

Computer Intervention to Decrease Level of Psychiatric Stigma among Medical Students

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Abstract. We designed our pilot study to investigate the effectiveness of computer-assisted anti-stigma interventions among medical students. Convenience sample of 51 consecutive students was evaluated before and after using the Anti-Stigma CO-ED system. After studying the computer program the level of stigma in the group significantly decreased ($p < 0.02$). We concluded that computer-assisted education could be effective in reducing psychiatric stigma among medical students.

Background. Stigma is a negative label that people frequently attach to groups or persons who are different from them in some respect, such as race, appearance, physical or mental health. Medical students sometimes can themselves have stigmatizing beliefs and attitudes toward mentally ill¹ that they can carry subsequently in their professional lives. The most appropriate time to address this problem is to educate medical students in their medical school years. Conventional education, such as lectures and classes, and also direct contact with psychiatric patients can diminish the level of psychiatric stigma in medical students. Computer-assisted interventions can be brief and cost effective mean to educate students about psychiatric stigma. We designed our pilot study to investigate the effectiveness of computer-assisted anti-stigma interventions among medical students.

Methods. Convenience sample of 51 consecutive fourth-year medical students was used to assess impact of anti-stigma computer-assisted education system (Anti-Stigma CO-ED) developed at the Chronic Disease Informatics Group and described previously². The age of the study participants was 20.4 ± 1.6 years, 15 of them were males (29.4%). All study participants were evaluated before and after using the Anti-Stigma CO-ED system. The curriculum provided by the psychiatric stigma educational program was based on the unitary theory of stigmatization. Following this theory, the curriculum addressed three components of stigma: cognitive (lack of knowledge or untrue beliefs about psychiatric disorders), emotional (feelings toward people with these conditions and its treatment), and behavioral (behavior toward people with mental health problems).

We collected information on socio-demographic data and mental health history of the participants before the intervention. To measure the level of stigma before and after the intervention, we used the Bogardus Social Distance Scale (BSDS). We also assessed students' knowledge on the most common misconceptions about psychiatric patients before and after intervention using multiple-choice

questions. This questionnaire contained 24 questions and the range of possible score was from 0 (no correct answers) to 24 (all answers are correct).

Results: In the study sample, 13 (25.57%) students thought they had serious emotional or psychiatric disorder in the past, 2 students (3.9%) considered that they currently had psychiatric disorder. The average level of stigma in the sample was 7.3 ± 4.9 points. The range of BSDS possible scores (from 0 to 21) was divided into 3 equal parts: 31 (60.8%) students had low level of stigma toward mentally ill, 14 (27.5%) – moderate, and 6 (11.8%) – high level of stigma. After studying the computer program the level of stigma in the group significantly decreased (7.3 vs. 5.7, $p < 0.02$). The knowledge scores of the students also significantly improved according to psychiatric stigma knowledge questionnaire (10.9 vs. 22.1, $p < 0.001$). The knowledge questionnaire had good psychometric properties with Cronbach alpha 0.77.

Discussion. Even in this sample, which included medical students who psychologically prepared to work with various kinds of patients, misconceptions and stigmatizing beliefs about psychiatric disorders were widespread, and the level of stigma toward psychiatric patients varied from low to high. Computer-assisted education was effective in reducing psychiatric stigma. We think that professionals who may interact with people with mental health problems or other stigmatized groups can benefit from such interventions.

There are some limitations in this study. It is difficult to predict if the change in students' attitudes and beliefs has the corresponding positive effect on their behavior; however there are some data to support this possibility. Whether the effect of the intervention is stable over time and if the intervention is effective in changing subjects' behavior in real life remains to be established.

Conclusions. Computer-assisted education could be effective in reducing psychiatric stigma among medical students. Further studies are needed to assess sustainability of this effect.

References

1. Mukherjee, R, Fiahlo, A, Wijetunge, A. The stigmatisation of psychiatric illness: the attitudes of medical students and doctors in a London teaching hospital. *Psychiatric Bulletin* 2002;26: 178-181.
2. Finkelstein J, Nyun, TM, Aronovitz JR, Khare R. A handheld interactive education tool for physicians to promote patient safety. *Proceedings of the 26th Annual Meeting of the Society of General Internal Medicine. J General Internal Medicine* 2003;18(suppl 1):108.