

Stigma About Mental Health in Slovenian First-Year Medical Students

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Journal of Medical Education and
Curricular Development
Volume 11: 1–5
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DOI: 10.1177/23821205241283751



ABSTRACT

OBJECTIVE: Stigma surrounding mental health persists as a significant impediment to adequate support and help-seeking behaviors in Slovenia, despite advancements in psychiatric care and education. This study investigates stigma among first-year medical students at the University of Maribor, Slovenia and how the stigma changes after completing a course in mental health literacy.

PARTICIPANTS: Participants were first-year medical students at the University of Maribor in the academic year 2023/2024. A total of 116 students participated in the baseline study, with 66 students participating in the follow-up study.

STUDY METHOD: The intervention involved implementing the “Transitions” program, aimed at enhancing mental health literacy and reducing stigma. We conducted a baseline study and a follow-up study, then used Wilcoxon signed rank test for repeated measures to compare the differences in ranks before and after implementation of the program.

FINDINGS: There was a significant reduction in stigma after intervention (Wilcoxon $Z = -3.06$, $P < .01$), suggesting a positive impact of the educational program. This reduction aligns with findings from similar programs globally, suggesting the efficacy of educational interventions in mitigating mental health stigma.

CONCLUSIONS: The study emphasizes the importance of integrating mental health education into medical curricula to foster stigma reduction and enhance mental health literacy among future medical doctors.

KEYWORDS: stigma, mental health, medical students, Slovenia, education, intervention

RECEIVED: April 4, 2024. **ACCEPTED:** August 28, 2024.

TYPE: Brief Report

FUNDING: The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research study received funding from Norway Grants and The Ministry of Cohesion and Regional Development of Slovenia.

DECLARATION OF CONFLICTING INTERESTS: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Introduction

Despite its small size, the population being only 2.1 million, Slovenia has made significant strides in the field of psychiatry, with a focus on holistic approaches to mental health care. The country prioritizes community-based initiatives, comprehensive mental health services, and ongoing research to address the evolving needs of its population. The country's mental health system provides a range of services, including outpatient clinics, inpatient care, and community-based support networks. Additionally, Slovenia has been proactive in integrating psychiatric care into primary healthcare settings, aiming to increase accessibility and early intervention for mental health issues.¹ Slovenian psychiatry emphasizes a collaborative approach between patients, families, and healthcare professionals, reflecting a commitment to promoting mental well-being and reducing stigma.

Stigma, according to the World Health Organization, encompasses feelings of shame, disapproval, and subsequent rejection, discrimination, and exclusion.² It involves being

labeled by certain traits, which can isolate individuals and lead to their perceived deviation from social norms.³ Those with mental disorders often bear the brunt of such stigmatization, facing discrimination across different aspects of life, making them among the most vulnerable members of society.⁴

In Slovenia, despite progress in mental health care, stigma remains a significant barrier to seeking help and receiving adequate support for mental health issues.

In 2018, Ljubotina, Đorđević and Sivec reported that stigma regarding mental health remains pervasive across Slovenian society, leading to discrimination and social exclusion for individuals with mental illness.⁴ Efforts to combat stigma include public education campaigns, advocacy initiatives, and increased access to mental health services, yet challenges persist in changing societal attitudes and perceptions toward mental health.⁵

Poor literacy in the field of mental health can lead to greater stigma, a lack of awareness of the recognition of mental disorders and an obstacle to seeking help, as well as lowered trust in a potential source of help and, consequently, the endangerment



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of the well-being, quality of life, and functioning of the individual.⁶ In essence, literacy is the key to reducing the stigma associated with mental health and ensuring that people have access to the resources they need.

Medical faculties in particular expressed extreme concern for the mental health of their students as students face burdens related not only to a demanding curriculum but also to the competitive climate of medical schools and the expectations of their future profession.^{7,8} Previous studies have shown that medical students have had a higher incidence of stress and stress-related mental problems than the general student population.⁹⁻¹² These include self-reports of depression and anxiety, reduced sleep quality, burnout, and even suicidal thoughts; mental health conditions that are well established in the medical education literature.¹³ Although almost a third of medical students experience depression, only 15% of those with depression seek treatment.¹³ Medical students also face an increased risk of non-medical use of prescription and illegal drugs due to stress.¹⁴ At the same time, they encounter noticeable obstacles in seeking help, including lack of knowledge and negative attitudes toward mental disorders and their treatment, fear of stigmatization, and lack of knowledge of access to appropriate care.¹⁵ The reasons for lack of help seeking are multifaceted, but a major contributor is mental health stigma. Mental health stigma in medical students is driven by perfectionism and unsustainable performance expectation that define their self-worth.⁹

From a developmental perspective, during the university period, young people move from a family environment to independent living, which is a critical period in the lives of young adults, especially when it comes to the academic pressures of university. Strategies that are integrated into the university setting, such as interventions to improve mental health literacy, can increase mental health awareness and reduce the stigma associated with mental health problems through promoting well-being.^{16,17} In this spirit, many educational programs have been developed around the world to improve mental health literacy among students. Previous studies have shown that such programs can significantly reduce the stigma associated with mental health and increase the likelihood that students will seek help when they need it.¹⁸

In 2022, attitudes toward mental illness of medical students were examined in Maribor University, Slovenia.¹⁹ This is one of the only 2 Medical faculties in Slovenia (the other being in Ljubljana). The study reported that sixth-year medical students were the most stigma-free, since they already completed the psychiatry clerkship (it is completed in the fifth year) and are thus more educated about mental disorders, than that is first-year students.

This study hypothesized that mental health literacy program “Transitions” will reduce stigma against mental health illness in first-year medical students. Previous studies showed that the “Transitions” program was helpful for improving stigma against mental illness.²⁰⁻²³

The original Canadian program materials “Transitions”²⁰ were translated into Slovenian by a professional translator and culturally adapted and digitized by the staff at the Department of Scientific Research, Maribor University Clinical Center in Maribor, Slovenia. The adapted materials were reviewed by a multiprofessional group of experts, including a child and adolescent psychiatrist, psychologists, and 2 university medical students. Cultural adaptation shortened the original material, taking into consideration such circumstances as that is studying in Slovenia is free, a large proportion of Slovenian students live with their parents during their studies, etc.

The program also offered links to additional information on specific topics, such as websites published by Slovenian mental health organizations. The content of the “Transitions” program focused on 3 themes dealing with life skills and mental health topics. The first theme emphasized important skills for independent living, strategies for academic life, and interpersonal relationships. Another theme provided strategies for gaining and maintaining good mental health and stress management skills. The third theme focused on mental disorders, associated treatment and help-seeking. These 3 basic topics remained the same as in the original document. The material contains educational texts, advices, and links to useful information resources.

Method

The reporting of this study conforms to the JARS-Quant statement.²⁴ See Supplemental File 1 for detailed methodology (available at <https://apastyle.apa.org/jars/quant-table-1.pdf>).

Inclusion and Exclusion Criteria

The inclusion criteria for the participants were that they were first-year medical students at the University of Maribor in the academic year of 2023/2024. The exclusion criteria were not attending the program’s tutoring classes.

Participant Characteristics and Sampling Procedures

Participation in the study was voluntary, and students could also complete the course without participating in the study. They were recruited through tutors directly and no exclusion criteria were applied. We have obtained written informed consents from all participants. We introduced the program “Transitions” to the first-year medical students at the University of Maribor in the academic year 2023/2024. We chose first-year students because they have not yet completed the psychiatry clerkship or attended any classes about mental health. The initial study population included 116 students, which was the intended sample size. The achieved sample size was 66 participants.

Before joining the program in October 2023, the participants completed the questionnaire including questions about stigma. This provided us with a baseline (T0) data. The next 6 weeks were dedicated to the educational program including face-to-face and self-studies.

The follow-up (T1) was conducted in December 2023 and January 2024 after the implementation of the “Transitions” program.

Measuring Instruments

The Attitudes Towards Mental Illness Questionnaire⁸ was used to assess stigma about mental health in the initial assessment and after the intervention. The questionnaire consists of 12 statements rated on a 7-point Likert scale from “strongly disagree” to “strongly agree” that contain general beliefs about people with mental health problems. Items are summed into a total score, with lower scores indicating more positive attitudes toward individuals with mental illness. The minimum score is 12 points, and the maximum score is 84 points. The internal consistency reliability of the current data was $\alpha = .80$. We also collected demographical data, including gender and prior education in mental health.

Statistical Analysis

Since the distribution of the data was not normal, we had to use nonparametric Wilcoxon signed rank test for repeated measures to compare differences in ranks before and after implementation of the program. The data were analyzed using the IBM SPSS Statistics 23.

Results

The baseline study (T0) was conducted in October 2023; the follow-up study (T1) was conducted in December 2023 and January 2024. A total of 116 students (23 male, 80 female, 13 did not reveal gender) participated in our baseline study (T0), and 66 students (12 male, 44 female, 10 did not reveal gender) completed the questionnaire after the intervention (T1). This means that 55.93% of students participated in T1. All included participants were first-year medical students and had no prior education in mental health.

Before the intervention, the mean sum of scores for stigma for all participants was 71.39 and after intervention it was 68.41. We calculated the standardized effect size using the Z value from the Wilcoxon signed rank test ($Z = -3.06$). The calculated value $r = 0.61$ is a large effect size according to Cohen's criteria.²⁵ We also calculated the differences in preintervention (male = 72.12, female = 70.66) and postintervention (male =

70.80, female = 66.02) mean of sum scores for each gender. We calculated the standardized effect size using the Z value from Wilcoxon signed rank test ($Z_{\text{males}} = -2.05$, $Z_{\text{females}} = -4.93$). The calculated value (of rank biserial correlation) $r_{\text{males}} = 0.52$ and $r_{\text{females}} = 0.65$ are large effect sizes according to Cohen's criteria.²⁵ This means there are no differences between genders. These results are shown in Table 1.

Discussion

This was the first study on stigma regarding mental health in first-year medical students in Slovenia. The main finding of this study is that stigma decreased significantly after the intervention (the application of “Transitions” program).

Our findings are similar to the results demonstrated by Wei et al, in the original Canadian “Transitions” program which also yielded similar positive outcomes on stigma.^{20,21} A systematic review and meta-analysis of Mental Health First Aid studies also observed minor reductions in stigma. However, a systematic review of studies focusing on mental health educational initiatives has indicated no significant reductions in stigma among healthcare students.²⁶ This trend was similarly observed in the Finnish study, which also had smaller number of participants in the follow-up study, but there was no reduction in stigma regarding mental health.²⁷ These discrepancies may be attributed to cultural differences, as individuals in Finland tend to hold more positive attitudes toward mental health in general.²⁸ In addition, the Finnish study baseline mean of stigma (54.20) was already lower than our baseline mean (71.39), which suggests that stigma about mental health was lower in Finnish medical students compared to Slovenian. A study conducted on medical students in 2023 also reported findings that sharing mental health experiences decreased stigma among residents.⁹ The “Transitions” program is structured, but our students also could share their experiences through tutoring hours, so we can also observe similar trends in our study.

Although our study provides valuable insights, it has some limitation. First, the study only included one of the 2 Medical Faculties in Slovenia and lacks a control group, which limits generalization. The attrition rate was relatively high at the follow up, which could also limit the generalizability of our results; the same happened in the Finnish study. Another limitation of our study could be the basic motivation of the

Table 1. Attitudes About Stigma Prior and After Intervention.

Variable	Baseline mean	Baseline minimum	Baseline maximum	Follow-up mean	Follow-up minimum	Follow-up maximum	Wilcoxon Z	P value
Stigma	71.39	54	84	68.41	53	78	-3.06	<.01
Stigma (males)	72.12	54	82	70.80	54	78	-2.05	<.05
Stigma (females)	70.66	55	84	66.02	53	74	-4.93	<.01

students to participate, as it was the middle of the school year and they had many school obligations. This could also be the reason behind the attrition rate.

It is very important to focus on reducing stigma among medical school students, since literature suggest high rates of burnout, depression, and other mental health concerns among them. The “Transitions” program targets this through increasing mental health literacy, which helps to destigmatize help seeking.⁹ Targeting mental health stigma may be associated with increased utilization of mental health care among medical students, who tend to hide their problems, because of the pressure of always being perfect.⁹

Conclusion

Slovenian version of “Transitions” program has reduced stigma among first-year medical students in Maribor. It is essential that we try to destigmatize future healthcare professionals, as they are more prone to burnout and might even work in mental health care in the future.

Acknowledgments

A pre-print of this article was submitted and published on Sage’s Advance platform and is available at: <https://advance.sagepub.com/users/772012/articles/856513-stigma-about-mental-health-in-slovenian-first-year-medical-students?commit=b4cf83dc4b159acd348078001c74da0fb14266c5>

The study is part of a larger project for mental well-being and mental health promotion (Empower Mental Health for 21—EMH421), whose main goal is to introduce and adapt already existing, evidence-based content on mental health promotion and literacy into study programs at the MF UM.

Authors’ Contribution

The authors confirm contribution to the paper as follows: study conception and design: Nina Vučinić, Hojka Gregorič Kumperščak, Sara Plakolm Erlač, Norbert Skokauskas; data collection: Nina Vučinić, Hojka Gregorič Kumperščak; analysis and interpretation of results: Rok Holthamer, Nina Vučinić; draft manuscript preparation: Nina Vučinić. All authors reviewed the results and approved the final version of the manuscript.

Authors’ Note

Ethics and Consent: The study was approved by the Medical Ethics Committee of the University Hospital Maribor, Slovenia, (approval no.UKC-MB-KME-24/23) on May 29, 2023. All participants provided written informed consent prior to participating.

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Supplemental Material

Supplemental material for this article is available online.

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