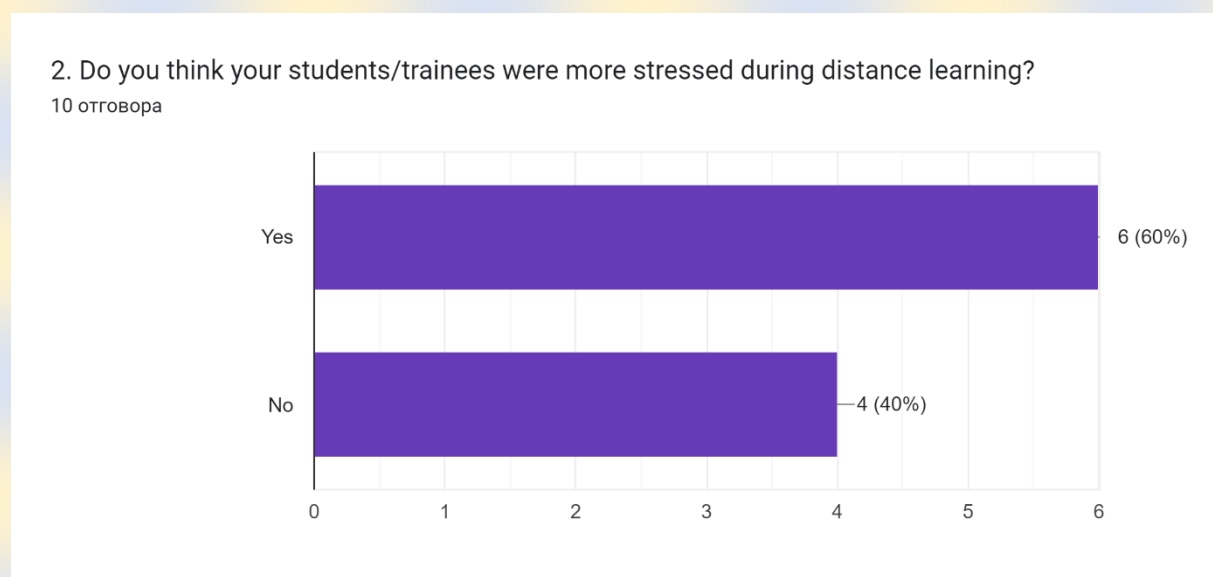
According to the data provided, seven of them are based in Varna, Bulgaria (70%), one in Targovishte (10%), one in Pernik (10%) and one in Glozhene (Kozloduy municipality) - 10%.



The first question in the main body assessed whether the teachers/trainers/staff in the organizations experienced increased levels of stress and burnout during distance learning. 100% of participants (representatives of the Training/Educational organizations) in the study answered “Yes” which indicates that unfortunately the educators have had such negative emotional experiences because of the online teaching environment.

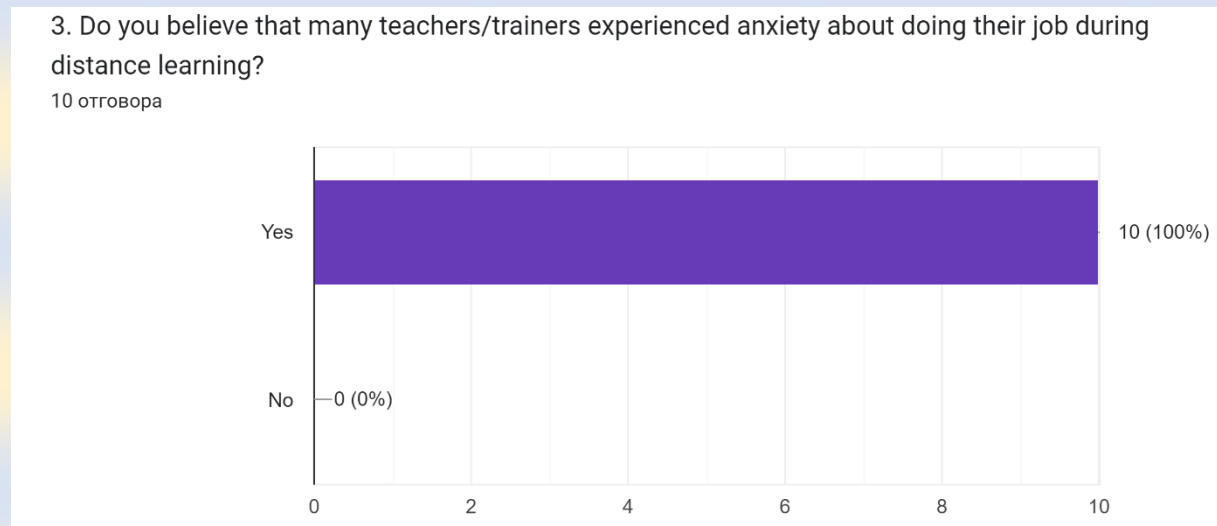


The second question focused on the stress experienced by another group – that of students/trainees in the organization. Here, the results were mixed – 60% of the participants think that the trainees had been more stressed during the period of distance learning, whilst 40% are of the opposite opinion. Regardless, the results indicated that there was a substantial part of students who experienced heightened stress levels during online learning.

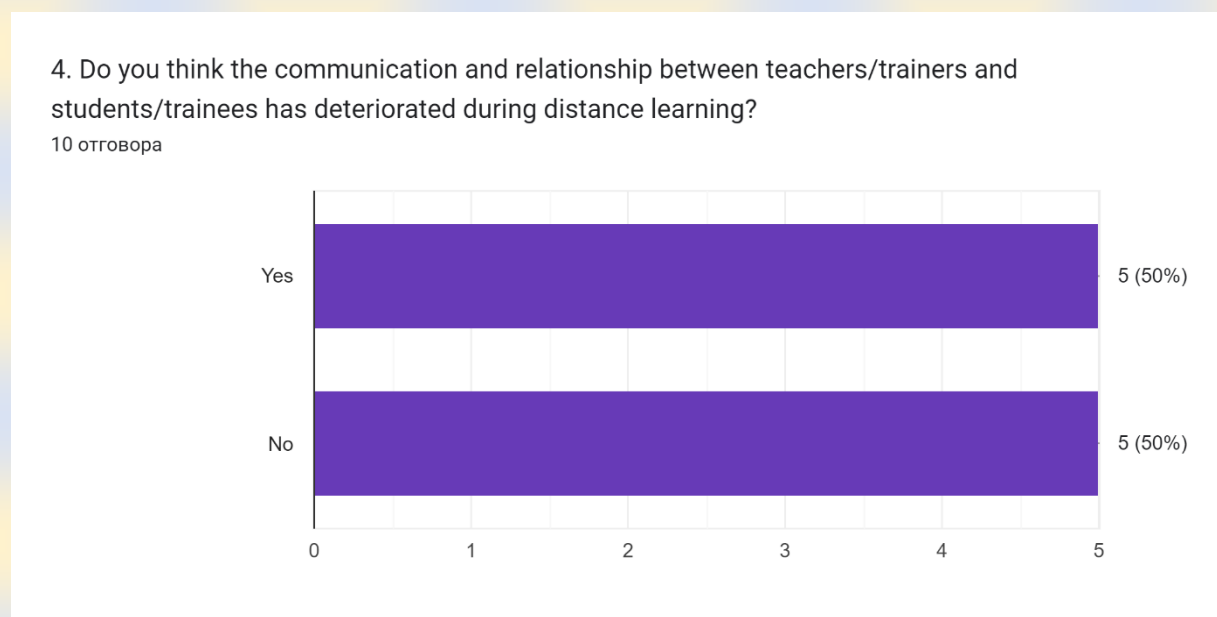




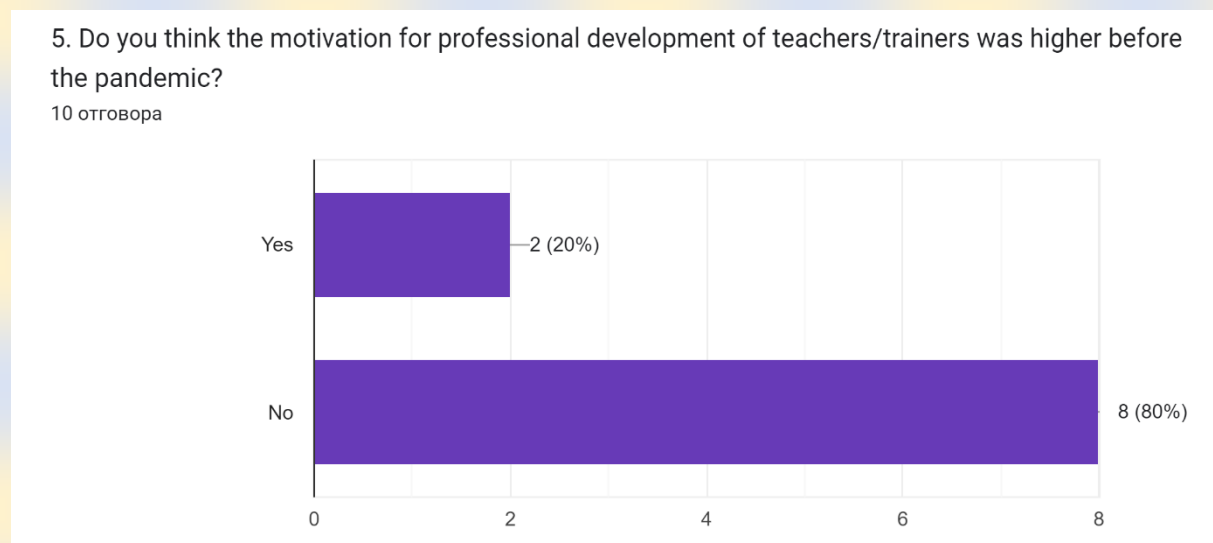
The next question in the study assessed whether participants felt that many teachers experienced increased anxiety about their work during the online learning period. All 10 respondents answered "Yes", indicating that apparently many trainers experienced such a negative emotion during distance learning.



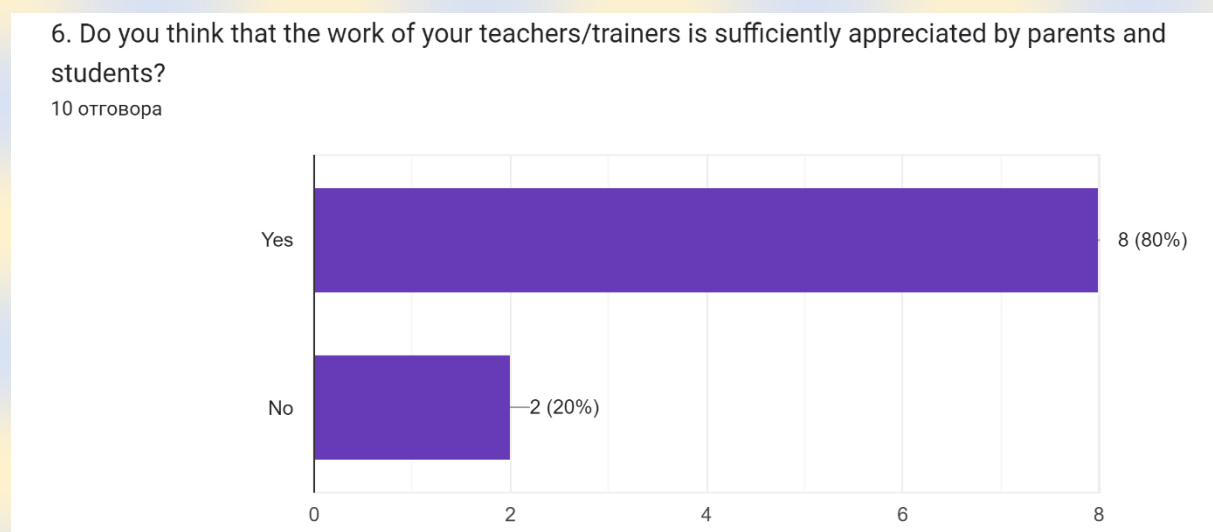
The fourth question deals with the communication and relationship between teachers / trainers and students / trainees during the period of distance learning, and whether it has deteriorated (worsened). Again, the results were mixed – half of participants agreed, and the other half disagreed. This reveals that some teachers found it hard to communicate and maintain a good relationship with their students, whilst others did not have such difficulty.



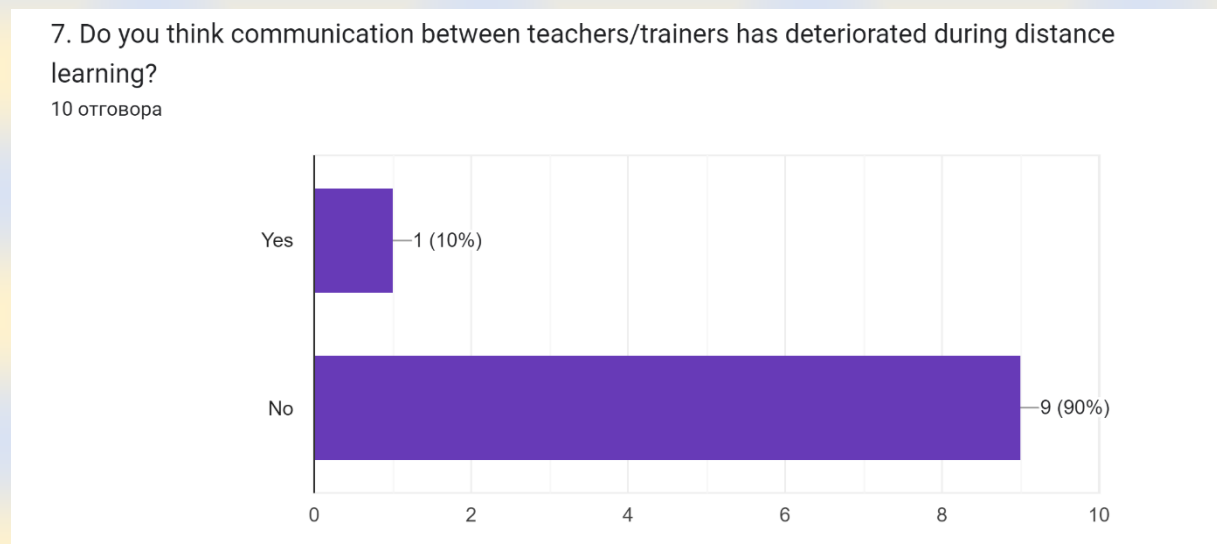
The next question reads "Do you think that the motivation for professional development of teachers/trainers was higher before the pandemic?" 80% of the survey participants did not report lower motivation, while only 20% noticed such a negative phenomenon. This indicates that trainers have continued to demonstrate high levels of motivation during this difficult period in their careers.



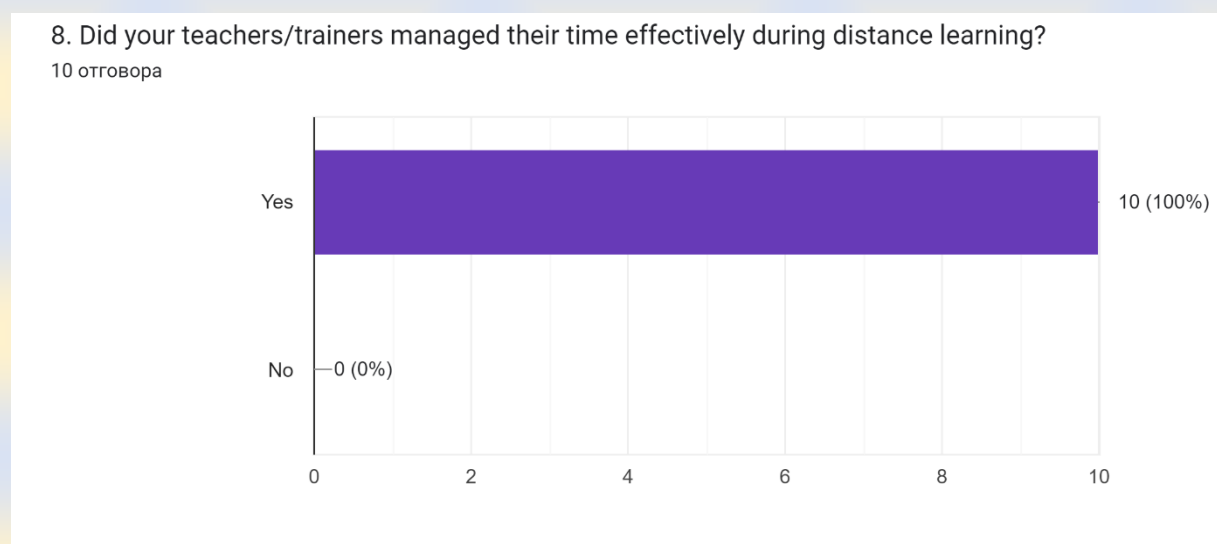
The sixth question is whether the participants think that the work of the trainers is appreciated by the students and their parents. The majority of respondents (80%) felt that the teachers' efforts were sufficiently appreciated by these groups. This clearly shows that this aspect has not been negatively affected by the COVID-19 pandemic and the distance learning period.



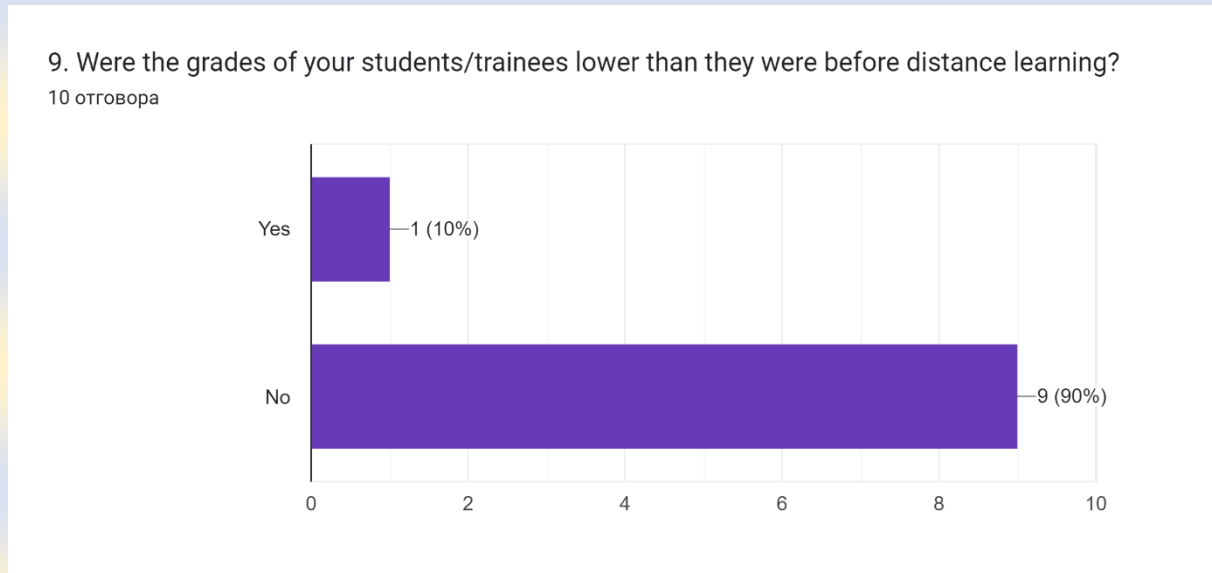
The seventh question focuses on communication between the teachers themselves. 90% of the survey participants believe that communication between teachers/trainers has not deteriorated during the distance learning period, and only 10% have the opposite opinion. This clearly shows that the teachers were able to effectively use online communication channels and maintain a good level of working relationships with their colleagues.



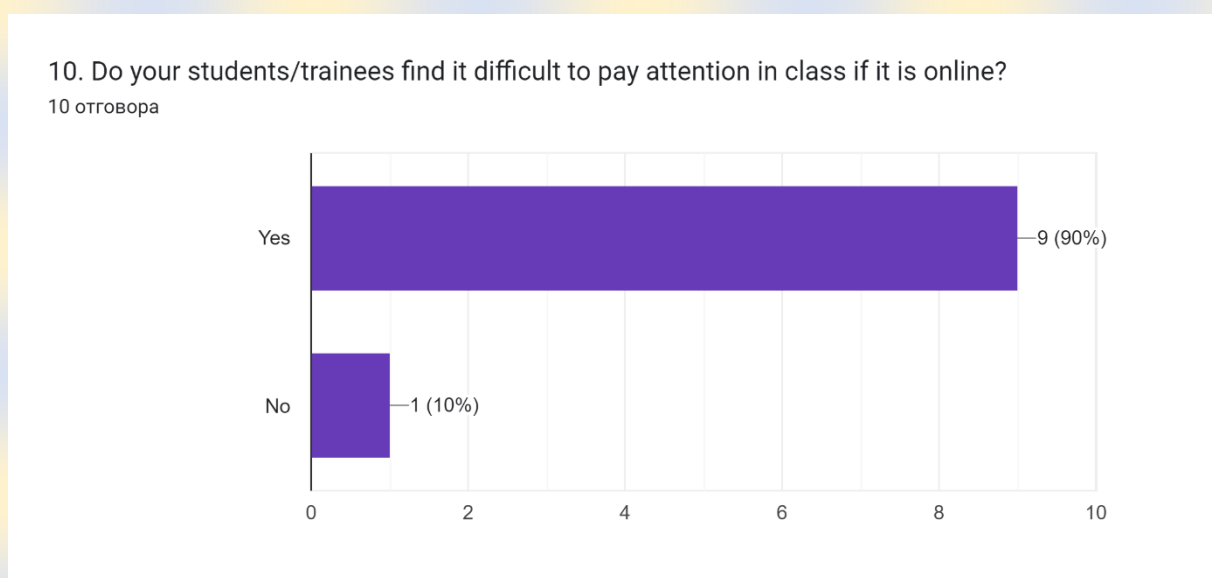
The next question evaluates whether the teachers managed their time in an effective manner during the period of distance learning. The data shows that all participants (100%) think that the trainers from the organization had good time management.



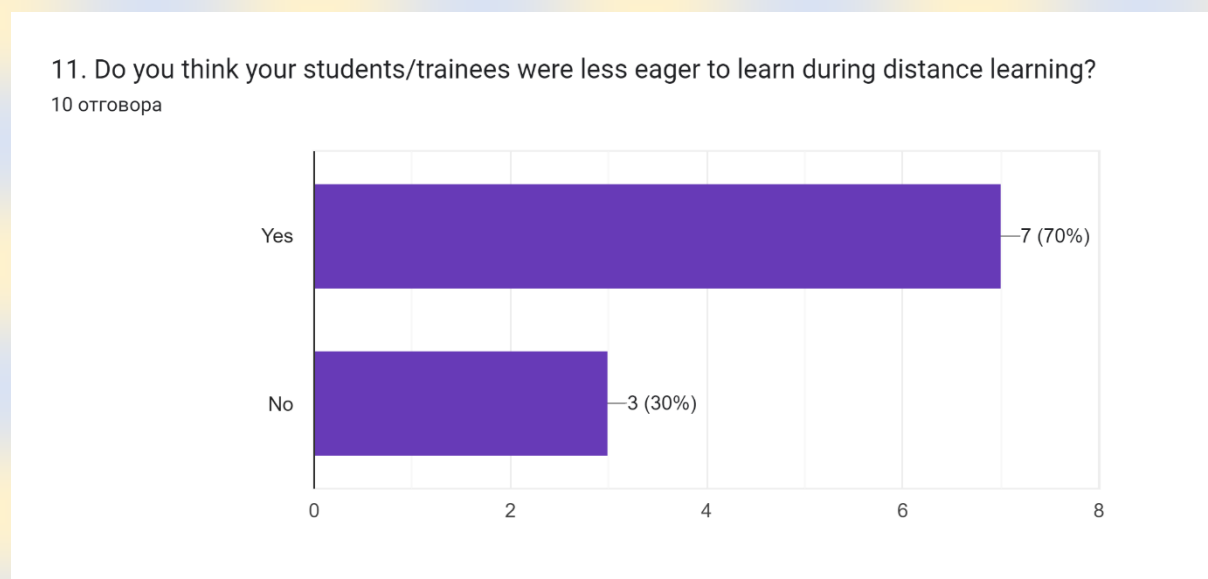
The subsequent question states “Were the grades of your students/trainees lower than they were before distance learning?”. Once more, the results are very good – the majority of respondents (90%) have answered “No”, whilst only 10% have answered “Yes”. This shows that students managed to preserve the level of their academic performance in spite of the distance learning.



The tenth item from the Questionnaire for Training organizations measures whether participants believe that their students/trainees find it difficult to pay attention during online classes. The majority of respondents (90%) answered "Yes", while only 10% answered "No". These data show that learners clearly struggled with this aspect during distance learning.



The last closed-ended question states “Do you think your students/trainees were less eager to learn during distance learning?”. The majority of representatives of training organizations (70%) reported negative changes in the motivation of their students, and the remaining 30% did not share such a difference. This clearly indicates that students had less desire to study during the online learning period.



The last question is open-ended and states: “Please share if you have any additional comments related to the impact of distance learning and the consequences for students/trainees and teachers/trainers”. No participants in the survey have provided any comments regarding the impact of distance learning on trainers and trainees.



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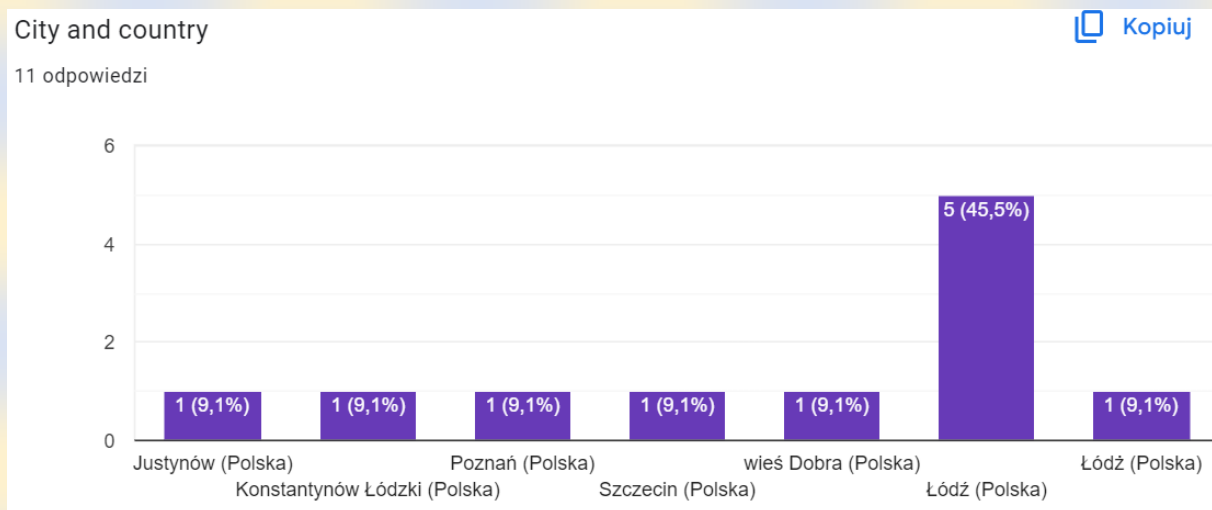
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### 3.2. Analysis of results Poland

[Questionnaire for Training Organizations outside the partnership to assess the consequences for students and teachers of e-distance learning](#) (Appendix 3) was completed by representatives of 11 such organizations in Poland, namely: Catholic Secondary School, Jana Brzechwy Elementary School and Kindergarten in Yustinów, National Educational Support Foundation (Ogólnopolski Operator Oświaty), Technical University in Łódź, Primary School 199 in Łódź , King Báthory Primary School ( Króla Batory ) in Szczawyn , Elementary School No. 1 in Konstantinow Lodzki, Elementary School February 24 1863, Primary School No. 1, College of Medical and Social Workers, Balticum College .

5 of the organizations are located in Lodz, Poland (45%) and the remaining 6 (55%) in Szczecin, Dobra, Konstantynów Łódzki, Szczawin, Poznań and Justynów.





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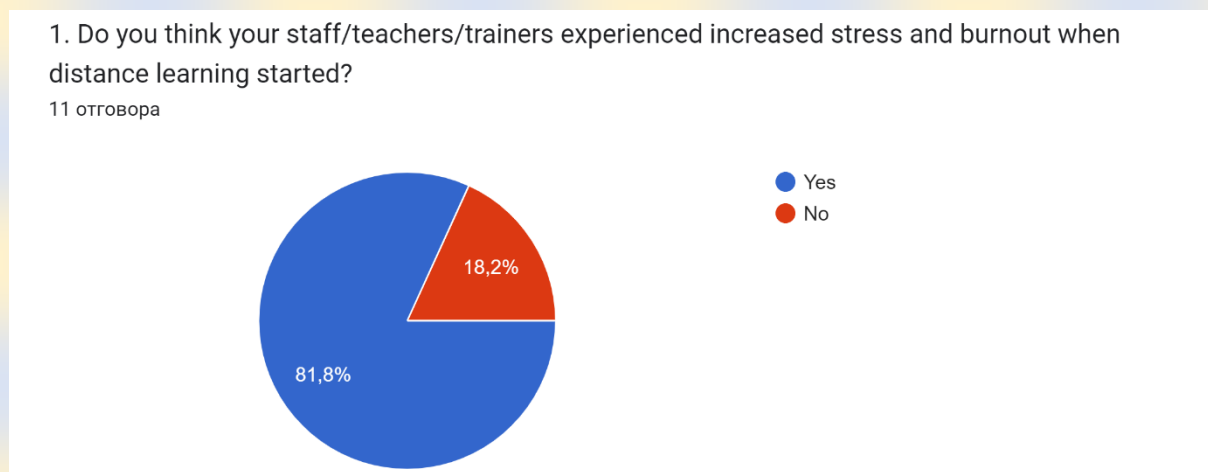


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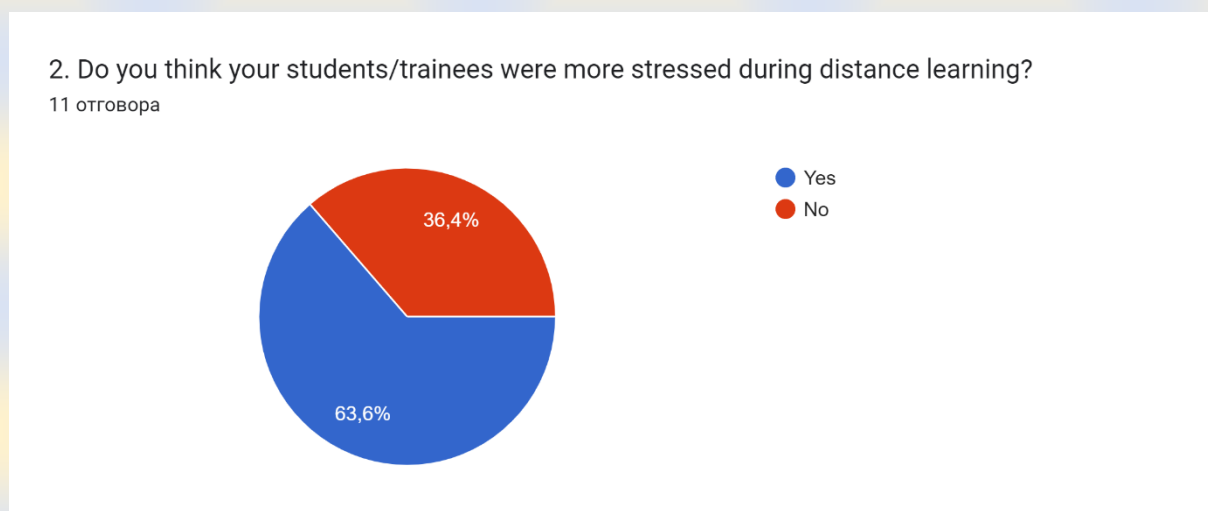
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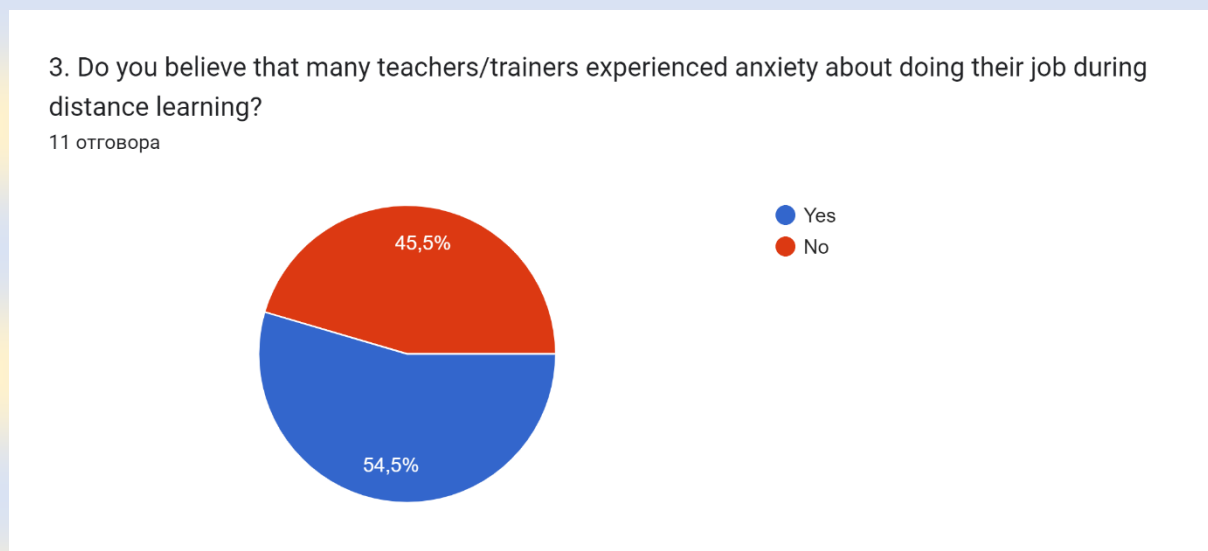
The first question in the main body assessed whether the teachers/trainers/staff in the organizations experienced increased levels of stress and burnout during distance learning. 81,8% of participants (representatives of the Training/Educational organizations) in the study answered “Yes” which indicates that unfortunately, the educators have had such negative emotional experiences because of the online teaching environment. 18,2 % answered No - it was only one person.



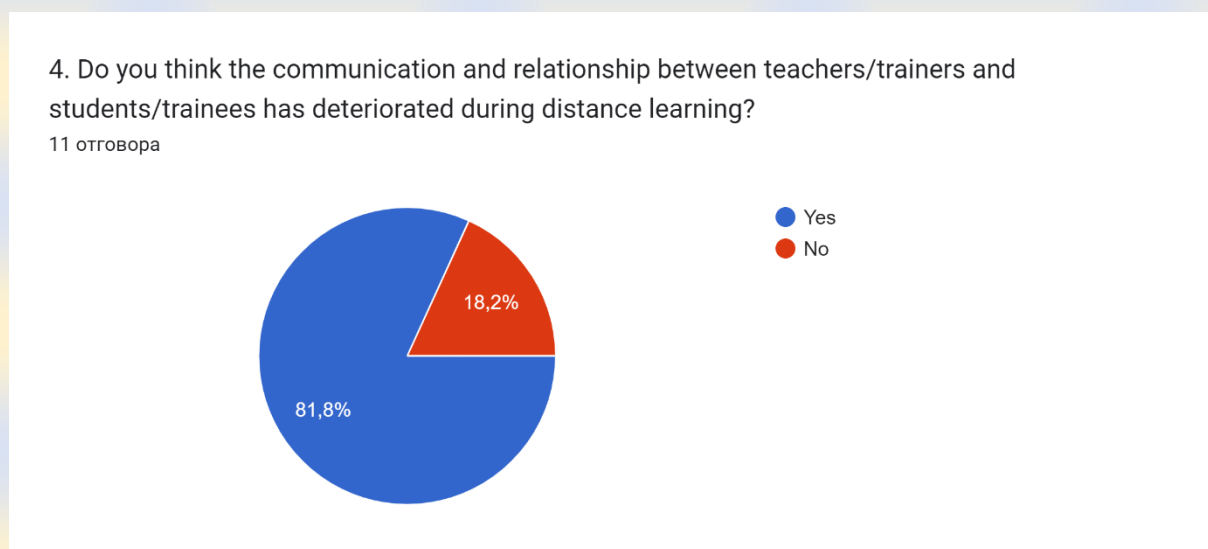
The second question focused on the stress experienced by another group – that of students/trainees in the organization. Here, the results were mixed – 63,6% of the participants think that the trainees had been more stressed during the period of distance learning, whilst 36,4% are of the opposite opinion. Regardless, the results indicated that there was a substantial part of students who experienced heightened stress levels during online learning.



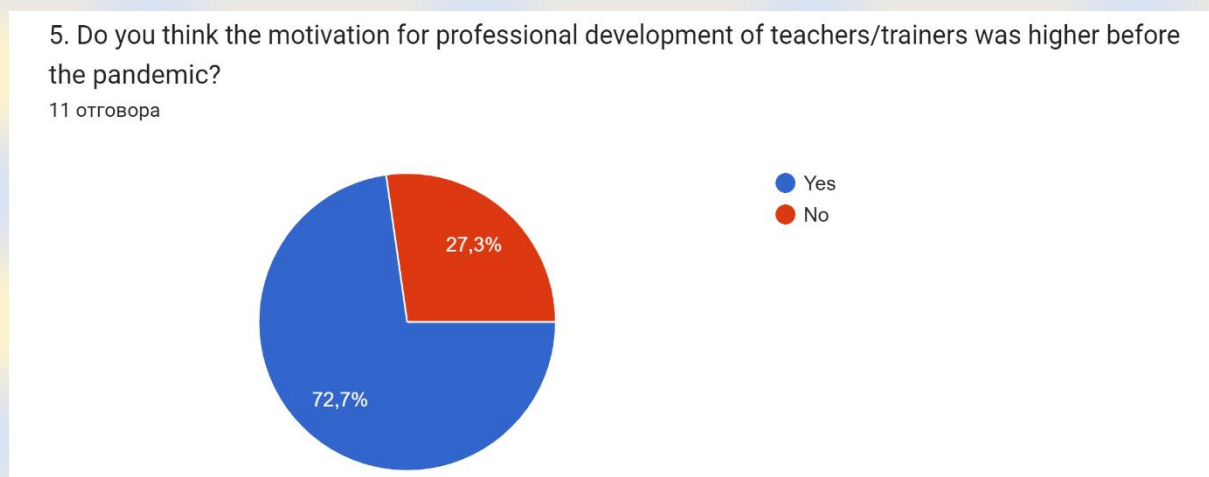
The third question asks representatives of training organizations about increased anxiety about work among their staff teachers during the period of online learning. A little over half answered "Yes" (54.5%), while the remaining 45.5% clearly did not observe this type of anxiety among their teachers.



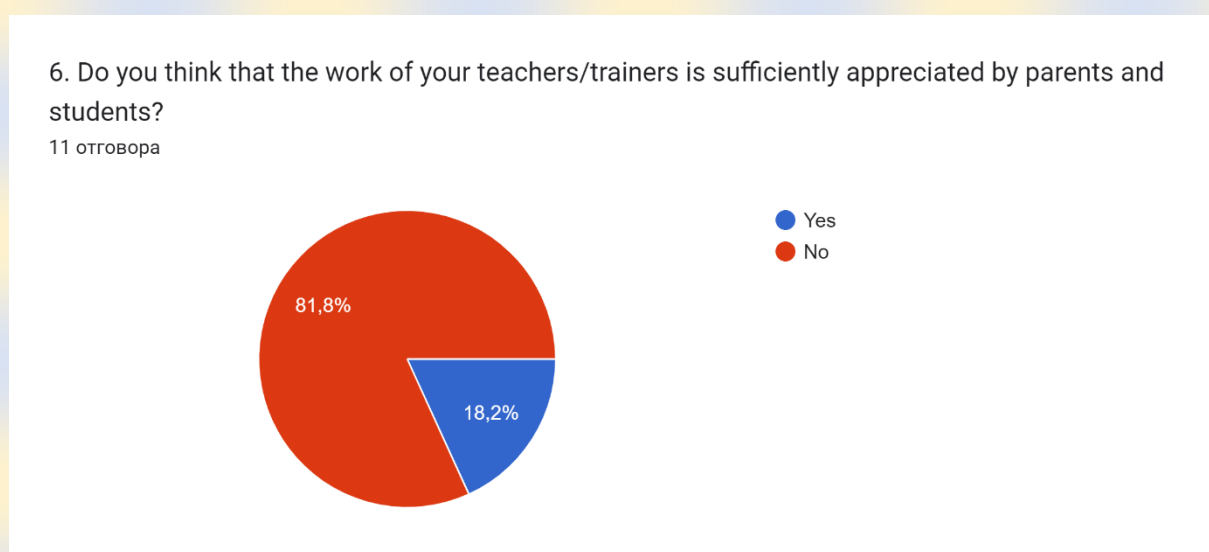
The next question refers to the contact and strength of the student-teacher relationship during distance learning. The majority of respondents (81,8%) share the deterioration of communication between teachers and students. This reveals that the electronic environment was not sufficient to ensure communication at the required level.



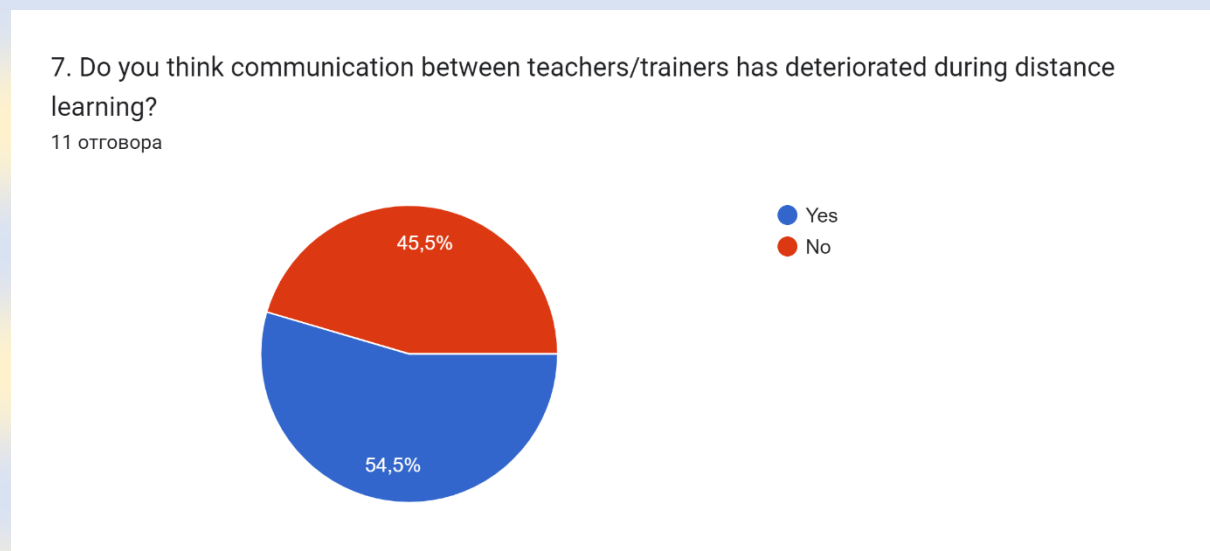
The fifth question focuses on changes in levels of motivation for professional development among educators during the pandemic period. According to 72,7% of respondents, motivation for professional development among teachers was higher before distance learning, while only 27,3% thought this was not the case. Therefore, we can assume that the pandemic has negatively affected the level of motivation for professional development of the staff.



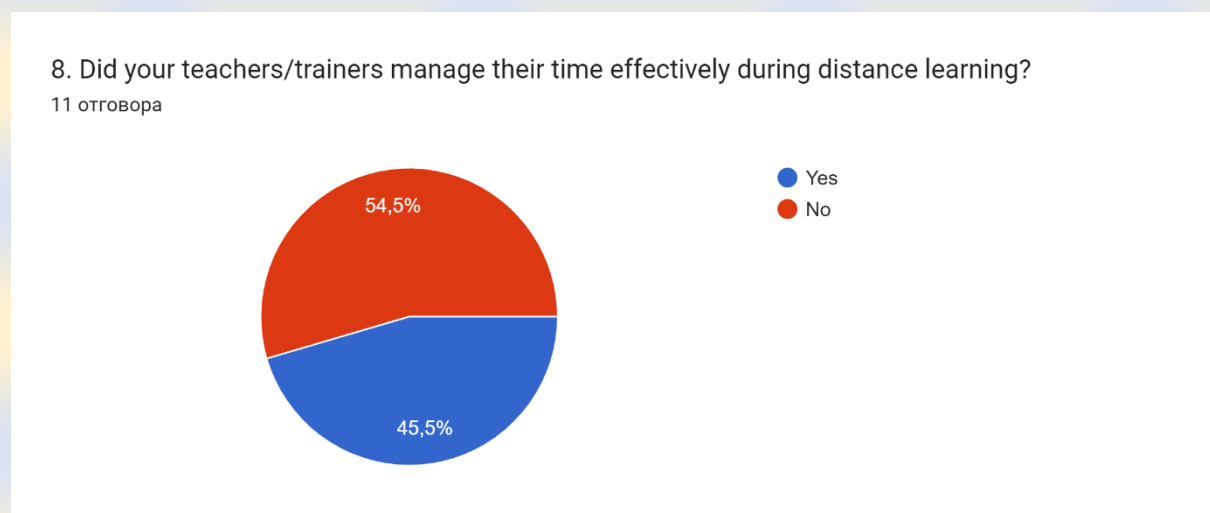
The sixth question is whether the participants think that the work of the trainers is appreciated by the students and their parents. The majority of respondents (81,8%) believe that teachers' efforts are not sufficiently appreciated by these groups. It is a common observation in Polish education that the profession and work of the teacher is less respected than in previous decades. In relation to COVID -19, it is generally said that parents should be more responsible for children's education than teachers.



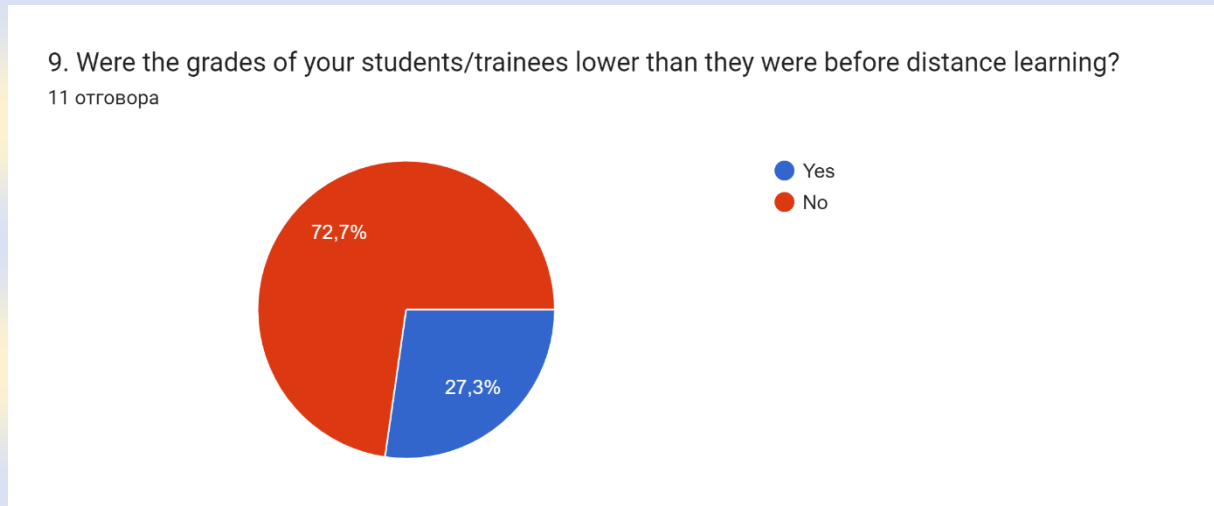
The next question again assesses communication, but this time between the teachers themselves. The responses of the survey participants are divided into two. Almost half (54,5%) are of the opinion that communication between educators has deteriorated during the distance learning period, while the remaining 45,5% think there is no deterioration.



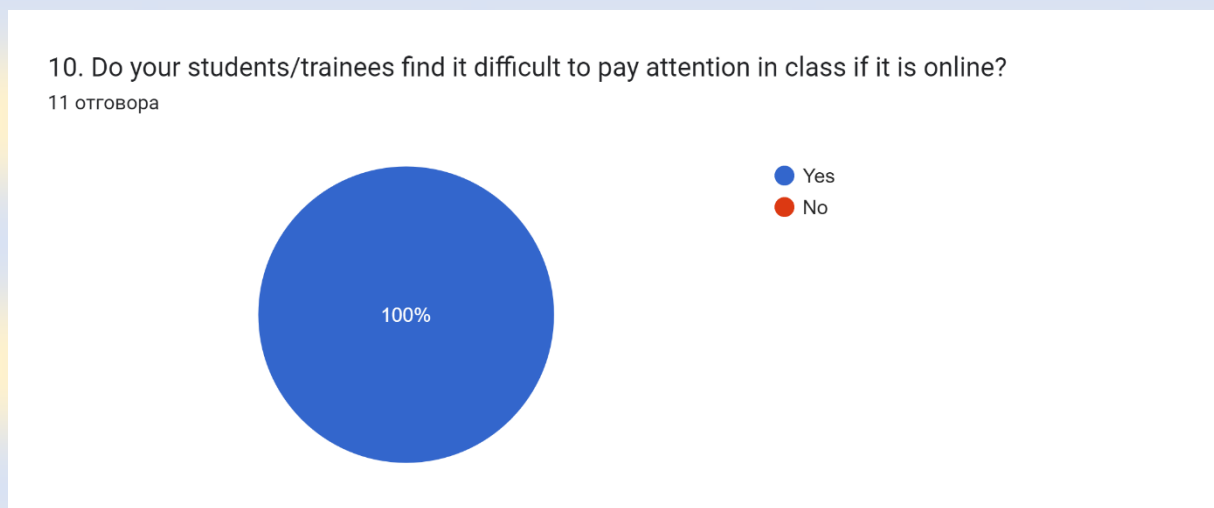
The eighth question evaluates whether teachers managed their time in an effective way during the distance learning period. In this case, the results are again mixed – half of the participants agree (54.5%) and the other half disagree (45.5%) with the statement.



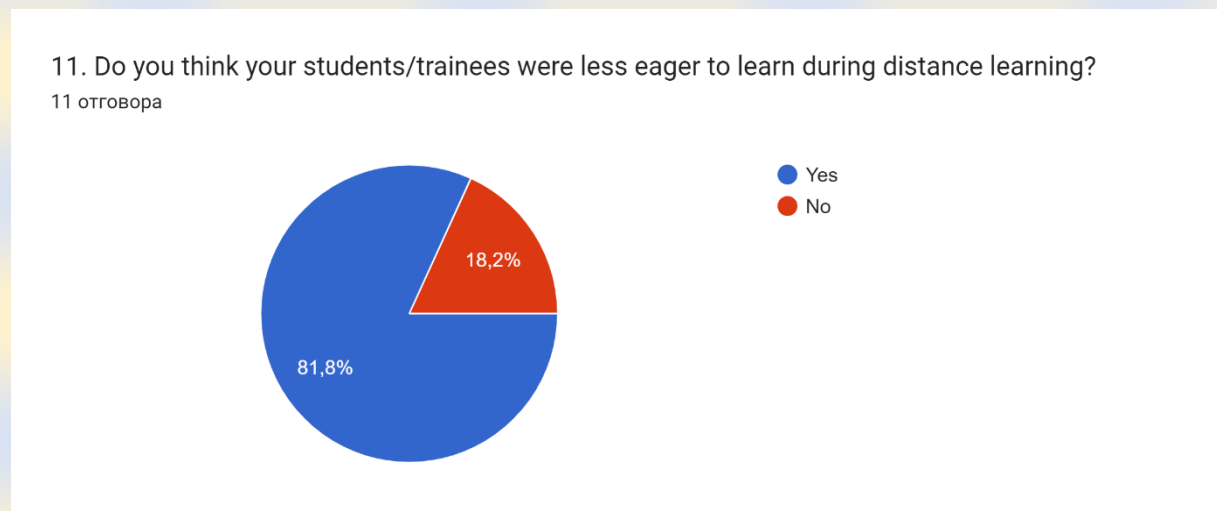
The next states “Were the grades of your students/trainees lower than they were before distance learning?”. The results are good – the majority of respondents (72,7%) have answered “No”, whilst 27,3% have answered “Yes”. This shows that students managed to preserve the level of their academic performance in spite of the distance learning.



The tenth question asks the representatives of teaching organizations if their students/learners had difficulty paying attention during the online classes. All respondents (100%) shared about difficulties with attention during online learning, which, despite the preserved level of grades, speaks of serious challenges, both for learners and their teachers.



The last closed-ended questions reads: "Do you think that your students/learners were less willing to learn during distance learning?". The majority of participants answered positively (81,8%), and only 18,2% answered "No". This clearly speaks of motivational problems among students during the period of online learning, which is a serious factor in the deterioration of the learning process.

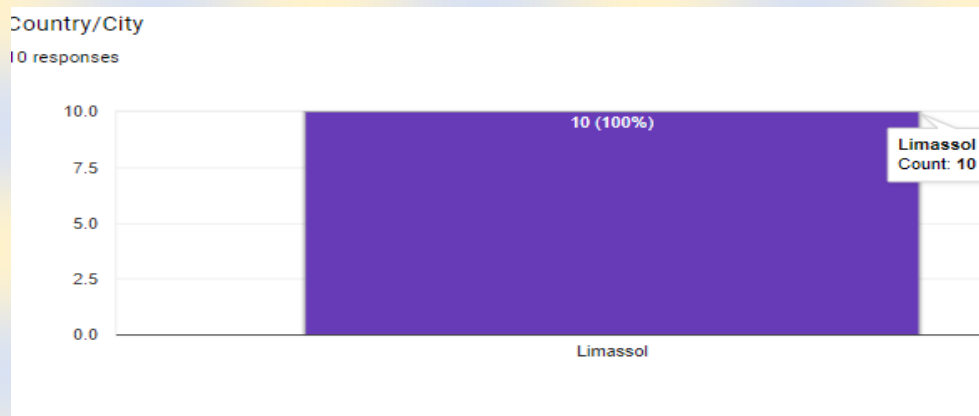


The last question is open-ended and reads: "Please share if you have any additional comments related to the impact of distance learning and the consequences for students/trainees and teachers/trainers ". Five of the participants took the opportunity to leave comments. They are:

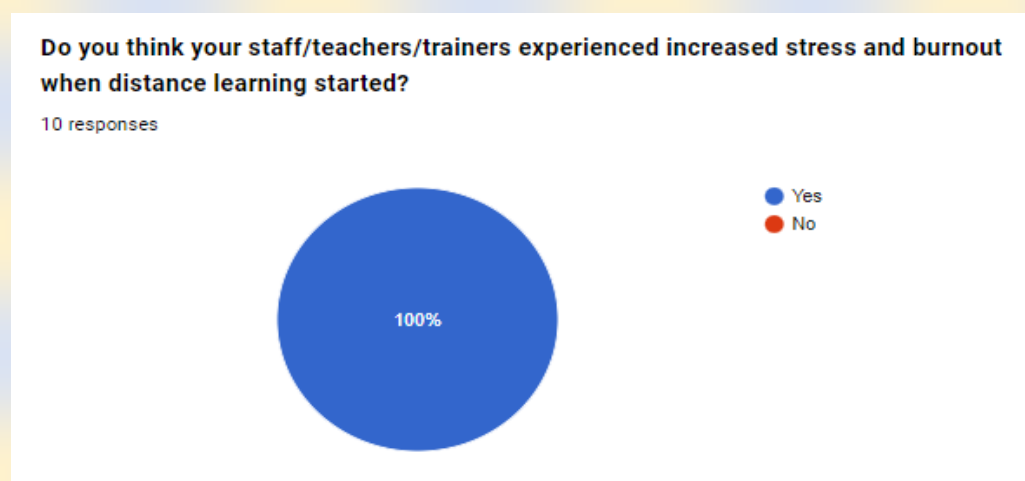
- *“The biggest disadvantage was social isolation and difficulties related to a lack of self-discipline. Students did not maintain the pace of the programme. Some students required constant supervision. It was difficult to conduct examinations in a fair manner.”*
- *“It has necessitated an update of the curricula and the tools used. Allows easy change of mode. Elements of remote learning have a positive impact on the learning process.”*
- *“Communication between peers has deteriorated significantly”*
- *“A return to normality resulted in starting to build relationships from the beginning”*
- *“Poor concentration, deterioration in relations with peers”*

### 3.3. Analysis of results from Cyprus

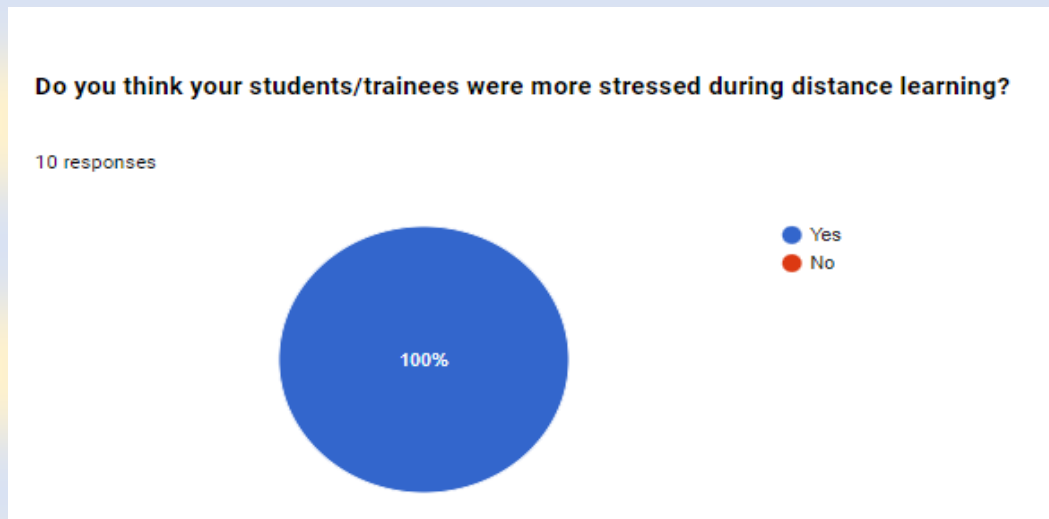
[Questionnaire for Training Organizations outside the partnership to assess the consequences for students and teachers of e-distance learning](#) (Appendix 3) was completed by representatives of 10 such organizations in Cyprus. These are: Ap. Loukas special school, 26<sup>th</sup> Primary, Apis, Diakrisi, Ims Research and Development, Lanitio, Gymnasio Katholikis, Deftero Lyceum, Tsirio primary and English Learning Ins. They are all located in Limassol, Cyprus (100%).



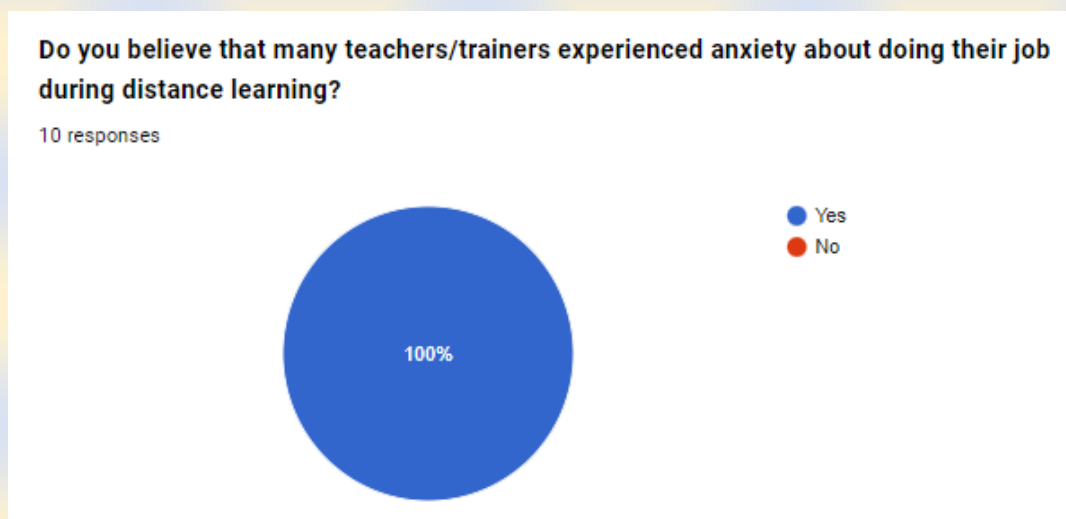
The first question in the main body assessed whether the teachers/trainers/staff in the organizations experienced increased levels of stress and burnout during distance learning. 100% of participants (representatives of the Training/Educational organizations) in the study answered “Yes” which indicates that educators had negative emotional experiences because of the online teaching environment.



The second question focused on the stress experienced by another group – that of students/trainees in the organization. Here, the results indicate that 100% of the participants think that their trainees had been more stressed during the period of distance learning. This is very alarming, as all respondents agreed with each other.

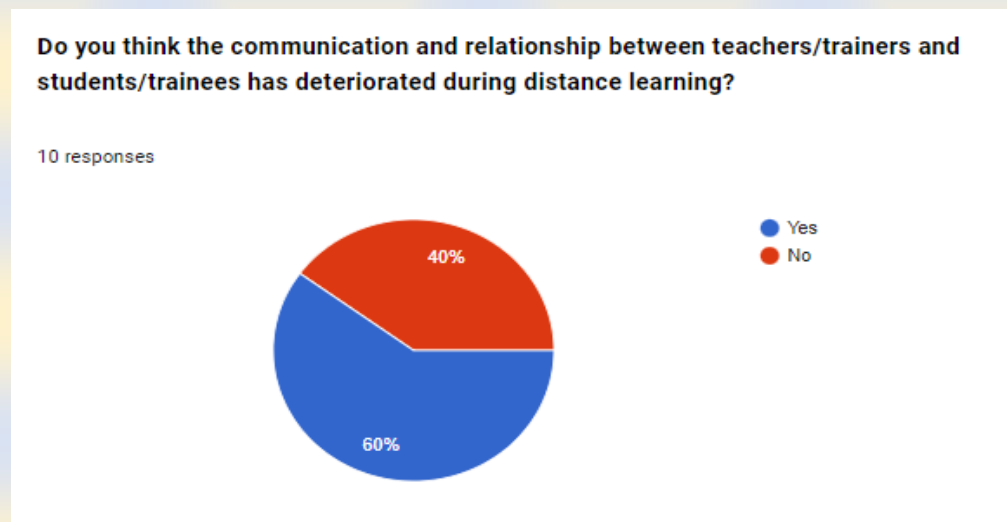


The next question in the survey evaluated if the participants believe that a lot of teachers had increased anxiety about their work during the period of online learning. Again, all 10 respondents answered “Yes” which shows that many trainers experienced such negative emotion during distance learning.

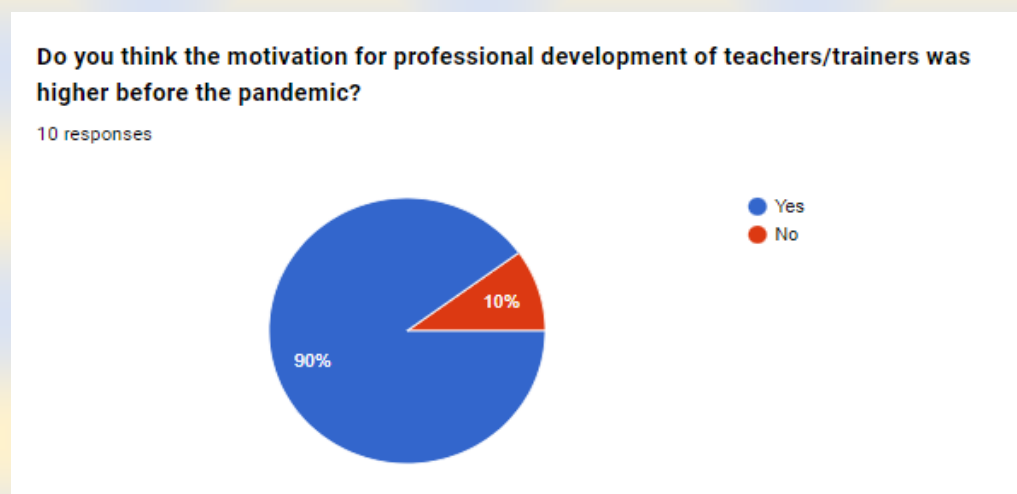




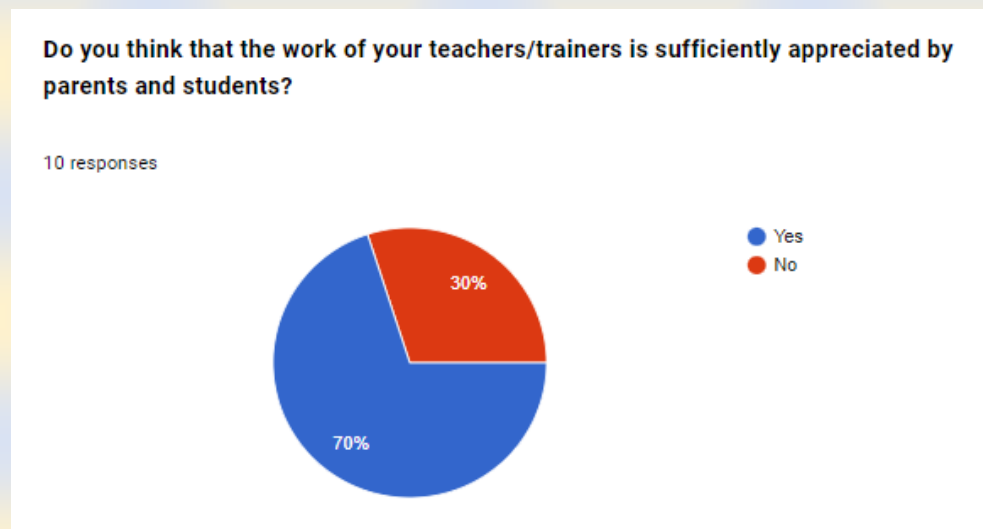
The fourth question refers to the communication and relationship between teachers/trainers and students/learners during the distance learning period and asks whether it has deteriorated. The responses show that 60% report deterioration, and 40% do not. This revealed that the majority of teachers encountered challenges in communicating and maintaining relationships with students.



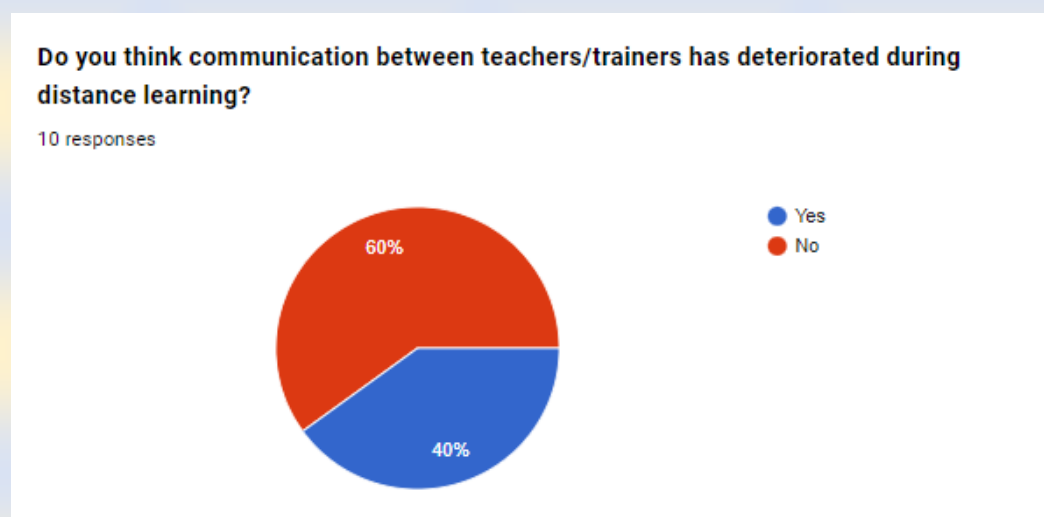
The fifth question reads: "Do you think the motivation for professional development of teachers/trainers was higher before the pandemic?" Here, 90% (9) of participants shared that teachers' professional development motivation was higher before distance learning, while only 10% (1) are of the opposite opinion. This shows that this difficult period also affected the teachers' attitude towards their career and their desire for its development.



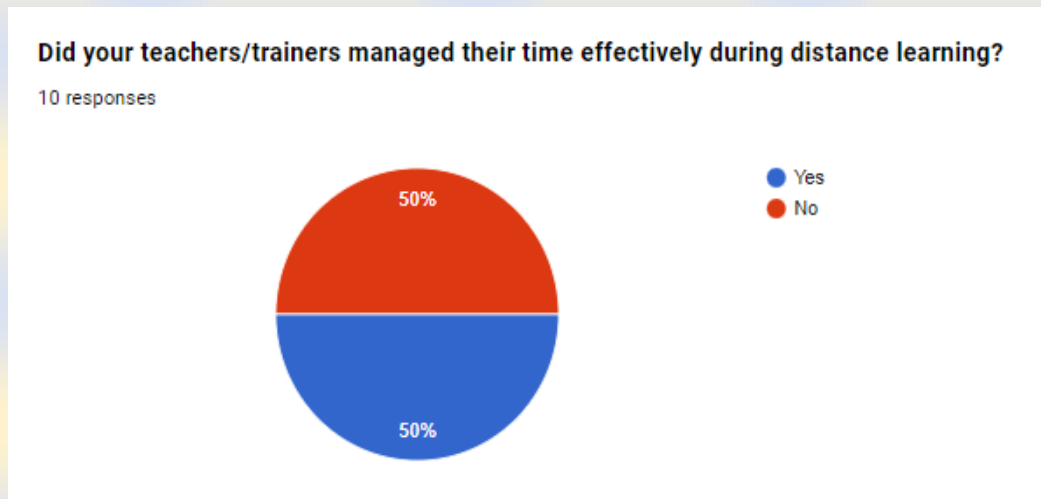
The sixth question examines whether the participants believe that the work of the trainers is valued by the students and their parents. The majority of respondents (70%) felt that the teachers' efforts were sufficiently appreciated by these groups. This clearly shows that this aspect has not been negatively affected by the COVID-19 pandemic and the distance learning period.



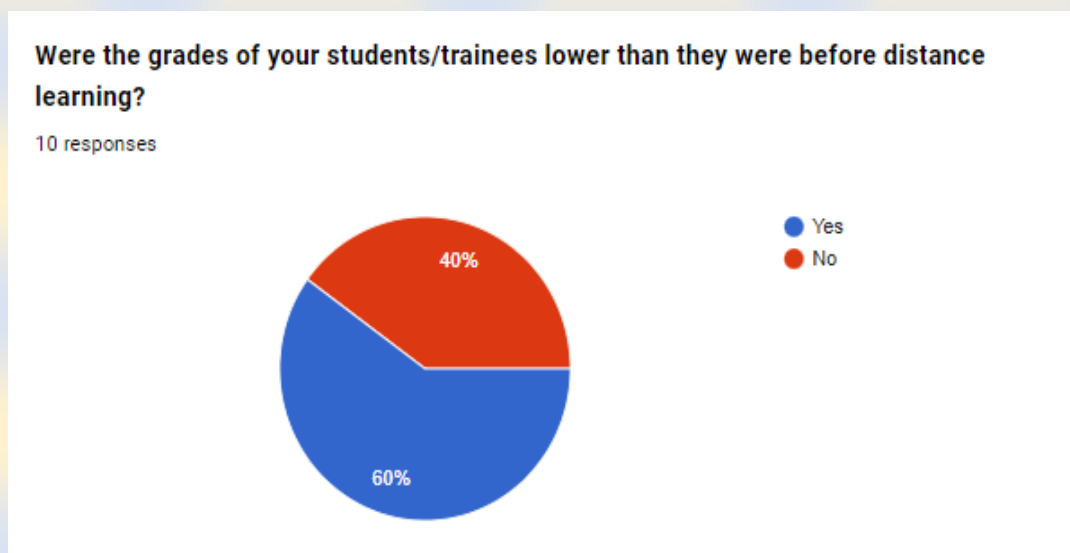
The seventh question assesses the communication between the teachers themselves. 60% of survey participants believe that communication between trainers has not deteriorated during the distance learning period, while 40% are of the opposite opinion.



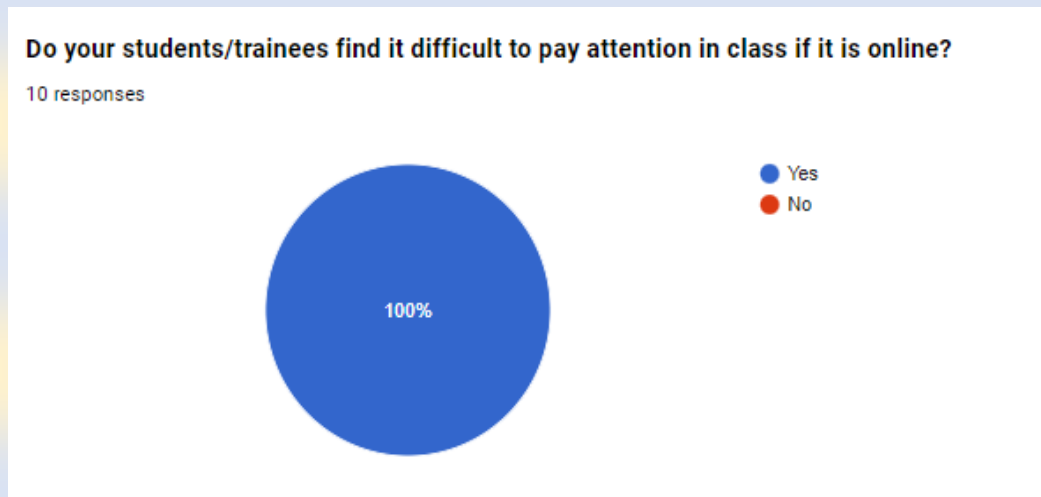
The next question focuses on the ability of educators to manage their time effectively in the distance learning period. Opinions are divided - 50% think that the trainers from the organization had good time management, while the other half think the opposite.



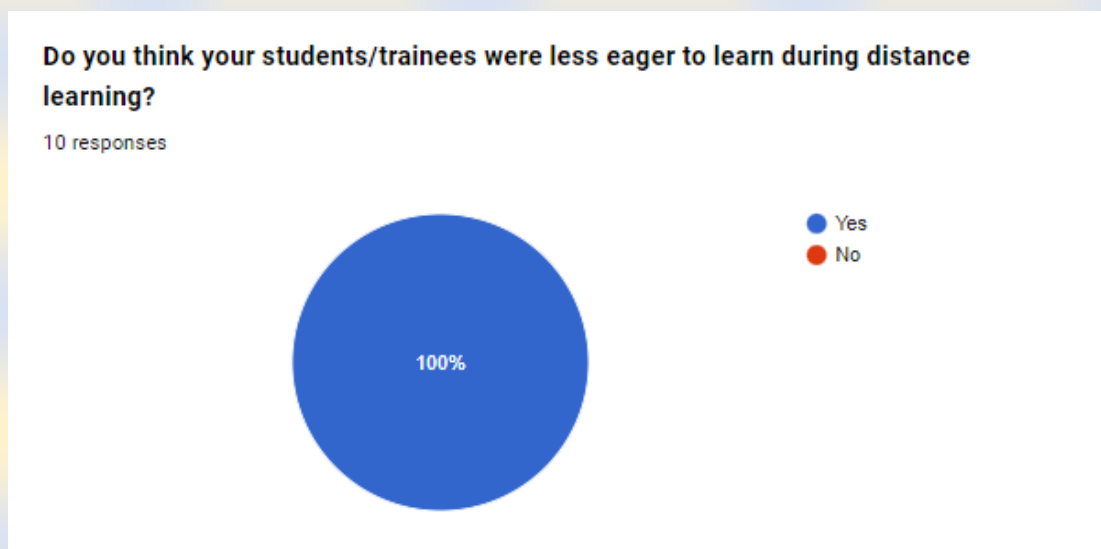
The next question reads "Were your students'/learners' grades lower than before distance learning?". 60% of respondents answered "Yes" while 40% answered "No". This indicates that most students have not been able to maintain their level of academic performance in distance learning.



The tenth question measures whether participants believe that their students/trainees find it difficult to pay attention during online classes. The results are very interesting – all respondents (100%) have answered “Yes”. It can be safely concluded that trainees clearly struggled with this aspect during distance learning.



The last closed-ended question states “Do you think your students/trainees were less eager to learn during distance learning?”. Unfortunately, all teachers agreed with the statement (100%). This clearly indicates that students had less desire to study during the online learning period.



The last question is open-ended and states: “Please share if you have any additional comments related to the impact of distance learning and the consequences for students/trainees and teachers/trainers”. No participants in the survey have provided any comments regarding the impact of distance learning on trainers and trainees.

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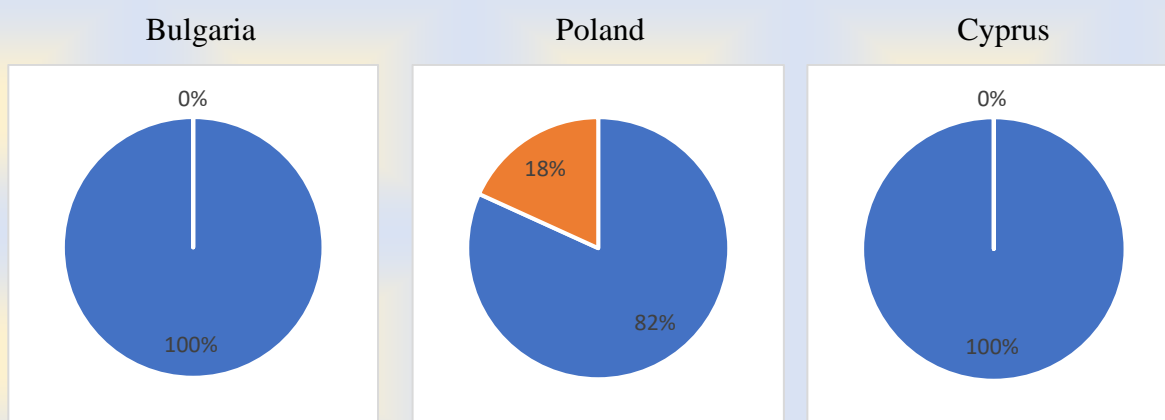
### 3.4. Comparative analysis and summary of the results from Bulgaria, Poland and Cyprus

After the individual analyzes of the results by country obtained from the training organization questionnaires, we make a summary analysis and comparison of the results. It should be noted that the sample size is only 31 respondents, which makes it significantly smaller than the samples of the student and teacher questionnaires (each of which is 150 people), so the purpose of the analysis is rather to verify the results obtained from the teacher and student questionnaires.

As part of our survey, representatives of a total of 31 training organizations completed [Questionnaire for training organizations outside the partnership assessing the consequences for students and teachers from distance education](#) (Appendix 3). 10 of all respondents were from Bulgaria, 11 from Poland and 10 from Cyprus.

The first question in the main body of the questionnaire focused on increased levels of stress among training organizations' staff during the pandemic. 94% of those who completed the questionnaire observed increased stress and burnout during the distance learning period among their employees. **This result strongly supports the findings from the teacher questionnaire that during the pandemic, educators have faced serious challenges at work that have had severe negative consequences on their emotional state, mental health and well-being** (76% of all, who completed the Teacher Questionnaire answered "Yes" to question 2. "Do you think teachers experienced increased stress and burnout when online teaching started?".)

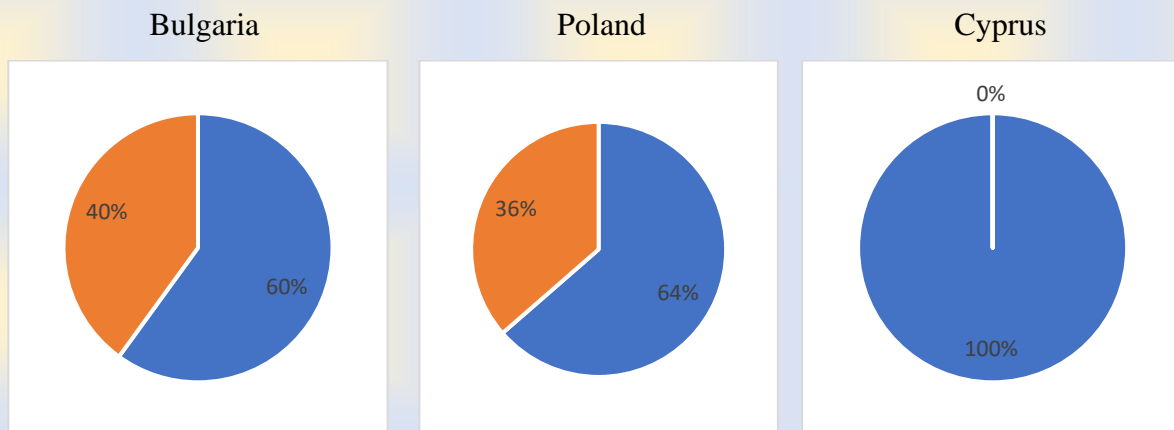
1. Do you think that your employees/trainers experienced increased stress and burnout when distance teaching started?



Yes  
No

The second question examines the stress levels of learners. A smaller proportion compared to the previous question, but still **a majority (74%) of respondents noticed higher levels of student stress during online learning**. In Bulgaria and Poland this share is respectively 60% and 64%, while in Cyprus it is 100%. These results are significantly stronger than the results of the teacher and student questionnaires. We recall that according to almost half of all teachers (49%), students were more stressed during online learning (see third question of the summary analysis of the teacher questionnaires). As for the self-assessment by the students themselves, only 34% shared that they felt more stressed, 41% more nervous, and 39% that they experienced more negative emotions during the pandemic period (see the results of the summary analysis of the responses of questions 1, 3 and 9 of the Student Questionnaire).

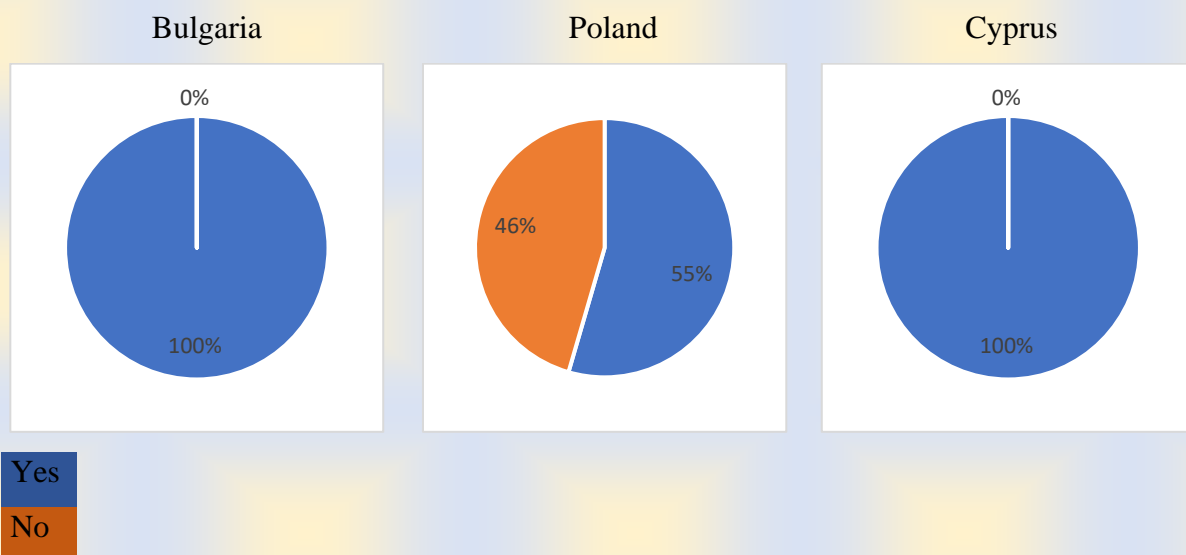
2. Do you think that your students/trainees were more stressed during distance learning?



Yes  
No

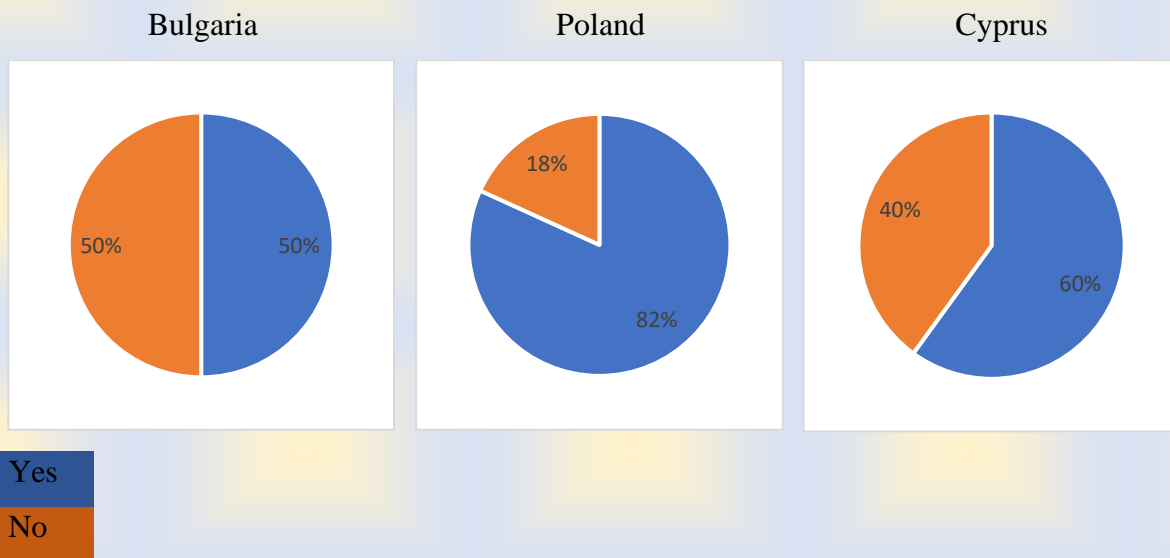
The third question asked representatives of training institutions if many trainers felt anxious about the performance of their work during distance learning. 84% of the responses are positive. The breakdown by country shows that all respondents from Bulgaria and Cyprus answered "Yes", while in Poland the share was 55%. The results nevertheless confirm the analysis of the other questionnaires and the conclusion that teachers struggled with increased anxiety during distance learning and needed specific support in this regard. (74% of all teachers responded positively to the third question "Do you think many colleagues experienced anxiety related to distance teaching?" of the Teacher Questionnaire.)

3. Do you believe that many teachers/trainers experienced anxiety about doing their job during distance learning?



The next question examines communication between trainers and trainees and the quality of their relationship during the pandemic. The majority (65%) believed that it had worsened, which is completely consistent with the results of the teacher questionnaires (65% of those who completed the Teacher Questionnaire answered "Yes" to the seventh question: "Do you think that communication and relationship with students deteriorated during online learning?" ).

4. Do you think that the communication and relationship between teachers/trainers and students/learners deteriorates during distance learning?







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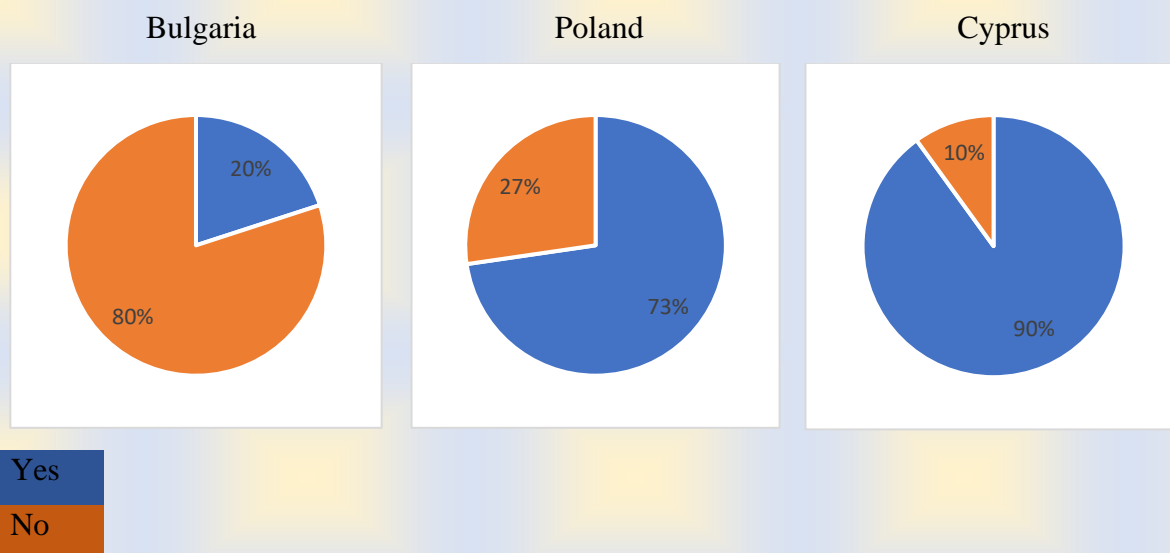


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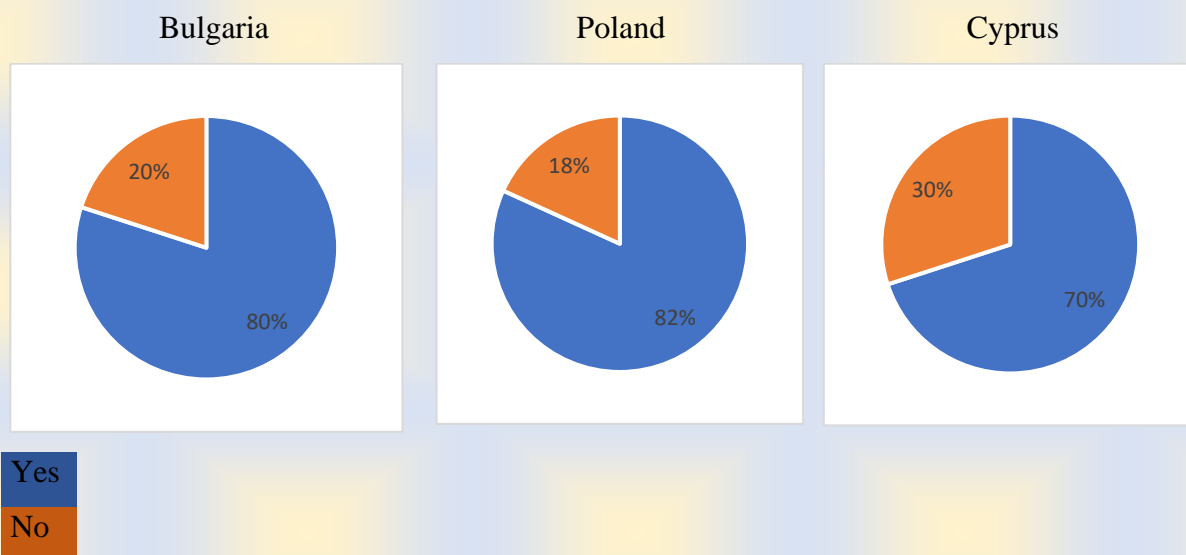
The fifth question explores the level of motivation for professional development among trainers, through the perspective of representatives of training organizations (see graph below). The results from the three countries differ significantly. While according to respondents from Poland (73%) and Cyprus (90%) they notice a decrease in motivation during the pandemic, in Bulgaria 80% are of the opposite opinion. A similar discrepancy and lack of certainty is also reported in the distribution of answers to this question and in the teacher survey (Question 11). However, it is clear that there is a significant proportion of teachers whose work motivation and professional development have been affected by the pandemic, but at this stage it is difficult to estimate its exact size.

5. Do you think the motivation for professional development of teachers/trainers was higher before the pandemic?



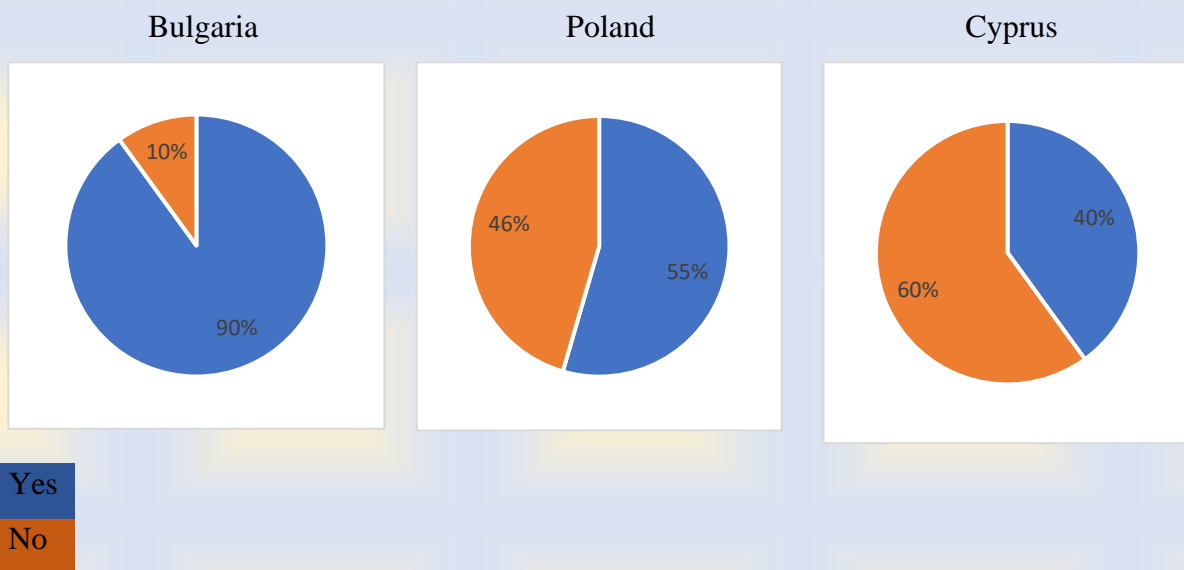
The next question is "Do you think that the work of your teachers/trainers is sufficiently appreciated by parents and students?". The results from the three countries are similar, as according to 77% of all respondents, parents and students value the teaching work sufficiently. On the other hand is the view of the teachers, expressed in the teacher questionnaire, according to which half of the participants do not feel appreciated at work (see the answers to Question 17 "Do you think that your work is sufficiently appreciated by parents and students?"). This discrepancy leads us to the conclusion that recognition of work goes unnoticed by educators, not that it is absent.

6. Do you think that the work of your teachers/trainers is sufficiently appreciated by parents and students?



The seventh question explores communication between teachers during distance learning. 90% of respondents from Bulgaria are of the opinion that there is a deterioration in communication between teachers, while in Cyprus this share is 40%, and in Poland 55%. Although there is no uniformity in the results between countries, it is nevertheless evident that there is a significant proportion of teachers who have encountered obstacles in their communication with colleagues during the pandemic.

7. Do you think communication between teachers/trainers has deteriorated during distance learning?





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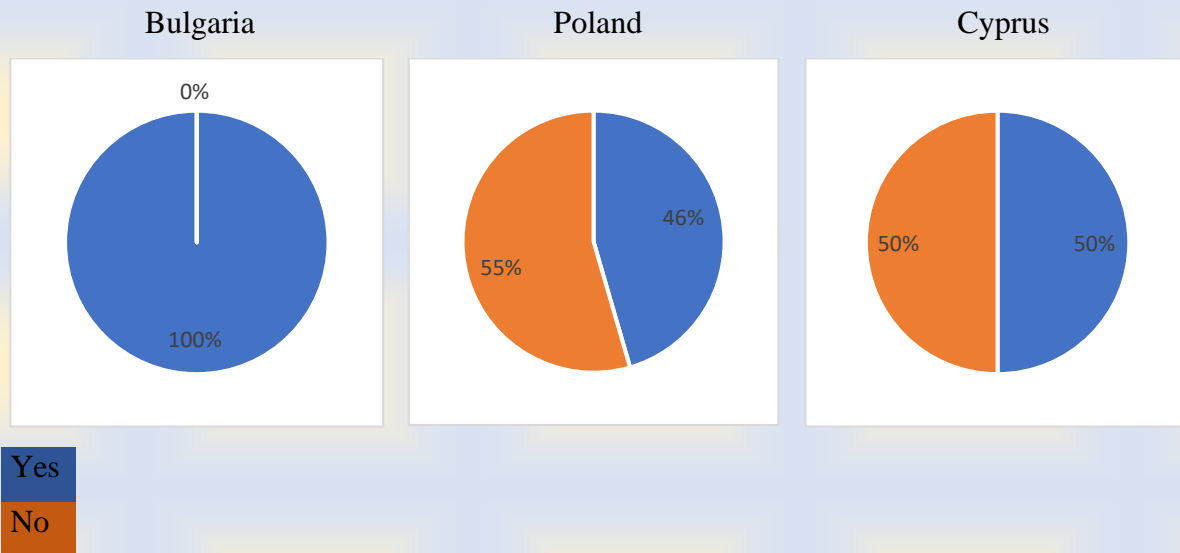


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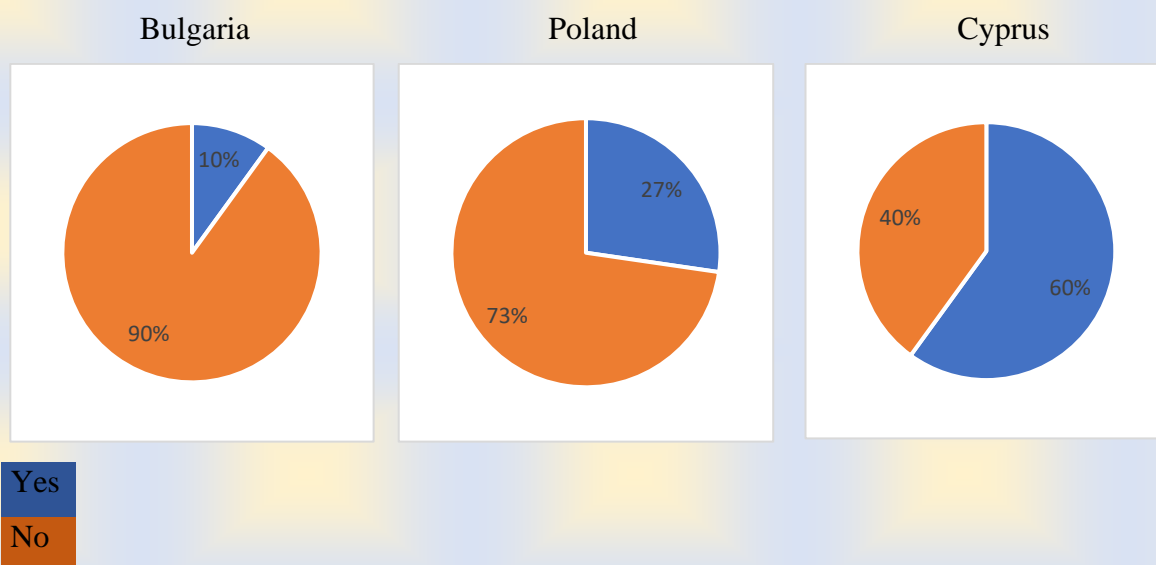
The eighth question focuses on teachers' time management skills during the pandemic. 100% of the respondents from Bulgaria are of the opinion that their trainers managed their time effectively, while in Poland and Cyprus the opinions are divided into two.

8. Did your teachers/trainers manage their time effectively during distance learning?



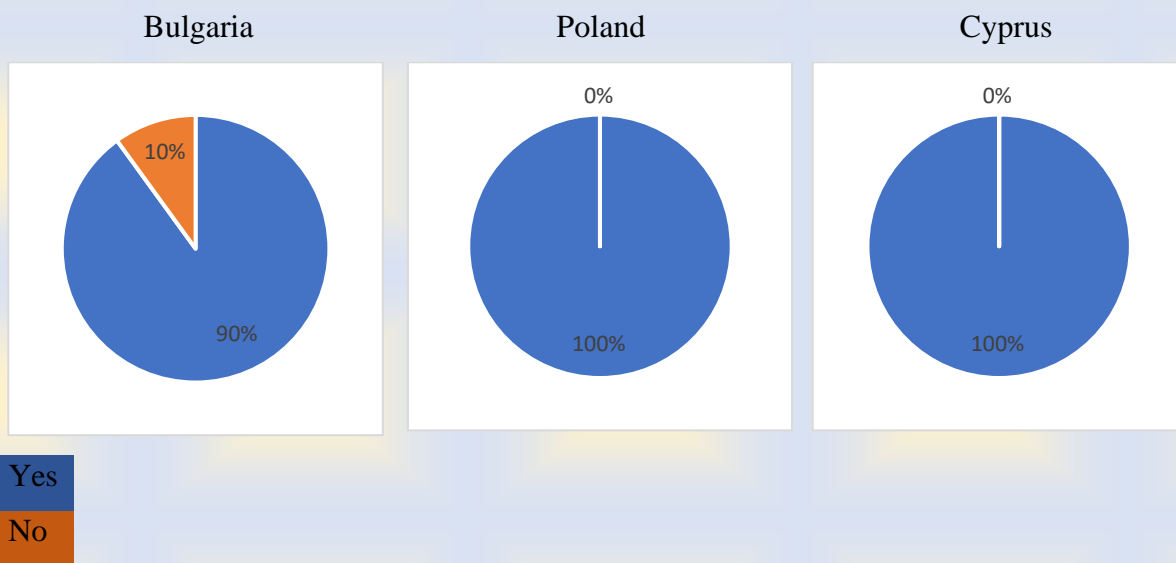
The ninth question focuses on the academic success of learners. The opinion of 90% of the respondents from Bulgaria is that the students did not deteriorate their grades during the distance learning period. The majority of Poland (73%) also think this way, while in Cyprus 60% report a deterioration in academic performance.

9. Were your students'/learners' grades lower than before distance learning?



The distribution of answers to the tenth question however, it is almost identical and extremely definite. It examines the level of attention of students during classes in the distance learning period. 97% of all respondents are of the opinion that it is more difficult for students to pay attention in class when it is held in an electronic environment. Although not so strongly, the majority of student survey respondents also shared this challenge (64% of student survey respondents answered yes to the second question: "Do you find it difficult to pay attention in class if it's online?").

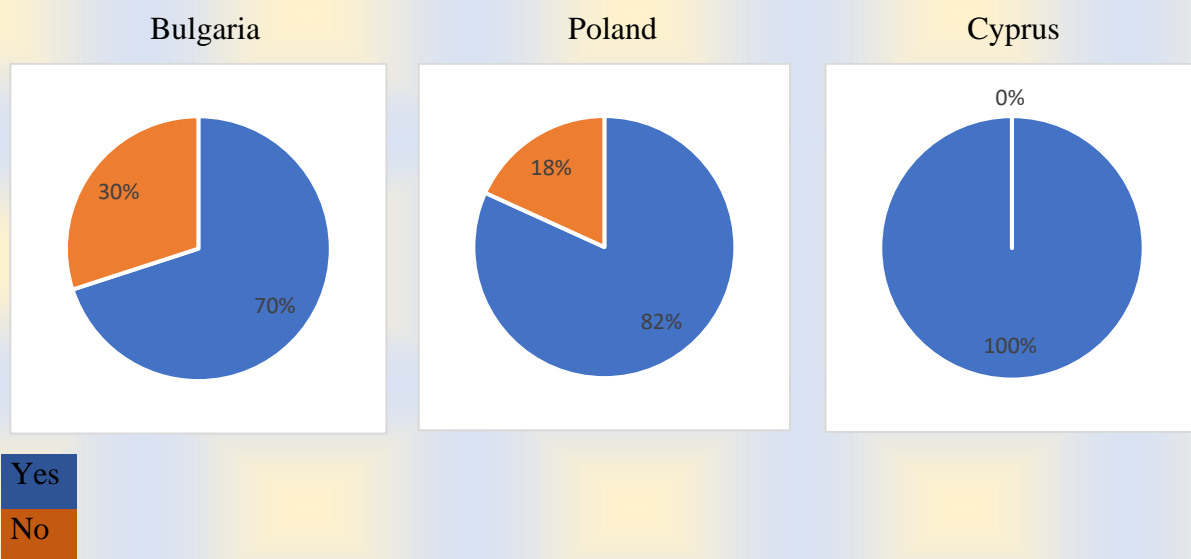
10. Do your students/learners find it difficult to pay attention in class if it's online?



Yes  
No

The last closed question is aimed at learning motivation among students. 84% of those who completed the survey for training organizations believed that learners had less desire to learn during distance learning, which also confirms the results of the survey among students (63% of respondents who completed the questionnaire for students answered "Yes" to the eighth question "Did you have less desire to learn during online learning?")

11. Do you feel that your students/trainees had less desire to learn during distance learning?



The last question is open-ended and reads: " Please share if you have additional comments related to the impact of distance education and the consequences for students/trainees and teachers/trainers ". Only five of the participants from Poland responded, and their comments can be found at the end of the analysis from Poland. There are no comments left by participants from Bulgaria and Cyprus.



## VIII. Conclusions and recommendations

Based on the results of WP2A1 Survey of student and teacher attitudes to well-being and mental health obtained from 152 teachers (an average of 50 per HAS partner educational organization), 150 students (50 each from HAS partner educational organization) and 31 training organizations (an average of 10 from the contact networks of the partner educational organizations in the HAS project), from Bulgaria, Poland and Cyprus, a some important conclusions and recommendations were made.

**First, it was concluded that the two hypotheses stated in Chapter I Introduction, which we tested through the questionnaires, were confirmed.** The two research hypotheses were formulated as follows:

- **Hypothesis 1:** During the period of online/distance learning, students and teachers experienced a deterioration in their mental and physical health and overall well-being.
- **Hypothesis 2:** During the period of online/distance learning, students and teachers experienced reduced levels, respectively, of school/professional work ability.

Each of the hypotheses was split into two according to the target group and tested according to the results from Bulgaria, Poland and Cyprus.

### 1. Confirmation of research hypothesis 1

The first research hypothesis states: During the period of online/distance learning environment, students and teachers experienced a deterioration in their mental and physical health and overall well-being. Based on the data collected, the hypothesis was confirmed, both for the group of students and for the group of teachers in all three countries covered by the study.

**During the period of online/distance learning, students have experienced deterioration in their mental and physical health and overall well-being.**

To evaluate the hypothesis in the survey directed at the students, we included a series of broad-ranging questions targeting their sense of social isolation, stress, anxiety and irritability, self-

esteem, as well as physical activity and eating habits. The results of the questionnaire confirm the hypothesis for all three countries, with a specific analysis below.

The other two questionnaires aimed at teachers and representatives of educational organizations also included a question that partially assessed the mental health and well-being of students, focusing on stress levels among this group.

*Bulgaria:* The hypothesis was confirmed. The results show that students in Bulgaria experienced increased levels of social isolation and anxiety during the period of online/distance learning, as 50% reported feeling more isolated during distance learning, and 54% were more worried about their health. Although not a majority, a significant share of respondents said they felt more nervous (40%), more stressed (26%), and experienced more negative emotions during the pandemic (32%). In addition, an impressive 68% of students admitted that they exercised less often, and 24% that they consumed more unhealthy foods during the period under review. According to the results of the survey of teachers in Bulgaria, nearly half (48%) were of the opinion that students were more stressed during online learning. In the case of representatives of training organizations who completed the survey, this share is 60%.

Given the direct impact of these factors, we can confirm the hypothesis that the online learning period was a serious challenge for students in Bulgaria, as they experienced a deterioration in their mental and physical health and overall well-being.

*Poland:* The hypothesis was confirmed. The results of the research show that the social factor among students in Poland is most seriously affected during the period of the COVID-19 pandemic and distance learning. 80% of this group of students said they felt more isolated and 54% lost contact with their friends during the pandemic. In addition, 50% felt more stressed, 40% experienced more negative emotions, and 28% were more nervous during the period in question. 52% experienced anxiety about their health. The effects on physical health are also visible - 56% of students say that they did sports less often, and 40% that they ate more harmful foods compared to the period before the pandemic.

40% of teachers and 64% of representatives of training organizations who completed the surveys for the respective groups in Poland believe that their students were more stressed during the distance learning period.

Given the data presented, we can summarize that for Poland the first hypothesis is confirmed for the group of students. We must pay attention to the fact that this is the country where the group of students reported the most serious deterioration of their mental and physical health and overall well-being during the pandemic, among the three countries considered.

*Cyprus:* For the students, the hypothesis was also confirmed. The results among this group showed that 61,5% felt more isolated during distance learning and 40% lost contact with some of their friends. Almost half of the Cypriot students surveyed (48,1%) experienced health anxiety, 56% were more nervous, 44% experienced more negative emotions and 25% were more stressed during the period of the pandemic. The physical well-being of Cypriot students was also negatively affected, with 50% of respondents saying they exercised less and 33% said they ate more unhealthy food.

It is noteworthy that teachers and representatives of educational organizations reported higher levels of stress among students, compared to what was shared by the students themselves. 60% of teachers and 100% of representatives of training organizations in Cyprus shared that students were more stressed during online learning.

Through the results and the analysis made, we can confirm the hypothesis that the period of online learning was a serious challenge for students in Cyprus, as they experienced a deterioration in their mental and physical health and overall well-being.

**During the period of online/distance learning, teachers have experienced deterioration in their mental and physical health and overall well-being.**

To evaluate this hypothesis, for the group of teachers, we included in the teacher questionnaire questions aimed at assessing the levels of social isolation, stress, anxiety and irritability, self-esteem, motor activity and quality of life, during the pandemic period. According to the results of the survey, we can confirm the hypothesis for all three countries, as can be seen from the summaries below.

In addition, the questionnaire aimed at representatives of training organizations also included a question that partially assessed the mental health and well-being of teachers, focusing on stress levels among this group.

*Bulgaria:* the hypothesis was confirmed. An impressive 88% of teachers surveyed in Bulgaria have observed increased levels of stress and anxiety among their colleagues during the online learning period. 78% share that they felt the negative impact of social isolation during the period, with the same share (78%) reporting a deterioration in their quality of life as a result of the isolation in question. 76% were worried about their health and 78% were less physically active.

Although the answers to two other questions related to the impact of the pandemic on the personal life of teachers sound more positive (only 22% say that they experienced more negative emotions, and 78% that the pandemic did not affect their self-esteem), the above results confirm the hypothesis that during the period of distance learning, teachers in Bulgaria have experienced a deterioration in their mental and physical health and overall well-being.

In addition, we report that according to 100% of those who completed the survey for educational organizations, their teaching staff members faced increased levels of stress during the pandemic period.

*Poland:* Although the results of the questionnaire to teachers in Poland are more moderate compared to the results of Bulgaria and Cyprus, we can confirm the research hypothesis. The majority of respondents do not believe that during the pandemic they experienced more negative emotions (76%), or that distance learning contributed to a disturbed balance in personal life (64%), or that the consequences of the pandemic affected their self-esteem (70%). On the other hand, however, the results show that 44% of the teachers experienced increased stress. 54% of respondents said they were more socially isolated, with 44% saying their quality of life suffered as a result. 56% felt anxiety about their health during distance learning, and 42% that they had lower physical activity during the period under consideration.

According to the opinion of 82% of representatives of training organizations who filled out the relevant questionnaire, their employees/teachers/trainers experienced increased stress and burnout when distance learning started.

As a result of the presented data, we can confirm that teachers in Poland experienced a deterioration in their mental and physical health and overall well-being during the period of online learning.

*Cyprus*: the hypothesis was confirmed. 90% of teachers in Cyprus reported feeling more socially isolated, although only 54% felt that this isolation had negatively affected their quality of life. 84% observed increased levels of stress and anxiety among their colleagues during the online learning period. 78% were worried about their health and 66% were less physically active.

The answers to other questions related to the impact of the pandemic on the personal life of teachers and for Cyprus sound more positive (20% say that they experienced more negative emotions, and 84% that the pandemic did not affect self-esteem). However, the other results presented above unequivocally support the hypothesis that during the period of e-distance learning, teachers in Cyprus experienced a deterioration in their mental and physical health and overall well-being.

In addition, we note that in Cyprus, 100% of those who completed the survey for educational organizations believe that their educators have faced increased levels of stress during the pandemic period.

## **2. Confirmation of research hypothesis 2**

The second research hypothesis states: During the period of online/distance learning in an electronic environment, students and teachers have experienced reduced levels, respectively, of school/professional performance. Based on the data collected, it was also confirmed for both the student group and the teacher group in all three countries covered by the study.

**During the period of online/distance learning, students experienced decreased levels of school performance.**

To evaluate the hypothesis in the survey aimed at the students, we included questions examining the change during the online learning period in their motivation to learn, communication in the learning process with classmates and teachers, level of attention and academic performance.

In addition, the other two questionnaires aimed at teachers and representatives of educational organizations also include questions that assess the school performance and readiness of students, focusing on communication with teachers, attention, academic performance and motivation to learn, through the eyes of the relevant stakeholders.

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*Bulgaria:* the hypothesis was confirmed. The most serious challenges when learning in an online environment, students in Bulgaria encounter in terms of motivation to learn. 68% of students from Bulgaria who completed the survey report that they had less desire to study during the pandemic period. In addition, 58% of the students who completed the questionnaire shared that it was difficult for them to pay attention in class when it was online. The same conclusions are confirmed by the results of the questionnaire for training organizations in Bulgaria, where 90% were of the opinion that it was more difficult for their students to pay attention in class if it was online, and 70% noted that their students/trainees were had less desire to learn during the distance learning period.

Despite these reported issues related to attention and motivation, the majority of students do not see a deterioration in their communication and relationships, both with their classmates (84%) and their teachers (76%). On the other hand, 64% of the teachers who completed the survey for the respective target group shared that they did not feel heard and understood by their students during online learning, and 50% of those who completed the questionnaire for training organizations see a problem with "student-teacher" communication. Based on the discrepancies in the evaluations and perspectives on the communication of the various stakeholders in school, we come to the conclusion that the communication in the educational process is another challenge for the students in Bulgaria during the period of online learning.

We also see that academic performance was a cause of anxiety among students, with almost half of respondents (48%) reporting that they were worried about their grades. Despite these concerns, only 16% reported that their grades were lower during online learning. This observation is also confirmed by the survey for training organizations - only 10% considered that the grades of their students/trainees were lower than before distance learning.

Distance learning has undoubtedly a negative impact on the school performance of students in Bulgaria. The negative impact is felt most strongly in terms of motivation to learn and attention in class. Difficulties in communicating with teachers and classmates are also noted, as well as increased levels of anxiety regarding success.

*Poland:* the hypothesis was confirmed. Difficulty paying attention in class when conducting an online lesson is a challenge that 66% of the students who filled out the survey from Poland had to deal with. In addition, the desire to learn was lower in 56% of them, which indicates serious

difficulties in meeting the responsibilities and obligations in the educational process. According to the observations of the representatives of educational organizations, these results are even more definitive - all (100%) of those who completed the survey in Poland believe that their students paid less attention in class and 82% that the students had a reduced desire to learn in online learning.

About a third of the participants in the survey report a worsening of communication with classmates and teachers - 28% believe that at the time of the pandemic they have worse relations with their teachers, and 30% with their classmates. 42% of teachers say that they did not feel heard and understood, which largely confirms the point of view of their students. On the other hand, however, 82% of representatives of training organizations from Poland are of the opinion that the communication and relationship between teachers/trainers and students/learners has deteriorated during distance learning. From the above, we can judge that communication during learning in an online environment was a challenge for the students.

40% of respondents were worried about their grades, with 34% saying they were lower during the pandemic. A similar proportion (27%) of training organizations have seen a decline in achievement among their students/learners.

It can be seen that online distance learning has had a negative impact on students in Poland, affecting a number of areas of their school performance. It most strongly affected motivation and attention, but communication with other stakeholders and knowledge gained were also affected.

*Cyprus*: the hypothesis was confirmed. The results of the analysis point to problems with learning motivation and attention in online classes as the most serious challenges for the students in Cyprus. 69% of respondents reported that it was difficult for them to pay attention in online classes, and 64% that they had a lower desire to learn during the distance learning period. All (100%) representatives of training organizations who filled out the relevant questionnaire also reported a deterioration of these two indicators among their trainees.

60% of respondents were worried about their grades, and 39% had lower academic performance during the COVID-19 pandemic.

When it comes to communication, only 10% of Cypriot students who completed the survey noticed a deterioration in their relationship with teachers, and 23% with their classmates. On

the other hand, however, we see that 71% of teachers did not feel heard and understood by their students during the period under review (according to the results of the teacher survey), and 60% of representatives of educational organizations are of the opinion that communication and the relationship between teachers/trainers and students/learners have worsened during distance learning.

From the analysis, we conclude that distance learning in an online environment during the COVID-19 pandemic has negatively affected the school performance of students in Cyprus. The negative impact is felt most strongly in terms of motivation to learn and attention in class. Difficulties in communication with teachers and classmates are also noticed, as well as anxiety and deterioration of their academic performance (for a significant part, although not the majority).

**During the period of online/distance learning, teachers experienced decreased levels of professional performance.**

To evaluate the second research hypothesis, regarding the professional work ability of the group of teachers, through the questionnaire directed at the teachers, we investigated the change during the online learning period in the motivation for teaching and career development, job satisfaction, communication in the learning process, as well as levels of stress, difficulties encountered and received support related to online/distance learning, etc.

In addition, the other two questionnaires aimed at students and representatives of educational organizations also include questions that assess the professional performance of teachers during the pandemic period. They focus on communication with colleagues and students, motivation for professional development, anxiety about online teaching, through the eyes of relevant stakeholders.

*Bulgaria:* the hypothesis was confirmed. Teachers in Bulgaria were subjected to increased stress and burnout when online distance learning started, they struggled with anxiety related to the new way of teaching (according to 88% of the teachers surveyed and 100% of the representatives of training organizations surveyed) and were more nervous and irritable at work (according to 50% of respondents). To a large extent, this is due to insufficient preparation, as evidenced by 44% of respondents, as well as the unprecedented conditions in which teachers



and our entire society had to function for months. The results strongly indicate that teachers in Bulgaria have been subjected to excessive work load, in addition to deteriorating mental and physical health and overall well-being during the period of the COVID-19 pandemic. Therefore, it is not surprising that the large proportion of educators (66%) found work to be less satisfying during distance learning. More than a third (38%) also share a reduced motivation for professional development.

In addition to the described characteristics that negatively affect the professional life of teachers, there is also the deterioration of communication and relationship with students, which 78% of teachers share. The quality of teaching, which is directly related to communication and the transmission of information, is also affected, as 64% of teachers share that they do not feel sufficiently heard and understood by their students. Communication with colleagues is also negatively affected, according to 38% of teacher survey respondents and 90% of training organization survey respondents.

The feeling of lack of recognition by students and parents, shared by 54% of teachers, is also indicative of reduced levels of professional work ability (80% of representatives of educational organizations share these observations).

Time management during the pandemic period was a challenge for more than a third of teachers in Bulgaria (38%). However, these difficulties remained hidden for the representatives of the training organizations, since according to all respondents from this group (100%), their teaching staff managed to manage their time effectively during distance learning.

The data collected from the questionnaires confirm the hypothesis that the period of distance learning was a serious challenge in the professional life of the teachers and they experienced reduced levels of work ability.

*Poland:* As with the first research hypothesis, in this case, we can confirm the hypothesis, although the results of the questionnaires in Poland are more moderate compared to the results of Bulgaria and Cyprus. It can be seen that, although in a more limited scope compared to the other two countries, the period of the COVID-19 pandemic and online teaching have negatively affected the professional performance of teachers in Poland.

A considerable share (44%) of teachers in Poland testify to increased stress and burnout among their colleagues. The same number (44%) share increased levels of nervousness and irritability

among teachers, as well as increased anxiety related to the new way of teaching (40%). More than half (55%) of the representatives of training organizations from Poland expressed the opinion that many of the teachers felt anxiety about the performance of their work during distance learning.

During the pandemic period, 44% of teachers in Poland conducted training online, while struggling with the feeling of not being sufficiently prepared to work in these unprecedented conditions.

There is also a deterioration in the communication in the work process with the main stakeholders - 54% of the surveyed teachers share about a deteriorated relationship with students, and a third about a deteriorated communication with colleagues during the pandemic. In addition, a large share of teachers (68%) does not feel that their work is appreciated by students and parents, which can be explained mainly by communication problems. On the other hand, recognition itself is an important factor related to workplace motivation. It is therefore no surprise that a large proportion of teachers in Poland (60%) have lost motivation for professional development during the pandemic period. 73% of the representatives of training organizations from Poland share the same observations about the motivation among the teachers in their teams.

Other researched factors that may characterize the reduced work capacity among teachers were reported by a smaller proportion of the surveyed teachers in Poland. Approximately 30% shared that they had difficulty managing their time, for 36% their work had become less satisfying, and the same number (36%) felt that distance learning had contributed to a disturbed balance in their lives. Although the share of these groups is not a majority, it is quite impressive.

From the above, we can summarize that in Poland we observe the manifestations of individual characteristics of reduced professional work ability among teachers. They are not to the full extent, as in Bulgaria and Cyprus, and do not always affect the majority of respondents. However, the presented data unequivocally speak of serious professional challenges for teachers, deterioration of the quality of work, motivation and overall professional performance in the period of the pandemic. Therefore, we can confirm the hypothesis that during the period of distance learning, teachers in Poland experienced reduced levels of professional work ability.

*Cyprus*: the hypothesis was confirmed. Teachers in Cyprus experienced increased stress and burnout when online distance learning began, as indicated by 84% of respondents there. Along with this, teachers have also struggled with anxiety related to the new way of teaching, which is confirmed in a categorical way by 94% of the surveyed teachers and 100% of the surveyed representatives of training organizations. Invariably, internal stress and emotional burden also reflected in workplace behavior, as according to 78% of the responses received, teachers were more nervous and irritable when teaching online. Additional uncertainty comes from the feeling of insufficient preparation, reported by 38% of respondents. As a result, work has become less satisfying for the majority of teachers in Cyprus (60%), and some of them have even lost motivation for professional development (according to 34% of all teachers surveyed and 90% of representatives of educational organizations surveyed).

Online learning also negatively affects communication with students, which, due to the nature of the work, is a key factor in the quality of teaching. A deterioration in communication with students is noted (62%), with even more teachers (71%) reporting that they did not feel sufficiently heard and understood by students during online learning. Communication with colleagues is also negatively affected, according to nearly half (48%) of those who completed the survey for teachers and 40% of those who completed the survey for training organizations. On the other hand, despite the difficulties in communication, the majority of teachers (68%) feel recognition for their work by students and parents (the opinion is confirmed by 70% of representatives of educational organizations sharing these observations). In addition, students apparently do not register problems in their communication with teachers, as 90% consider that it has not worsened during the pandemic.

Time allocation during the online learning period was also a challenge that half of the teachers in Cyprus (52%) struggled with.

The results strongly support the hypothesis that the period of distance learning has been a serious challenge in the professional life of teachers in Cyprus and they have experienced reduced levels of work ability.

### 3. Conclusions and recommendations for Bulgaria

#### Conclusions regarding the impact of the pandemic and online learning on the group of students from Bulgaria:

Along with the confirmed research hypotheses, the analysis for Bulgaria in terms of well-being and mental health and the consequences of distance learning for students, based on the data obtained from the survey, brings out the main challenges that this target group faced during the pandemic and online learning, such as:

- Attention difficulties when conducting and participating in online classes (58%) and reduced motivation to learn online (68%) affect a large proportion of students. In themselves, they are important indicators of a decline in school performance. Given that school occupies a major part of children's lives, these factors also negatively affect the overall well-being of students;
- Grade anxiety affects nearly half of students during online learning. It is noteworthy that despite the significant share of students who said they were worried about their success (48%), only 16% of respondents reported a real decrease in success during the pandemic. Given the motivational and attentional difficulties shared by the students, it is highly likely that the maintained success is due to adaptation of assessment criteria by teachers rather than actual knowledge and good performance comparable to the pre-pandemic period;
- Maintaining mental health is a challenge for students during the e-learning period: 40% reported feeling more nervous, 26% more stressed, and 32% experienced more negative emotions during the pandemic;
- Maintaining physical health is also a challenge. The majority shared about lower physical activity and reduced time for sports during the pandemic (68%);
- The increased feeling of isolation from their usual social environment is another negative consequence during the period of the pandemic and online learning, which has a direct impact on the overall well-being of a large number of students (50% shared that they felt more isolated from their friends at school during distance learning (50%);

- Communication between students and teachers has deteriorated during online learning. Although only 24% of students from Bulgaria admit to such a problem, it is identified and shared by 78% of the teachers who completed the survey;
- The increased level of health-related anxiety (declared by 54% of respondents from Bulgaria) further burdens the emotional state of students and, in combination with other factors such as social isolation and worries about grades, can lead to a serious deterioration of mental health and overall well-being of students.

### **Recommendations for improving school performance, mental and physical health and overall well-being of students from Bulgaria:**

Based on the conclusions and the identified main challenges facing students in Bulgaria, we also summarize a series of recommendations for adequately meeting the needs of students during periods of isolation and learning, with the aim of preserving their school performance, mental and physical health and overall well-being. The recommendations are aimed at the main three levels, based on a multi-level analysis structure (macro, meso and micro levels) and require targeted and coordinated actions by all stakeholders along the chain, given the high degree of priority of the set goals.

- Given the students' need for effective psychological support, it is necessary to introduce programs to help them deal with their negative emotions during distance learning and after it ends - such as nervousness, anxiety, stress, health anxiety, other mental challenges, as well as decreased motivation. It is necessary to develop and implement such programs in regular school life, which are applicable in an electronic environment with the same effectiveness;
- Adapted and more effective strategies and ways of engaging students with online learning content are needed to be implemented by educational organizations in the learning process to help them maintain attention during online classes. This requires the renewal of already existing programs, the development of attractive online lessons and additional training for educators on the subject;
- More effective interventions, programs, and tools need to be developed and implemented to promote communication and relationship building among classmates

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and between students and teachers, and to address social isolation in online learning contexts and beyond. Such measures can be the introduction of regular group assignments on subjects, setting special time for communication, promoting communication in the learning process and after it, introducing psychological methods and tools to support communication, etc.;

- It is necessary to develop more effective strategies, programs and tools to promote the maintenance and improvement of students' healthy habits during distance learning (healthy nutrition, regular exercise, proper positioning, etc.). Such appropriate tools that would positively affect the physical health of students in periods of isolation and inability to maintain their regular motor habits could be the development of online lessons for physical exercise and sports, for students of different age groups and gender, age-adapted online recipes and cooking lessons, etc.;
- It is necessary to create more motivational methods and programs to be applied to students to stimulate their desire to learn even in distance learning conditions, in which educators, school psychologists and even parents are involved. The development and application of such methods should be encouraged by educational institutions in the form of training for the pedagogical team, introduction of incentive systems, exchange of good practices, etc.;
- Finally, students need additional support from their teachers (in the form of practical exercises) to adapt more easily to the new demands of online learning, mainly to alleviate their fears about their academic performance.

### **Conclusions regarding the impact of the pandemic and online learning on the group of teachers from Bulgaria:**

Along with the confirmed two research hypotheses, the analysis for Bulgaria in terms of well-being, the level of professional work ability and the consequences of distance learning for teachers, brings out the main challenges that this target group has faced during the pandemic and online learning:

- Teachers in Bulgaria have been exposed to increased stress and burnout during the pandemic and learning, along with anxiety related to distance teaching (according to

88% of surveyed teachers and 100% of surveyed representatives of training organizations). Work has become less satisfying (66%) and this has negatively affected the quality of work, with a large proportion of teachers demonstrating nervousness and irritability when teaching online (according to 50% of respondents);

- Teachers did not receive sufficient training to adequately meet the challenges and new demands in their work in this unprecedented situation that affected the whole society (only 44% considered that they had sufficient training before the start of the pandemic);
- Communication and relations between teachers and students have deteriorated during the distance learning period (according to 78% of the surveyed teachers). Despite the available online channels and continuing education in an online environment, teachers do not feel heard and understood by their students (64%);
- The lack of recognition and insufficient evaluation of the work by the interested parties (students and parents), which 54% of the surveyed teachers share, also has a negative impact on motivation and quality of work;
- Communication with colleagues is also affected, according to a third of educators and 90% of representatives of training organizations;
- Health concerns during the pandemic have also been a constant part of teachers' lives (76%), among other challenges of a personal and professional nature;
- The physical well-being of teachers was at risk, given that the majority of them had reduced their physical activity during the COVID-19 pandemic (78%);
- Social isolation and detachment from the environment of friends and colleagues have negatively affected the majority of teachers in Bulgaria (78%), and this has directly worsened their quality of life (78%);
- Despite the many challenges, the strong negative consequences on the general well-being and professional working capacity of teachers in Bulgaria during the pandemic period, their resilience is impressive. Most of them did not allow negative emotions to overwhelm them (78%), managed to manage their time and balance between personal life and work duties (62%) and preserved their self-esteem (78%). It is positive that 62% have maintained their motivation for professional development, which is an excellent starting point and a prerequisite for successfully overcoming the negative consequences.

## **Recommendations for improving the working capacity, mental and physical health and overall well-being of teachers from Bulgaria:**

Assessing the negative consequences of the pandemic and distance learning in an online environment on teachers and education in general, we also realize that many of them could have been avoided. To date, the digital transition seems inevitable, and it is highly likely that e-learning will continue to be a part of the lives of both students and teachers, as the main or complementary environment for carrying out the learning process. Therefore, it is of utmost importance that the educational system, in its entire multi-level structure (macro, meso and micro levels), identify and analyze the mistakes made and take adequate measures towards the teachers, in order to preserve their professional working capacity, mental and physical health and overall well-being. The present study provides such an opportunity for analysis. Based on the conclusions drawn and the identified main challenges facing teachers in Bulgaria, a series of recommendations can be summarized:

- There is a need to create and implement more effective programs and tools to support teachers' mental health and well-being to deal with negative emotions such as stress, nervousness, irritability, anxiety (including health anxiety) and burnout during online teaching. It is of particular importance that these forms of support are easily accessible, including in an online environment.
- Practical application of new methods for maintaining good communication and relationships in the teaching staff (including psychological methods and support tools) is necessary. Such appropriate forms are the creation of peer support network for teachers, both within the school and between different training and educational organizations. Providing access to psychological and group therapy, coaching and mentoring programs would also support professional work ability and have a positive effect on teachers' mental health;
- The introduction of regular education and training to maintain the level of digital competences among teachers will support confidence and reduce the stress of a new transition to an online form of education. This applies even more strongly to older teachers. More effective methods, programs and tools should be developed and



implemented to help teachers/trainers deal with their workplace anxiety in a distance learning context (in addition to supporting tools to improve their digital competencies);

- It is equally important for teachers to engage in additional training, with a focus on expanding and digitizing pedagogical competences - online teaching, maintaining motivation and attention of students in an online environment, discipline and testing, etc., to improve efficiency and quality of teaching in online classes;
- More effective strategies, programs and tools need to be developed and implemented to support the communication process between teachers and students (as well as their parents) in the context of online learning and beyond. Such measures can be the introduction of regular assignments in smaller groups, setting special time for communication, promoting communication in the learning process and after it, regular parent meetings, introducing psychological methods and tools to support communication, etc. It is imperative that all tools can also be applied in an online format;
- It is necessary to develop effective tools and programs that promote social inclusion, physical activity and a healthy lifestyle among teachers;

#### 4. Conclusions and recommendations for Poland

##### **Findings regarding the impact of the pandemic and online learning on the Polish student population:**

Along with the confirmed research hypotheses, in the current part of the analysis, we highlight the main challenges that the group of students in Poland faced during the COVID-19 pandemic and online learning. These are:

- A large proportion of students in Poland are suffering from increased stress levels during the pandemic period. As already mentioned in the summary analysis and the comparison of results between the countries in the study, Poland is the country where students are most affected by the negative consequences of the pandemic and online learning. 50% of Polish respondents reported increased levels of stress, 28% said they were more nervous, and 40% experienced more negative emotions during the pandemic. 52% report increased anxiety about their health. At the same time, this clearly remains

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outside the teachers' observations, as only 40% of teachers in Poland consider that their students were more stressed during the period of online learning (in Bulgaria this share is 48%, and in Cyprus 60%). 64% of representatives of educational institutions share the same opinion;

- The main barriers related to conducting training in an online environment, which prevent students from Poland from fully participating in the educational process, are attention difficulties (66%) and low motivation (56%). This makes learning, which in itself is a primary activity for this target group, a serious challenge, with the potential to negatively impact the overall well-being of students;
- 40% of students in Poland were worried about grades, and more than 1/3 of respondents reported a decrease in their success during online learning;
- Maintaining physical health is also a challenge. The majority were less physically active during the pandemic (56%), and 40% said they ate less healthily;
- The increased feeling of isolation from their usual social environment is another negative consequence during the period of the pandemic and online learning, which strongly affects a major part of students in Poland. An impressive share (80%) of the respondents shared that they felt more isolated from their friends at school during distance learning, and 54% lost contact with some of their friends;
- Communication between students and teachers has deteriorated during online learning. This is evident for 28% of students from Poland, but 54% of the surveyed teachers admit to the existence of such a problem.

### **Recommendations for improving school performance, mental and physical health and overall well-being of students from Poland:**

Based on the identified specific challenges for students in Poland, important recommendations can be summarized for adequately meeting the needs of this group in periods of isolation and learning in an electronic environment. The purpose of these recommendations is the full participation of students in the educational process, preservation of their school performance, mental and physical health and overall well-being during periods of online education. The

recommendations are aimed at the main three levels, based on a multi-level structure of the analysis (macro, meso and micro levels) and require targeted and coordinated actions by all stakeholders in the educational process, given the high degree of priority of the set goals.

- Given the increased levels of stress and tension among students, it is necessary to introduce effective psychological support programs to help them deal with their negative emotions during and after distance learning, such as nervousness, anxiety, stress, anxiety about health, other mental challenges as well as decreased motivation. It is necessary to develop and implement such programs in regular school life that are applicable in an electronic environment with the same effectiveness. Of particular importance is the direct involvement of teachers in the implementation of such programs. Additional training for educators to help them more easily identify increased levels of stress among students would be of great benefit;
  - Adapted and more effective strategies and ways of engaging students with online learning content are needed to be implemented by educational organizations in the learning process to help them pay attention during online classes. This requires updating the already existing programs, developing attractive online lessons and additional training for educators. With the improvement of students' attention, it is expected that this will lead to an improvement in their academic achievements and a reduction in the tension related to academic performance;
  - It is necessary to create more motivational methods and programs to be applied to students to stimulate their desire to learn even in distance learning conditions, in which educators, school psychologists and even parents are involved. The development and application of such methods should be encouraged by educational institutions in the form of trainings for the pedagogical team, introduction of incentive systems, exchange of good practices, etc.;
  - Of particular importance is the development and implementation of more effective interventions, programs and tools to promote communication and the maintenance of relationships between classmates and between students and teachers and to address social isolation in the context of online learning and beyond. Such measures can be the introduction of regular smaller groups assignments, setting time for communication,
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promoting communication in the learning process and after it, introducing psychological methods and tools to support communication, etc.;

- Providing additional support from teachers in the form of practical exercises to adapt to the new demands of online learning will also help communication between the two groups and greatly alleviate students' fears about their academic performance.
- It is necessary to develop effective strategies, programs and tools to encourage the maintenance and improvement of students' healthy habits, which also cover periods of isolation and distance learning and which are aimed at promoting healthy eating, regular exercise, correct positioning, etc. Such appropriate tools that would positively affect the physical health of students in periods of isolation and inability to maintain their usual motor habits are the development of online lessons for physical exercise and sports, for students of different age groups and gender, age-adapted online recipes and cooking lessons and more.

### **Findings regarding the impact of the pandemic and online learning on the group of teachers from Poland:**

The analysis of the results of the questionnaires in Poland confirms the two research hypotheses and at the same time reveals the main challenges faced by teachers/educators/trainers during the pandemic and online learning. They can be summarized as follows:

- Changes in lifestyle and work during the pandemic have affected a significant, though not overwhelming, share of teachers in Poland. They share about increased levels of stress and burnout (44%), manifestations of nervousness and irritability (44%), increased anxiety related to the new way of teaching (40%).
- The majority of teachers did not receive sufficient training to adequately meet the challenges and new demands in their work in this unprecedented situation (56%);
- Work communication in an online environment during the pandemic has not been effective enough. The relationship of teachers with the main stakeholders in the educational process (students, parents and colleagues) has deteriorated. 54% of the surveyed teachers from Poland shared about a deteriorated relationship with students,

and a third about a deteriorated communication with colleagues during the pandemic.

68% of teachers do not feel that their work is appreciated by students and parents;

- Loss of motivation for professional development affected the majority of teachers in Poland during online learning (60%);
- There are significantly fewer teachers in Poland who have had difficulties in managing time (30%), for whom work has become less satisfying (36%) and who are of the opinion that distance learning has contributed to an imbalance in their lives (36%);
- Health concerns during the pandemic have also affected over half of teachers in Poland (56%), among other challenges they have had to contend with of a personal and professional nature;
- 42% of teachers in Poland report reduced physical activity during the COVID-19 pandemic;
- During the pandemic and online teaching, the majority of teachers in Poland have struggled with social isolation and detachment (54%), which has directly worsened the quality of life of 44% of all respondents in the country.

### **Recommendations for improving the work capacity, mental and physical health and overall well-being of teachers from Poland:**

The results of the conducted survey show that the negative impact of the pandemic and distance learning in an online environment has affected teachers in Poland to a lesser extent, compared to the other two countries (Bulgaria and Cyprus). However, the negative consequences have undoubtedly affected the personal and professional lives of a significant share of teachers in Poland, although not overwhelmingly, and thus the entire education system and the quality of educational services. We can assume that teachers in Poland are more ready for the digital transition, but they still need additional support. It is important that the support reaches precisely that considerable group of teachers who felt stressed, isolated, nervous, insufficiently prepared for the challenges of online teaching. Therefore, we can summarize that the recommendations for improving the working capacity, mental and physical health and overall well-being of teachers from Bulgaria and Cyprus are also valid for Poland. The advantage of the Polish environment is that there is a larger number of trained teachers available who can be a good

example and support for their colleagues. It is the efficient use of this valuable resource that is key. The remaining recommendations can be summarized as follows:

- Effective programs and tools to support the mental health and well-being of teachers need to be developed and implemented more widely to manage stress levels and deal with negative emotions such as nervousness, irritability, anxiety (including health anxiety) and burnout. It is of particular importance that these forms of support reach all teachers and are easily accessible, including in an online environment;
- Application of new methods and optimal use of existing ones is necessary to maintain good communication and relationships in the teaching staff (including psychological methods and support tools). Such appropriate forms are the peer support network for teachers, both within the school and between different schools/training organizations. It is this that will ensure the all-important transfer of good practices and positive examples between teachers. Providing access to psychological and group therapy, coaching and mentoring programs would also support professional performance and have a positive effect on teachers' mental health. They should also help teachers with practical know-how to maintain their levels of professional motivation even in the context of online teaching;
- It is necessary to introduce regular education and training to maintain the level of digital competences among teachers, especially among their seniors. This will affect confidence and reduce stress when making a new transition to an online form of learning.
- More effective methods, programs and tools should be developed and implemented to help teachers/trainers deal with their workplace anxiety in the distance learning context (in addition to supporting tools to improve their digital competences);
- It is equally important for teachers to engage in additional training, with a focus on expanding and digitizing pedagogical competences - online teaching, maintaining motivation and attention of students in an online environment, discipline and testing, etc., to improve efficiency and quality of teaching in online classes;
- More effective strategies, programs and tools need to be developed and implemented to support the communication process between teachers and students (as well as their

parents) in the context of online learning and beyond. Such measures can be the introduction of regular group assignments on subjects, setting aside time for communication, promoting communication in the learning process and after it, introducing psychological methods and tools to support communication, etc.;

- It is necessary to develop effective tools and programs that promote physical activity and a healthy lifestyle among teachers;
- Strategies, tools and programs are needed to provide educators with information and knowledge on how to deal with social isolation if online learning emerges in the future;

## 5. Conclusions and recommendations for Cyprus

### **Findings regarding the impact of the pandemic and online learning on the Cypriot student population:**

The analysis of the results in Cyprus of the questionnaires to assess attitudes towards well-being and mental health and the consequences of e-learning carried out within the framework of the present study not only confirms the research hypotheses but also points to some important challenges that students in Cyprus faced during the pandemic and online learning.

- Overall, the data showed that students in Cyprus struggled with nervousness (56%) and stress (25%) and were exposed to anxiety about their health (52%) and fear of lower grades (60%). This was also evident for their teachers, as well as for representatives of educational organizations, of which 60% and 100%, respectively, reported increased stress among students during the pandemic period;
- Concerns about academic performance affected the majority of surveyed students (60%), which can be explained by the low concentration during online classes, which a significant share of respondents (69%) admit to;
- Maintaining physical health has also been a challenge for students in Cyprus. Half of those surveyed reported less physical activity during the pandemic, and a third said they ate less healthily;
- The negative impact of the pandemic is also seen in students' attitudes towards online learning, where they state that they have lost motivation and desire to learn (64%);

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- Social isolation during the COVID-19 pandemic has affected the lives of a large proportion of students (62%) and existing online communication channels have not been able to compensate for this. 62% of teachers also admit that communication with their students has deteriorated. It is widely recognized that social isolation and social distancing affect students most negatively. This is a very important issue, as motivation serves as the basis of wanting to learn more, and if our students lose that motivation, it can only lead to destructive paths. It is therefore imperative to come up with new strategies and methods that will empower students to thrive in an electronic environment if we are to move forward to the digital transition. Teachers must also be adequately trained in using new technologies and effective approaches that will spark the interest of students;
- Even though a significant percentage of students in Cyprus showed resiliency and determination in the time of the pandemic, we cannot ignore the fact that the majority of students struggled to keep up with online learning. If there is something we have learned in the field of education during the pandemic, is that at the moment we are not ready to rely solely on distance learning but rather integrate it into teaching at a slower pace so that students and teachers can get accustomed to it.

### **Recommendations for improving school performance, mental and physical health and overall well-being of Cypriot students:**

Based on the results obtained in Cyprus from the questionnaires to students, teachers and educational organizations, recommendations can be made aimed at individual stakeholders at the macro, meso and micro level. The purpose of the recommendations is to adequately meet the needs of students during periods of isolation and learning in an electronic environment, for their full participation in the educational process, preservation of their school performance, mental and physical health and overall well-being during periods of online learning.

- Adapting and introducing more effective strategies and ways of engaging students with online learning content to be implemented in educational organizations to increase motivation;

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- Improving students' access to effective psychological support and support programs to help them deal with their negative emotions during and after distance learning, such as nervousness, anxiety, health anxiety and other mental challenges;
- More effective interventions, programs and tools should be developed and implemented to promote communication and the maintenance of relationships between classmates and between students and teachers and to address social isolation in the context of online learning and beyond;
- It is necessary to develop effective strategies, programs and tools to encourage the maintenance and improvement of students' healthy habits, which also cover periods of isolation and distance learning and which are aimed at promoting healthy eating, regular exercise, correct positioning, etc. Suitable tools can be online training, for students of different age groups and gender, age-adapted online recipes and cooking lessons, etc.
- It is necessary to create more motivational methods and programs to be applied to students in order to stimulate their desire to learn even in the conditions of distance learning;
- Finally, students need additional support from their teachers (in the form of practical exercises) to adapt more easily to the new demands of online learning, mainly to overcome their fears about the academic performance.

### **Conclusions regarding the impact of the pandemic and online learning on the group of teachers from Cyprus:**

The analysis of results in Cyprus from the questionnaires included in the present study points to some important issues that educators in Cyprus have faced during the COVID-19 pandemic and the accompanying online learning. Data from the survey highlight the negative impact of distance learning on the emotional, physical and psychological well-being of educators and raise concerns about readiness for such a transition from traditional classroom learning to an online environment. This affects not only teachers, but also the entire educational process and threatens the effective learning of students. Therefore, it is important to take into account the presented findings and solve the identified problems, in order to implement online learning

more effectively. Relevant stakeholders should ensure that there are appropriate support tools for teachers as well as adequate training.

- Most teachers in Cyprus feel they are not ready to make this immediate transition and report increased levels of stress and anxiety (84%). Too few of them (38%) consider that they have received the necessary preliminary training;
- As a result of tension and stress and other challenges, work during the pandemic has become less satisfying for teachers in Cyprus (60%);
- During the period of online learning, communication with students is strongly affected (62%). A large proportion of teachers say that they do not feel sufficiently heard and understood by their students (71%);

### **Recommendations for improving the work capacity, mental and physical health and overall well-being of teachers from Cyprus:**

Some recommendations to help improve online learning include:

- More effective strategies, programs and tools should be developed and implemented to support the communication process between teachers and students (as well as their parents) in the context of online learning and beyond;
- In addition, strategies should be developed to deal with the poor concentration of students sitting at home behind the monitor, to give teachers a toolkit of new approaches to motivate active participation of their students during online lessons. On the one hand, online education has played an important role in continuing the academic year in such unpredictable times, but on the other hand, we must recognize the limitations and drawbacks that come with learning in an electronic environment and how it can affect the psyche of all involved.
- More effective programs and tools need to be created and implemented to support teachers' mental health and well-being to deal with negative emotions such as stress, nervousness, irritability, anxiety (including health anxiety) and burnout during online teaching. These tools and programs should also focus on how to tackle social isolation and promote physical activity and healthy lifestyles among educators;

- Additional training should be provided to teachers, focusing on how to teach online more effectively and how to motivate students to learn and improve discipline in online classes;
- The fact that 60% of those who completed the survey of educational organizations said that their students' grades were lower during the pandemic should be taken seriously. Mitigating measures should be adopted that will allow students and teachers to perform at their best in a worry-free environment.
- More effective methods, programs and tools should be developed and implemented to help teachers/trainers deal with their workplace anxiety in a distance learning context (in addition to supporting tools to improve their digital competencies);

**The above conclusions and recommendations have been provided by all partner organizations under project 2022-1-BG01-KA220-SCH-000085347 "Healthy at school. Support for the well-being and mental health of students and teachers" / HAS, on Erasmus +. They can serve as valuable information to be used to create future programs, methods and tools to support the mental health and well-being of students and teachers in distance/online learning contexts.**

## IX. Recourses

### Recourses in alphabetical order:

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## X. Appendices

### Appendix 1: Questionnaire for assessing the attitudes of Students on wellbeing and mental health and the consequences of distance learning

Age.....

Gender: M/F

City and country: .....

1. Did you feel more stressed during the pandemic?  
Y/N
2. Do you find it hard to pay attention in class if it's online?  
Y/N
3. Do you feel more nervous now compared to before the pandemic?  
Y/N
4. Are your grades lower than they were before the online learning?  
Y/N
5. Did you feel more isolated from your friends at school during distance learning?  
Y/N
6. Did you exercise less during the pandemic?  
Y/N
7. Are you eating more unhealthy foods than before the pandemic?  
Y/N
8. Did you have less desire to learn during online learning?  
Y/N
9. Did you experience more negative emotions during the pandemic?  
Y/N
10. Do you feel that now you have a worse relationship and communication with your teachers compared to 2 years ago?  
Y/N
11. Do you feel that now you have a worse relationship and communication with your classmates compared to 2 years ago?

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- Y/N
12. Did you worry more about your health during the pandemic?
- Y/N
13. Did you worry about your grades during online learning?
- Y/N
14. Did you lose contact with some of your friends during the pandemic?
- Y/N
15. Please share if you have any additional comments related to distance learning and the impact of the COVID-19 pandemic on you and your close ones.....  
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## Appendix 2: Questionnaire for assessing the attitudes of Teachers on wellbeing and mental health and the consequences of distance teaching

Age.....

Gender: M/F

City and country: .....

1. During the pandemic, did you feel that your job was less fulfilling?  
Y/N
2. Do you think teachers experienced increased stress and burnout when online teaching started?  
Y/N
3. Do you think students were more stressed during online learning?  
Y/N
4. Did you feel more socially isolated during the pandemic?  
Y/N
5. Were you less physically active during the pandemic?  
Y/N
6. Do you think many colleagues experienced anxiety related to distance teaching?  
Y/N
7. Do you think the communication and relationship with students has deteriorated during online learning?  
Y/N
8. Did you find it difficult to manage your time during online learning?  
Y/N
9. Do you feel you were given enough training when you had to start teaching online?  
Y/N
10. Have the consequences of the pandemic affected your self-esteem?  
Y/N
11. Was your motivation for professional development higher before the pandemic?  
Y/N



12. Do you think that the quality of life has deteriorated as a result of the isolation caused by the pandemic?

Y/N

13. Have you experienced anxiety about your health during the pandemic?

Y/N

14. Do you think distance learning has contributed to an imbalance in your life now?

Y/N

15. Did your colleagues feel more nervous and irritable when teaching online?

Y/N

16. Do you think you experience more negative emotions now compared to before the pandemic?

Y/N

17. Do you think that your work is sufficiently appreciated by parents and students?

Y/N

18. Did you feel sufficiently heard and understood by students during the online learning?

Y/N

19. Do you think communication with colleagues has deteriorated during online learning?

Y/N

20. Please share if you have additional comments related to distance learning and the impact of the COVID-19 pandemic on you and your close ones.

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### **Appendix 3: Questionnaire for Training organizations outside the partnership assessing the consequences for students and teachers from distance education**

Name of the organization:.....

City and country:.....

Email:.....

Website:.....

1. Do you think that your employees/trainers experienced increased stress and burnout when distance teaching started?  
Y/N
2. Do you think that your students/trainees were more stressed during distance learning?  
Y/N
3. Do you believe that many teachers/trainers experienced anxiety about doing their job during distance teaching?  
Y/N
4. Do you believe the communication and relationship between teachers/trainers and students/trainees deteriorated during distance learning?  
Y/N
5. Do you feel that the motivation for professional development in teachers/trainers was higher before the pandemic?  
Y/N
6. Do you think that the work of your teachers/trainers is sufficiently appreciated by parents and students?  
Y/N
7. Do you believe communication between teachers/trainers deteriorated during distance teaching?  
Y/N
8. Did your teachers/trainers manage their time effectively during distance teaching?  
Y/N



9. Were the grades of your students/trainees lower than they were before the distance learning?

Y/N

10. Did your students/trainees find it hard to pay attention in class if it is online?

Y/N

11. Do you feel that your students/trainees had less desire to learn during distance learning?

Y/N

12. Please share if you have additional comments related to the impact of distance education and the consequences for students/trainees and teachers/trainers.

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