CO-CONSTRUCTING A LEARNING EXPERIENCE TO APPROACH MENTAL ILLNESS IN THE CLASSROOM: A TEACHING MICRO-SCENARIO

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Abstract

Social distancing, isolation, stress, and fear in the times of the COVID-19 pandemic are factors that trigger or exacerbate mental health conditions. Further to this, mental health literacy is particularly relevant to secondary education as puberty is a common age of onset of mental disorders. Nevertheless, the topic is somewhat overlooked due to teaching challenges that involve potential emotional triggers, the complex and sensitive nature of the issue, as well as a limited pool of educational resources. Here, we propose a teaching micro-scenario that addresses the topic of mental health literacy via an interdisciplinary approach that promotes active learning. First, students are introduced to the neurobiology of mental disorders by means of engaging with interactive audiovisual materials and a 3D brain simulation. Then, students work on their statistics skills by calculating estimates on affected populations including the school community. Finally, art and creativity are employed to explore healing and public health. The evaluation of the proposed learning intervention is achieved in the form of plenary discussion.

Keywords: Mental health literacy, secondary education, active learning, interdisciplinary education, STREAM.

1. Introduction

The COVID-19 pandemic has had a negative impact on the mental health of the young (Ye, 2020). Further to this dire outcome of home-confinement and social alienation, young adolescents are already at an increased risk as more than half of mental illnesses have their onset before the age of 14 (Kessler et al., 2007). Therefore, it is imperative to promote mental health literacy (Bjørnsen, Espnes, Eilertsen, Ringdal, & Moksnes, 2019) in secondary education. Having said that, educators face challenges in the form of personal triggers, the emotional weight and complexity of the topic (Reinke, Stormont, Herman, Puri, & Goel, 2011), as well as a lack of a good grasp of relevant educational resources (Andrews, McCabe, & Wideman-Johnston, 2014). The present micro-scenario proposes an interdisciplinary approach (Osman, Hiong, & Vebrianto, 2013) aiming at informing students about mental illnesses and increasing empathy by highlighting the social stigma. Furthermore, STREAM (Science Technology Reading Engineering Arts Mathematics) approaches such as the present intervention are deemed effective (Ververi, Koufou, Moutzouris, & Andreou, 2020) at boosting science, technology and art literacy by means of active learning and involvement (Wood, 2009).

2. Methodology

Subject area: Biology, Neuroscience, Psychology, Art - Topic: Mental health literacy - Age group: teenagers and young adults - Duration: 90 minutes.

2.1. Educational goals

Through this teaching approach we aim to: (1) Promote mental health literacy, (2) Educate on 6 common mental illnesses in terms of the following aspects: neurobiology, incidence & prevalence, signs & symptoms, causes, and treatment, (3) Call attention to alarming patterns of behavior amongst teenagers that may be linked to mental illnesses, e.g. eating disorders, (4) Identify misconceptions related to mental

illnesses, (5) Inform on the impact of stigma on people with mental illnesses, (6) Boost science, technology and art literacy, (7) Introduce research thinking, (8) Encourage artistic expression, (9) Apply a STREAM interdisciplinary approach to mental health issues, (10) Implement co-constructivism in the class by boosting student initiative, collaboration, active learning and peer learning.

2.2. Materials
(1) Laptop, (2) Projector, (3) Speakers, (4) IT (Information Technology) room with Internet access, (5) Student Tablets.

2.3. Procedure
The proposed intervention comprises IT-enhanced micro-activities concerning mental health and spans over two teaching hours. In the first hour, we use a two-fold approach: First, we educate students on 6 common mental illnesses and then students work on relevant incidence data. In the second hour, students employ art as a motivation for further research and learning on the topic and they also produce their own pieces.

2.3.1. 1st Phase (time: 45 min). 1st micro-activity (time: 30 min). Educating on the topic of mental illnesses by means of interactive Web 2.0 platforms and audiovisual material.
1.Warmer: We project a TEDx video (excerpt 06:54-11:08) that involves the stigma a woman living with schizophrenia has endured (https://youtu.be/xbagFzcyNiM).

2. Students are instructed to visit the Genially platform (https://www.genial.ly/). The link provided involves interactive images on 6 common mental illnesses (namely, schizophrenia, eating disorders, depression, bipolar disorder, obsessive compulsive disorder, post-traumatic stress disorder). The uploaded material has been produced by the authors for the purposes of the present teaching micro-scenario (https://view.genial.ly/6049100a42ac330d8f4cc5bb/interactive-image-interactive-mental-health). Students explore the material and subsequently a plenary discussion is held.

3. We then direct students to the "Mental Health" page on the website "Our World in Data" (https://ourworldindata.org/mental-health). Students are requested to explore the site and collect information on the global, national and gender-prevalence statistics concerning mental illnesses. As a homework activity, we ask students to produce relevant estimates based on the school population using the "Part, Whole and Percentage" page on the GeoGebra platform (https://www.geogebra.org/m/knxczufb#material/vmbuztsg).

2.3.2. 1st Phase (time: 45 min). 2nd micro-activity (time: 15 min). In this activity, students are prompted to explore brain simulations to familiarize themselves with brain structures and to gain a better understanding of how those are involved in mental illnesses.
1. Students are instructed to explore the 3D Brain app (https://play.google.com/store/apps/details?id=org.dnalc.threedbrain). The app contains interactive brain structures with information on the links between brain regions and mental illnesses.

2. Additionally, we ask students to use an interactive brain model, provided by the BrainFacts.org website, where they gain a more realistic view of the brain (https://www.brainfacts.org/3d-brain#intro=true).

2.3.3. 2nd Phase (time: 45 min). 3rd micro-activity (time: 30 min). Approaching mental illnesses through an art-combo activity.
1. Warmer: Students watch a 3-video compilation (08:12) by Button Poetry (https://youtube.com/playlist?list=PLEXLmEyYScFU2Ra_KPXxALA7AOodjIInI). The compilation consists of 3 poems by the respective individuals: a woman living with depression who attempts to communicate her feelings to her mother, a man with obsessive-compulsive disorder who shares his experience of heartbreak, and a woman who has faced eating disorders, narrates the obstacles she has encountered during her recovery.

2. We initiate a discussion about well-known people that have publicly shared their stories on dealing with mental illnesses. Then, we show students Tate Modern (https://www.tate.org.uk) entries of artwork from artists that have lived with mental illnesses such as Edvard Munch and Vincent van Gogh.

3. Importantly, students are then asked to design their own artwork in the form of web-based posters on a virtual canvas provided by the Glogster platform (https://edu.glogster.com/). Students are requested to draw material and inspiration for their multimedia, interactive posters from the sources explored in previous steps and activities (e.g., the BrainFacts.org website provides a screenshot tool where they could produce pictures of brain domains etc.). Additionally, we explain to students that they

may also use copyright-free images from online repositories such as WikiMedia Commons (https://commons.wikimedia.org/wiki/Main_Page). Their finished digital art collages are presented in class at a later time point.

2.3.4. Evaluation (time: 15 min). A plenary discussion is held on the scope of the lesson. In the discussion, we urge students to brainstorm on ways to raise awareness on mental health or to promote empathy on the individual and societal levels (e.g., performances, podcasts, talks etc.). Before leaving class, students are requested to answer a Google Forms (https://www.google.com/forms/about/) questionnaire evaluating learning outcomes (https://docs.google.com/forms/d/e/1FAIpQLSdsDFp8AjiVxckIK4_PMyCDXMAB1fsrV_o_3 pahokSYm5NWWA/viewform?usp=sf_link). The questionnaire has been produced for the purposes of the present micro-scenario. As a Going-Further activity, students may be asked to produce original single-act plays that tap on the issue of mental illnesses.

3. Discussion

The relationship between mental health literacy and the well-being of adolescents has recently been pointed out (Bjørnsen et al., 2019). Interestingly, relevant investigation has shown that even short-term interventions negate misconceptions and are effective in increasing mental health literacy (Pinfold, Stuart, Thornicroft, & Arboleda-Flórez, 2005). We propose an educational micro-scenario aimed at high school students that is in line with the theory of co-constructivism (Reusser & Pauli, 2015). The micro-activities are IT-enhanced (Andreou, 2019) and thus suitable both for distance-learning as well as face-to-face settings. Finally, in this study, a questionnaire has been designed to determine the learning outcomes of the proposed intervention, therefore an investigation will show the effectiveness of the micro-scenario.

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