ISSN: 0975-833X

Available online at http://www.journalcra.com

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

International Journal of Current Research
Vol. 13, Issue, 11, pp.19673-19678, November, 2021

DOI: https://doi.org/10.24941/ijcr.42609.11.2021

RESEARCH ARTICLE

DURATION OF EXPOSURE TO MENTAL HEALTH CARE FACILITIES THROUGH MEDICAL INTERNSHIP TRAINING DOES NOT IMPACT ON REDUCING MENTAL HEALTH STIGMA

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ARTICLE INFO

Article History:
Received 25th August, 2021
Received in revised form
19th September, 2021
Accepted 24th October, 2021
Published online 26th November, 2021

Keywords
Education, Medical,
Psychiatry,
Stigma.

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ABSTRACT

Background: The existence of stigmatizing attitudes with individuals suffering from mental disorders is unequivocal, timeless and observed even among mental health professionals. The impact of such stigmatization varies from social exclusion to lack of medical support, ending up, at times, in preventable deaths. Medical education institutions still find it difficult to deconstruct the stigma among students, and the search for effective methods, in short and long term, guides the main studies in the area and is also the main focus.**Objective**: Assess the effects of duration of mental health training in students during the medical internship in reducing the stigmatization of people with mental disorders.**Method**: A quasi-experimental study to assess the impact of an educational program during the medical internship in mental health. The sample consisted of 70 and 67 medical students in their last year in college, in 2018and 2019, respectively. Questionnaires were applied to assess the extent and typification of stigma, concerning schizophrenia and self-perception on medication management and treatment of psychiatric disorders. The instruments used the Three-Point Likert Scale to assess the results. The questionnaires were applied immediately before and after exposure to the educational program, which lasted four and nine weeks in 2018 and 2019, respectively. The mean values of self-perception and stigma were compared between both occasions using the Student T-test. **Results**: the mean post-test scores regarding self-perception and stigma did not show significant difference between the classes. **Conclusion:** Future studies need to observe other potential variables to improve the effectiveness of intervention programs to reduce stigmatization to people in psychic suffering.

Citation: Antonio Pedro Suarte, Lays Genro Coutinho, Júlia Visconti Segovia Barbosa et al. *"*Duration of exposure to mental health care facilities through medical internship training does not impact on reducing mental health stigma*", 2021. International Journal of Current Research, 13, (11), 19673-19678.*

INTRODUCTION

Stigmatization is a sociocultural construct established when a group of people assigns a discriminatory mark to another group, usually a minority, depriving it of rights and privileges to which should be associated with[1]. This phenomenon is procedural in nature and is built on four key elements: (1) labeling, (specific personal characteristics are perceived as significantly different); (2) creating stereotypes (the association of such differences to undesirable characteristics); (3) separating (categorical distinction between a larger and "normal" group, and the group labeled as significantly different); and (4) losing status and discrimination (devaluation, rejection and exclusion from the labeled group)[2].

The existence of stigmatizing demeanors towards people undergoing mental issues is indisputable, and has persisted throughout history. Such phenomenon is noticed in different situations, contexts, environments, and social groups, including the health professionals themselves, even those dedicate directly to people in psychic affliction[3-6]. A that study analyzed samples from 27 countries, revealed that approximately 40% of people with psychological suffering reported having previously been disrespected by health professionals dedicated to their care[7]. This analysis explicitly demonstrates the stigma is undoubtedly a public health problem and a globally relevant obstacle to quality and access to health treatments[8-10]. The impact of this phenomenon can be

so broad as to contribute to premature death of people with mental illness.

This is due to access limitations and inferior quality of medical care provided to these people, which can lead to underdiagnosis of severe systemic diseases and affect life expectancy[11]. The stigmatization of people with mental disorders by doctors is present as early as in the basic training in medical school[12-13]. The negative stereotype of individuals with psychological disorder is so ingrained, even interventions focused on dispelling stigma applied to medical students in the beginning of medical school demonstrate little long-term effectiveness in reducing social stigmatization of people with psychiatric disorders[14-16]. Nevertheless, medical academic institutions cannot be shirked from their duty to train doctors with exceptional humanistic capacity. Although applying an efficient intervention model to promote consistent and lasting changes in destigmatization by future health professionals carries an evident challenge, there is a substantial need to encourage adopting such strategy. In this manner, regardless of sociocultural influences and personal experiences with mental disorders having clearly greater effect on positive and negative attitudes towards people with psychological conditions[17], one should not ignore the relevance of educational interventions and the role of academic institutions in implementing strategies to decrease stigma[18].

To date, the elements which presented the best relationship with the effectiveness of programs to reduce stigma for students have been interest, previous knowledge and contact with people with some mental disorder by academics[10,19]. Our group previously analyzed the effect of medical internship, with an extent of four weeks of training in mental health equipment[15]. The training, however, showed little impact on changing the pattern of stigmatization of people in severe psychic suffering. In this study, we evaluated the effects of time of mental health training during medical internship in reducing the stigmatization of people with psychological disorders by students. Considering that contact with people with mental disorders relates to a lower degree of stigmatization of minority populations[20], our hypothesis is that the contact of medical students in medical internship for a longer time (from four to nine weeks of training) would be related to the reduction of stigma.

MATERIALS AND METHODS

Study design: The present study reproduces a method previously employed by this research group[15]. The assessment of the impact of educational interventions with durations of four and nine weeks adopted quasi-experimental design. We evaluated stigmatization and competence before and after the immersion training programs in inpatient and outpatient mental health care facilities by students in the last year of medical school of a public higher education institution in Distrito Federal, Brazil. The research was approved by the Ethics and Research Committee of Fundação de Ensino e Pesquisa em Ciências da Saúde (registration in CAAE 80614617.5.0000.5553).

Description of the educational program: The evaluated program comprises one of the mandatory curricular internships in medical school in Brazil. It consisted of immersion in outpatient and hospital services specialized in caring for individuals with mental disorders. One of the groups analyzed was subjected to an intervention with the duration of four weeks (Group A), comprising 40 hours per week of practical and theoretical activities, with groups of eight to ten students of medical school. The comparison group (Group B) was submitted to an intervention on the same format, with the duration of nine weeks, maintaining the same weekly workload of practical and theoretical activities. The methodology applied in both trainings was identical and employed the following pedagogical resources/learning scenarios:

Discussion of clinical cases, workshops and seminars on topics related to: psychiatric semiology and the specifics of medical interview, the medical approach to the patient and the phenomenology applied to mental health; mood disorders; schizophrenia spectrum disorders; anxiety disorders; pharmacology of antidepressants and mood stabilizers; the pharmacology of anti-anxiety medicines and hypnotics; psychiatric emergencies; developmental psychiatry, with an emphasis on the most prevalent diseases in childhood and adolescence [autism, attention deficit hyperactivity disorder (ADHD), and oppositional defiant disorder/conduct disorder] and standards for parental management; drug management in special populations: elderly persons, pregnant women, children, and people with chronic illnesses (cancer patients and people living with HIV, for instance), public policies in mental health. The pedagogical resource fully adopted the application of problematization techniques based on clinical cases experienced by students. The topics covered were distributed in three weekly meetings under the guidance of a professor specializing in psychiatry. The extent of each meeting was four hours;

Psychiatric outpatient clinics at the General hospital, in community multidisciplinary mental health care centers for the treatment of people with substance use disorders and for people with general mental disorders;

Psychiatric emergency in general hospitals and psychiatric hospitals;

Psychiatric consultation-liaison, defined by caring for patients in hospital beds of other medical specialties that require support from psychiatry. Table 1 describes the syllabus and practice scenarios for both educational programs.

Participants: For Group A, 70 sixth-year students of Medical school in 2018 were invited and included. 51.43% from this total samples corresponded to male students. And for Group B, 67 sixth-year students of Medical school in 2019 were invited and included. All participants signed the Informed Consent form, obtained in writing. The exclusion criteria were: being directly involved with the research group which developed the present study; having previously participated in long-term extension programs in psychiatry; having completed a previous undergraduate degree in the mental health field (psychology, occupational therapy, social work); being absent or refusing to participate in any stage of instruments application.

Instruments

Two instruments were used: A questionnaire to evaluate the stigmatization of patients with schizophrenia, developed by Loch et al. The instrument consists of two parts, described below:

- Pattern and nature of the contact with mental illness. The variable of interest in this question was identifying the presence of a family member and/or acquaintances with psychiatric disorders and, when affirmative, the contact frequency with such person. The frequency options were: daily, weekly, monthly, occasionally and never.
- Stigma dimensions. The questionnaire consists of four dimensions of stigma: stereotypes (12 characteristics to be compared with those of someone from the general population); perceived prejudice (the interviewee's opinion on nine statements related to the attitudes of the general population towards the index individual), social distance (it measures the interviewee's reluctance to participate in certain activities with the index individual), and civil rights restrictions. The assessment of stigma was developed from the opinion a participant should express regarding an individual described in an opening vignette for the interview. In this case, the instrument would describe an adult, young, male individual with a psychopathological profile of schizophrenia. The participants' opinions were assessed throughout the questionnaire using a Three-Point Likert Scale. In order to avoid assessment bias, the items did admit inverted scores. In such cases, scores were corrected for data appraisal. In all items, participants were able to choose the following options, which were considered a null score: "I prefer not to answer", or "I do not know how to answer." Both stereotypes – positive (regarding items portraying positive characteristics, such as being more creative or talented) and negative (regarding items with negative characteristics, such as being unintelligent, dangerous or unreliable) – were assessed by the instrument. The sum of positive and negative stereotypes could range from 12 (minimum of stigmatization) to 36 (maximum of stigmatization). Perceived prejudice (perception of stigmatizing demeanors from society in general, by most people) was evaluated through nine items, based on the scales of social acceptance and social stigmatization. Both scales measure social demeanors towards people with schizophrenia. Social distance was evaluated under an adaptation of the social distance scale[9], through seven questions that measured the interviewee's reluctance to participate in certain social activities with the alleged individual with mental disorder in aforementioned vignette. The item "would you rent a room for a person with schizophrenia?" was replaced by "would you invite a person with schizophrenia to a party, a meeting or a dinner?", since in Brazil it is quite unusual to rent a room for someone else. The restriction of civil rights was evaluated through three items (autonomy for choosing treatment, ability to vote and to drive).

Questionnaire elaborated to assess self-perception of knowledge, prepared by the authors. The instrument comprised 12 items, with a Three-Point Likert response evaluation, that assess self-perception on medication management and treatment of psychiatric diseases of epidemiological impact.

Data analysis: For each group, the mean values of self-perception and stigma were compared between both the beginning and the end of the internship, using the Student T-test. The parallels between self-perception measures and stigma were analyzed using Pearson correlation coefficient. Associations between the qualitative demographic variables and the gain in self-perception, as well as the gain in the stigma scale, assessed on the difference in the scores in before and after, were appraised through Pearson's chi-squared test. The analyses were conducted by the application Statistical Analysis System (SAS) 9.4 (SAS Institute, Inc., 1999). The value $p< 0.05$ was considered significant. In the intergroup comparison, the means on post-treatment for self-perception and stigma parameters were compared between groups A and B using analysis of covariance (ANCOVA). In the ANCOVA models, the measures obtained after treatment were considered as a dependent variable, the group (A and B) as an independent variable, and the measures of self-perception or stigma, at baseline, as a covariate. Intragroup means were compared using the Student T-test for paired samples. $P < 0.05$ was considered significant. The analysis was performed using SAS 9.4 (SAS Institute, Inc., 1999).

RESULTS

51.4% of the 70 participants in Group A were male. Most identified themselves as linked to the Catholic religion (n = 26, 37.1 %), although other religions were also listed: Evangelical (N = 14, 20%), Spiritist (N = 6, 8.6%), African-oriented religions (n = 1, 1.4%) and other religions not specified, or not linked to any religion (n = 22, 31.5%). 53.7% of the 67 students in Group B were female. Most identified themselves as linked to the Catholic religion (n = 30, 44.8%), although other religions were also listed: Evangelical (N = 9, 13.4%), Spiritist (N = 6, 8.9%) and other religions not specified, or not linked to any religion (N = 22, 32.9%). Both samples presented, in most, unmarried individuals, corresponding to 92.9% for Group A and 85.07% for Group B. As for age, in Group A, 60% are older than or aged exactly 25 years. In Group B, 50.8% of the participants were aged 25 or older, compared to 49.2% who aged less than 25 years. Most of the students had no children, being 90% in Group A and 89.55% in Group B. Additionally, a survey on the presence of mental illnesses within the students' families stated: 78.6% in Group A stated they had relatives with mental illnesses, while in Group B the percentage was 85.1%.

These findings are summarized in table 2.

Intragroup analysis: In both Group A and Group B, the mean post-test self-perception scores (T1) were significantly higher than those at the beginning of the intervention (T0). In Group A, the variation was 15.63 to 23.85; while in Group B it was 16.46 to 25.24. As for stigma, in Group A the mean scores of stereotypes, perceived prejudice and post-test total score were significantly high compared to the pre-test mean scores. Regarding stereotype, the change was from 16.53 to 18.18; whilst in perceived prejudice 11.29 to 12.39. In terms of social distancing and restriction of civil rights, no change between pre and post-test was identified. The mean in total stigma score changed from 47.80 to 50.94. In Group B, the mean scores of stereotypes, perceived prejudice, social distancing and the total score in post-test were significantly higher, compared to the pre-test mean scores. Stereotype changed from 16.79 in T0 to 17.94 in T1; perceived prejudice ranged from 12.25 to 13.02; social distancing numbers increased from 14.09 to 15.11.

Table 1. Description of the curricular activities on psychiatry internship

Activity	Description
Theoretical program	Discussion of clinical cases, workshops and seminars on topics related to: psychiatric semiology and the specifics of medical interview, the medical approach to the patient and the phenomenology applied to mental health; mood disorders; schizophrenia spectrum disorders; anxiety disorders; pharmacology of antidepressants and mood stabilizers; the pharmacology of anti-anxiety medicines and hypnotics; psychiatric emergencies; developmental psychiatry, with an emphasis on the most prevalent diseases in childhood and adolescence [autism, attention deficit hyperactivity disorder (ADHD), and oppositional defiant disorder/conduct disorder] and standards for parental management; drug therapy in special populations: elderly persons, pregnant women, children, and people with chronic illnesses (cancer patients and people living with HIV, for instance), public policies in mental health.
Psychiatry outpatient in General hospital	Outpatient procedures performed by a psychiatrist in three different hospitals under the Unified National Health System (SUS) in Distrito Federal; general psychiatry outpatient clinics, tipifying a specialty outpatient model.
Psychosocial Care Centers for treating individuals with substance use disorders (CAPSad)	Aid performed by a psychiatrist, specialized in Substance Use Disorder, interviews with patients in long-term hospitalization, medication group, and smoking management group. In therapy groups, activities are held as opportunities for patients to exchange experiences. The students help mental health professionals organize events.
Psychosocial Care Centers for treating individuals with mental disorders in general (CAPS)	Aid performed by a psychiatrist for the management of critically ill patients who require intensive or semi-intensive care.
Psychiatric emergency	Medical care of patients with mental disorders or in a situation of psychic suffering, in crisis.
Psychiatric consultation-liaison	Medical care of hospitalized patients in hospital beds of different medical specialties that require psychiatric support.

Table 2. Sociodemographic data from internship medical students

	Group A (N = 70)	Group B (N = 67)
Male	51.4	46.3
Catholic	37.1	44.8
Evangelical	20	13.4
Spiritist	8.6	8.9
African-oriented religions	1.4	0
Other religions or no ties	31.5	32.9

Table 3. Comparison between and within groups for confidence and stigma dimensions after the 4-week and 8-week education in-practice training program on mental health care for internship medical students

	Group A (N = 70) *mean* [CI 95%]	Group B (N = 67) *mean* [CI 95%]	*Coefficient of variance* [CI 95%]	p^*
Confidence total score				
T0	15,63 [14,56; 16,69]	16,46 [15,32; 17,61]		
T1	23,85 [22,67; 25,04] †	25,24 [24,28; 26,21] †		
T1 (adjusted)#	23,89 [22,82; 24,96]	25,20 [24,14; 26,26]	1,31 [-0,19; 2,82]	0.0867
Stereotype total score				
T0	16,53 [15,31; 17,75]	16,78 [15,85; 17,71]		
T1	18,18 [17,13; 19,23] ‡	17,94 [16,92; 18,95] ‡		
T1 (adjusted)#	18,20 [17,23; 19,17]	17,92 [16,97; 18,63]	-0,28 [-1,64; 1,07]	0.6775
Noticed preconception				
T0	11,29 [10,68; 11,90]	12,25 [11,74; 12,77]		
T1	12,39 [11,68; 13,10] ‡	13,02 [12,31; 13,72] ‡		
T1 (adjusted)#	12,63 [11,98; 13,29]	12,80 [12,16; 13,43]	0,16 [-0,75; 1,09]	0.7229
Social distance				
T0	14,59 [13,82; 15,36]	14,09 [13,26; 14,91]		
T1	15,13 [14,23; 16,03]	15,11 [14,23; 16,00] ‡		
T1 (adjusted)#	15,08 [14,28; 15,89]	15,21 [14,41; 16,00]	0,12 [-1,01; 1,26]	0.8284
Civil rights restriction				
T0	6,48 [6,25; 6,72]	6,62 [6,38; 6,86]		
T1	6,48 [6,14; 6,81]	6,57 [6,35; 6,80]		
T1 (adjusted)#	6,50 [6,23; 6,77]	6,56 [6,29; 6,83]	0,06 [-0,33; 0,44]	0.7718
Stigma total score				
T0	47,80 [45,50; 50,09]	49,64 [47,95; 51,34]		
T1	50,94 [48,39; 53,48] ‡	52,53 [50,70; 54,37] ‡		
T1 (adjusted)#	51,31 [49,28; 53,34]	52,16 [50,13; 54,19]	0,85 [-2,03; 3,72]	0.5619

‡ $p < 0.05$ or †$p < 0.0001$; #adjusted means for ANCOVA using baseline measures

Regarding restriction of civil rights, there was no significant change between the tests, as well as in Group A. The mean in total stigma score changed from 49.64 to 52.53.

Comparison between groups: The mean post-test scores regarding self-perception and stigma presented no significant difference between the classes adjusted by baseline measurements.

Considering a 95% confidence interval; the coefficient of variation in self-perception was 1.31, with *p* value 0.0867; in total stigma, the coefficient of variation was 0.85 with *p* value 0.5619. Analyzing the dimensions of stigma separately, no statistically significant difference was found. This respective data collection can be found summarized in table 3.

DISCUSSION

This study explored the role of time in the impact of in-service training for last-year students of Medical school on reducing stigma relative to individuals with severe mental disorders. Unlike the original hypothesis of the authors, the nine-week immersion in various contexts of mental health care did not cause greater reduction of stigma than a shorter training (in four weeks) of students completing Medical school in Brazil. In contrast, other studies indicated results which were consistent with a greater reduction of stigma by the extension of training from four to eight weeks long rotations[21-22]; however, the above-mentioned studies and the present one employed different instruments and had different dimensions. The explanation offered by the authors concerning the variation observed in the studies pertaining to training time would be the low pre-test baseline, so that the perception of improvement in post-test was conspicuous[21-22]. In the present study, we identified high levels of stigmatization in measures before the intervention with little variation, statistically non-significant. Interesting enough, despite applying pedagogical resources recommended for the effectiveness of mental health training programs, such as active methodologies, long duration, conducting training by experts[23], we did not get the expected response. Seemingly, a non-included variable can be significant in the effectiveness of programs of this nature: interest.

The interest in psychiatry and mental health is a well-known factor to achieve better response potential in reducing stigma through training programs[10]. Due to the chronic, degenerative and incurable nature of most mental disorders, this area of medical knowledge and practice tends to arouse less interest from medical students. Such phenomenon seems to be common to other serious and incurable chronic diseases, as revealed by a study on which the authors evaluate the demeanors of medical students regarding mental disorders compared to different organic diseases[24]. In this examination, medical students adopted frankly negative approaches towards patients with different chronic idiopathic diseases as much as for those with mental disorders. This conveys the impression of narcissistic fragility deriving from doctors (especially the youngest) in dealing with diseases which do not comprise clear diagnosis, favorable prognosis or healing treatment. In the mental health sphere, another study conducted with final-year medical students in South Africa evidenced difference in how medical students behave facing cases of suicidal behavior by overdose in people with a depressive disorder or chemical heroin addicts and schizophrenics. Regarding the first subjects, for whom there is a cure prospect, a lower degree of stigmatization was perceived compared to those with schizophrenia - considered an incurable condition - towards which the stigmatizing behavior remained[25]. Seemingly, deconstructing the catastrophic image related to the prognosis and treatment of mental disorders is a favorable path to broaden interest and reduce stigma. Including in Medical school more in-depth discussions about a doctor's role on individuals with serious, idiopathic and incurable diseases is another possibility, in order to demystify medicine as a "life-saver" and understand the importance of improving life quality through treatments in continuous care. One must also recognize other variables which are specifically involved in psychic ailment.

The social and historical construction on the stigmatization of madness is founded as early as in childhood[26] and remains permanently reinforced by the media throughout life[22, 27], which makes it a difficult concept to reverse. Such phenomenon makes the concepts of explicit and implicit stigma highly pertinent. Explicit stigma is expressed to the the individual with mental disorder; implicit stigma is defined as introspectively unidentifiable (or inaccurately identified) traces of past experiences that mediate favorable or unfavorable feelings towards an object[28]. Despite professionals usually presenting better communication and decreased explicit stigma after interventions to reduce stereotypes, implicit stigma remains strongly present[13]; as a result of it being socially unacceptable to openly express any prejudice, although such beliefs are still subjectively quite strong among health professionals. Possibly, the predominantly hospital-centric nature of the teaching and learning scenarios in Medical school has hindered the greater effectiveness of the programs in reducing stigma.

The interaction with more severe cases is related to the perpetuation and increase of stigma by health professionals since, by the very nature of these conditions, it implies greater commitment, worse prognosis, therapeutic response and perpetuation of severe symptoms[16,20]. Other environments of human care, such as community mental health care services, could favor the contact of students with the patients with great potential for optimal therapeutic response and full recovery of functionality, causing more favorable perception regarding patients and the potential of treatment. Despite the valuable information described in this study, some other limitations need to be taken into account: (1) the absence of a control group; (2) the stigma-assessing instrument utilizes a vignette describing a patient with schizophrenia, which refers to a condition of greater severity, thus, making it possible that the study has limitation in stigma generalization for patients with different mental disorders; (3) the absence of a validated tool for stigma assessment in Brazil - however, considering the chosen instrument has been used in previous large-scale studies, it was acknowledged as relevant; (4) some of the socio-demographic data which could hold some connexion were not available, such as: income, sexual orientation, and family relationships.

CONCLUSION

Certainly, the formulation of a more effective method to deconstruct the stigma by health professionals will require a detailed, stronger evaluation on the processes of stigma construction, how it is embedded in sociocultural contexts and how it affects the identity construction of the subjects and society as a whole[29]. Future studies ought to observe other potential variables to improve the effectiveness of intervention programs to reduce stigmatization towards people in psychic suffering.

CONFLIT OF INTEREST STATEMENT: The authors declare that there is no conflict of interest.

FUNDING STATEMENT: One of the graduation students received a scientific initiation scholarship, provided by the School of Health and Sciences (Escola Superior de Ciências da Saúde - ESCS).

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