

Train Digital Entrepreneurship on Health Informatics in Western Balkan Countries

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Abstract. The BeWell@Digital project aims to improve Western Balkans' youth mental health by empowering them through digital education, peer-to-peer counselling services, and employment opportunities in the digital working arena. The Greek Biomedical Informatics and Health Informatics Association developed six teaching sessions about Health literacy and digital entrepreneurship, each comprising a teaching text, presentation, lecture video, and multiple-choice exercises, as part of this project. These sessions aim to improve counsellors' knowledge of technology and their ability to utilise it efficiently.

Keywords. BeWell@Digital project, Mental health, Digital entrepreneurship, Health literacy

1. Introduction

Most of the world is connected to the Internet in the digital era. Still, the dependence on technologies, together with the pandemic, changes in routine and increase in uncertainty, is leading young people to develop more symptoms of anxiety, depression, and interruption of sleep patterns, even triggering cyberbullying and distortion of body image.

Mental health in the Western Balkans is a significant issue. The Covid 19 and socioeconomic factors have contributed very negatively regarding mental health. Other factors are abuses such as tobacco and alcohol, an unhealthy lifestyle (poor diet, lack of exercise) and environmental factors such as air pollution [1]. Compared to the rest of Europe, in the Balkans there are more mental disorders and suicides. Also, there is a bigger stigma for people suffering from mental health issues. Additionally, healthcare services and infrastructure are very pure [2]. Furthermore, there is a shortage of digital tools used for mental health improvement within Balkans countries, compared to other European countries and worldwide. Therefore, various opportunities exist for e-health applications in the Western Balkans [3]. Within the framework of the BeWell@Digital project, the Greek Biomedical Informatics and Health Informatics Association (GBHIA) created educational material on digital literacy in health to support digital entrepreneurship in the area. Specifically, six training sessions were created, including subjects on Health data, information, knowledge & Big data, Web browsing, Electronic

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Health - Mobile Health, Health Information Systems - Electronic Health Records (EHR), Telehealth and Telemonitoring Information Systems, and Virtual healthcare teams – Chatbots.

2. Methods

The BeWell@DIGITAL project aims to improve the status of Western Balkans' youth mental health by empowering young people to enhance skills in digital educational routine and career development, the creation of supportive peer-to-peer counselling mental health services and creating new capacity building and employment opportunities for youth in digital working arena, all enhanced by innovative non-formal education experiences, new mobile tools and digital solutions, and open dialogue at a local and national level that will reflect on broader EU area.

To achieve the above purpose, educational material was created. This material consists of four pieces. For each module, a text of approximately eight pages containing detailed content, a presentation of approximately twenty slides, and a video presentation of approximately eight minutes were created. Also, a package of exercises consisting of thirty-seven multiple-choice questions, approximately six questions for each module was created. The digital entrepreneurship sessions aim to help counsellors understand technology better and use it to achieve their purpose better and faster.

3. Results

The Purpose of the digital entrepreneurship sessions created by GBHIA for the BeWell@Digital project was to help future counsellors understand technology better and use it to achieve their purpose faster and more efficiently. The structure of the educational text is the following: a) Introduction & Keywords, b) Content, c) Conclusion, d) Reflection, e) Further Reading, f) Resources. The first section is «Introduction & Keywords», where a paragraph describes the aim of this Session. There are also eight keywords related to the training module. The following section is the «Content», which contains the main educational text. The «Conclusion» describes briefly and using bullet points the most important parts of the «Content» section and explains its relevance with peer counsellors. In «Reflection», there are four questions that, if the future counsellors are able to answer correctly then, they have understood most of them. In «Further Reading», extra material is recommended. The last piece is «Resources», where the bibliography needed to create each session is mentioned. The following educational material is the presentation of each module created using MS PowerPoint [4]. The content is more comprehensive than the corresponding educational material of each module and is described using mainly bullet points and more images. It consists of about twenty slides and has a structure like the text. The video tutorials show the PowerPoint presentation for each section explaining each slide and image in detail. Created using the Narakeet website [5]. By using this website, the video was adjusted, the video size was selected (Same as the presentation), the Language (English – British), the voice (Edward), the volume (Standard), the speed of the video (Normal), the music (Easy – listening (Melodic)), Subtitles (Off) and which slide will be the characteristic photo of the video (First frame). The last material created is a package of exercises consisting of thirty-seven multiple-choice questions, approximately six questions for each module; they aim

to examine the counsellors' knowledge after studying the modules. The first session (Health data, information, knowledge & Big data) aims to provide basic information about computer science to clarify the terms data, big data, information, and knowledge, to show us their characteristics and give us examples of the use of each of these concepts. After completing this session, counsellors can also distinguish health informatics from the rest of the information technology industry. This is important because health informatics is now applied everywhere in Health, Psychology, and Well-being [6,7]. The second session is about Web browsing. This Session aims to provide basic information about Web browsers software, search engines and rules that generally apply to most search engines. After completing this session, counsellors can browse the internet and search quickly and efficiently [8,9]. The third session is about Electronic Health & Mobile Health and its application; it aims to provide information about Electronic and Mobile Health and its application [10,11]. The fourth session is about Health Information Systems & Electronic Health Records, providing basic information about health EHR. Further, more detailed information on electronic health records is also provided [12,13]. The fifth session is about Telehealth and Telemonitoring Information Systems. This Session aims to provide information about Telehealth, its examples, use, services, and benefits but also implementation difficulties. Nowadays, Telehealth is used more and more often because it promotes health everywhere. By understanding Telehealth, counsellors will be able to give distance advice if it is needed using the tools described in this session. The last session is about Virtual healthcare teams – Chatbots. Virtual care can provide counselling and psychological support, so counsellors should know how it works and use it indirectly or directly. Chatbots have been widely used in psychology in recent years, so counsellors should be able to recommend the best depending on the occasion [14,15].

4. Discussion – Conclusions

The digital era has drastically altered how young people communicate with one another and the world around them. The COVID-19 epidemic and increased reliance on technology have increased mental health issues such as anxiety, sadness, and sleep disruption [16]. The BeWell@DIGITAL project understands the value of digital entrepreneurship and mental health awareness and has created educational materials to address these challenges, and it also promotes youth's mental health in the Western Balkans by providing digital education, job development, and mental health services. More Specifically, the project partner GBHIA prepared teaching material on digital entrepreneurship and health literacy as part of this project to help counsellors understand digital services better. The six training sessions designed by GBHIA addressed a wide range of digital entrepreneurship themes. Each session included a presentation, an accompanying lecture video, and exercises with multiple-choice questions. The success of these instructional sessions may be measured in various ways such as evaluation by trainees on remote or physical training. Initially, the trainings were meant to improve counsellors' health literacy and digital entrepreneurship knowledge. The sessions can help counsellors better grasp technology and apply it to achieve their goals more effectively, perhaps leading to better mental health outcomes for youth. To summarise, the BeWell@DIGITAL project is necessary to promote youth's mental health in the Western Balkans by equipping them with digital education, job development, and mental health services. The GBHIA-created digital entrepreneurship and health literacy sessions

can assist counsellors in better understanding technology and using it to achieve their goals more effectively, leading to better mental health outcomes for youth. The educational sessions may also have more significant implications for mental health throughout the Western Balkans, because this project is a potential first step toward establishing a more supportive and inclusive environment for young people suffering from mental health disorders.

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