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Does stigma concerning mental disorders differ through medical education?

A survey among medical students in Istanbul

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Abstract *Background* Stigma and discrimination toward mentally disabled persons might exist within the medical environment and may form a barrier for patients to receive appropriate care. The aim of this study is to determine the attitudes of medical students toward mentally disabled people and to understand the impact of schooling on attitude difference by evaluating second and sixth year medical students. *Method* The study was carried out among 452 students from all the three public medical schools located in Istanbul, Turkey. Attitudes were assessed through a Likert scale by presenting vignettes for depression and schizophrenia. *Results* In both men and women, the scores of last year students for depression and schizophrenia scales were better compared with those of the second graders, and the differences were statistically significant ($p < 0.05$). However, the proportion of students who did not perceive schizophrenia as “temporary” and “curable” and the perceived likelihood of dangerousness for schizophrenia were higher among the last year students compared with the second graders. *Conclusion* As a result of this study, it was determined that last year students had improved attitudes toward the mentally ill; however, they still had striking

stigmatizing opinions and judgments. The improvement in the attitude score between the second and the sixth graders is considered a result of the students’ contact and interaction with persons having mental disorders throughout their medical education. The challenge is to maintain a social environment that aims to reduce the distance between the patient and the medical staff through introducing a holistic approach in medical schools.

Key words stigma – depression – schizophrenia – medical students – medical education – social distance

Introduction

According to the World Health Report 2001, 450 million people worldwide suffer from mental or behavioral disorders [24]. Although today, mental disorders can be controlled effectively, only a minority of cases has access to medical treatment. One of the reasons for the low rate of service use is the stigma attached to mental disorders. Myths, misconceptions, and negative stereotypes about mental illness held by many people in the community form one of the main causes of stigma. Therefore, comprehensive approaches based on combating the negative stereotypes and misconceptions in the community are proposed as one of the strategies to overcome stigma and to increase the accessibility to mental health services.

Research has shown that stigma and discrimination related to mental disorders exist widely throughout the world. Various studies carried out in diverse cultures show a close link between mental disorders and perceived likelihood of dangerousness [12, 15, 18, 19, 21, 22].

However stigmatization of mental disorders is not merely limited to the people in the community. Health care professionals, even psychiatrists, can as well intensify stigmatization of mental disorders. Sartorius

The Turkish version of the scales is available on request from the corresponding author.

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[20] in his editorial underlines the fact that until recently psychiatrists in different countries requested longer holidays and higher salaries because they had to work with people who had mental disorders. The negative attitudes of the health care professionals toward the mentally ill need attention since this might form a barrier for patients to receive appropriate care both for their mental and physical complaints [8]. Stigma is also important in reducing medical professionals' seeking help and use of mental health services. A study showed that among the medical students having depression, only 22% were using mental health counseling services. While 30% of the students indicated that stigma was the barrier in using mental health services, 37 and 24% indicated that lack of confidentiality and fear of recording were the main reasons [13].

Therefore, it is important to overcome stigma throughout the school year within the social environment of medical schools. In medical schools, learning takes place in training and social interaction. Hence, medical education and environment must be structured to build a positive impact on the attitudes toward mental disorders. Medical students must not only gain knowledge and skills about recognition and management of mental problems, but they also should improve their attitudes and practices toward persons having mental disorders.

Thus, the purpose of this study is to assess current attitudes of medical students to form a positive environment for overcoming stigma in medical schools. The objective is to determine the attitudes of medical students toward mentally disabled people, as well as to understand the impact of schooling on attitude change by evaluating the second and sixth year medical students.

Subjects and methods

■ Participants

One of the objectives of the present study was to evaluate the impact of schooling on attitude difference. To achieve this purpose, we selected the second and the last grade medical students as the study population, because the main interactions with the mentally disabled persons take place in the beginning of the third year and the students go through the psychiatry shift on their fifth year. There are three public medical schools in Istanbul, all of which have approximately 6,500 medical students. In this study, a convenient sample of 452 students from the second and last years were interviewed from the three medical schools.

■ Instruments

The data were collected by a standardized questionnaire form that assessed the sociodemographic characteristics of the students, their knowledge, and their attitudes toward depression and schizophrenia. Two vignettes, one for depression and one for schizophrenia, were used to evaluate the attitudes toward the mentally disabled. Each vignette was constructed by applying the criteria proposed by DSM IV. After presenting each vignette, knowledge was determined by evaluating recognition of the disorder through open-ended ques-

tions, and the answers were coded as true and false. Recognition of depression for the first vignette and schizophrenia for the second vignette were recorded as the right answers.

A team consisting of two public health specialists and a psychologist constructed the depression and schizophrenia scales in the light of the existing literature. Attitudes for depression were firstly evaluated by determining the participants' approach toward the presented vignette as a third person. The participants' were also asked what their attitudes would be and how they would proceed if they had had a similar health problem just like the vignette. Differently, the attitudes toward schizophrenia were assessed only by evaluating the participants' approach to the vignette since schizophrenia was considered as a more sensitive health problem compared with depression. For that reason, the depression scale constituted 11 items, whereas the schizophrenia scale only seven items. Attitudes were evaluated by assessing perceived social distance, dangerousness, intention to disclose the condition, approval of proposed measures, and curability of these conditions. Attitudes were determined on a Likert scale composed of five items as totally agree, agree, not sure, disagree, and totally disagree.

■ Data collection

Before starting the survey, the questionnaire form was tested in a pilot study. A team of medical students visited the three medical schools during February 2003 and collected the data. The response rate was 82%.

■ Analysis

Internal consistency was assessed by the Cronbach α coefficient for both scales. The Cronbach α for depression and schizophrenia scales were 0.68 and 0.55, respectively. Depression and schizophrenia scores were weighted by using the regression coefficients for each item. Next, the scores were transformed to t scores. Higher scores indicated an improved attitude.

The data were analyzed using SPSS 11.0. Mann Whitney U test was used for the comparison of continuous variables since the data did not follow the Gaussian distribution. Chi-square and Fisher's Exact Tests were used for the comparison of percentages in the analyses. A p value of less than 0.05 was determined for statistical significance.

Results

Of the 452 students, 230 (50.9%) were from the second and 222 (49.1%) were from the sixth year. The socio-demographic characteristics of the students by school year are presented on Table 1. The basic characteristics of the second and sixth year students were similar except for gender. There were less female students in the sixth year compared with the second year (47.4 vs 32.4%), and the difference was statistically significant.

Sixth year students were able to recognize depression and schizophrenia better than the second year students. The second year students (17.8%) stated depression as the diagnosis for the first vignette. This rate was 86.5% for the sixth grade students, and the difference was statistically significant ($p < 0.001$). Again, schizophrenia was more recognized among the sixth grade students (86.0 vs 11.7%, $p < 0.001$).

Attitude scores for depression and schizophrenia among the second and sixth year students by gender are presented in Figs. 1 and 2. Sixth year students

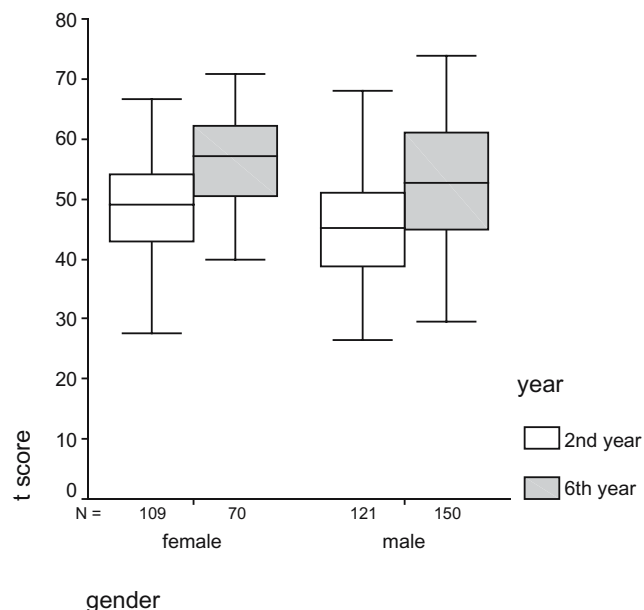
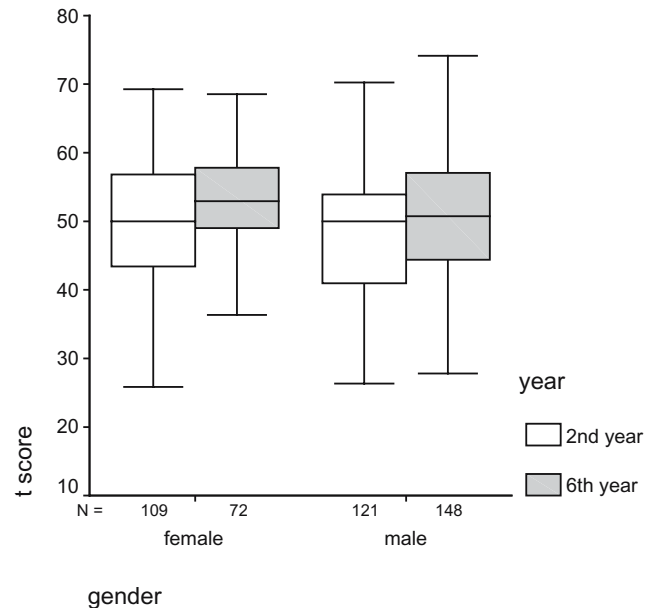
Table 1 Sociodemographic characteristics of medical students by school year

Characteristics	Second year <i>n</i> =230 Percent	Sixth year <i>n</i> =222 Percent	<i>p</i> Value
Gender			
Women (<i>n</i> =181)	47.4	32.4	0.001
Men (<i>n</i> =271)	52.6	67.6	
Medical school			
A (<i>n</i> =145)	28.3	36.0	>0.05
B (<i>n</i> =165)	39.1	33.8	
C (<i>n</i> =142)	32.6	30.2	
Father's education ^a			
Primary school or less (<i>n</i> =96)	22.2	20.4	>0.05
Junior or high school (<i>n</i> =135)	30.4	29.4	
College or higher (<i>n</i> =220)	47.4	50.2	
Mother's education			
Primary school or less (<i>n</i> =178)	43.5	35.1	>0.05
Junior or high school (<i>n</i> =178)	36.1	42.8	
College or higher (<i>n</i> =96)	20.4	22.1	

^aFather's education was missing in one of the questionnaires

scored better both for depression and schizophrenia compared with the second year students. The difference was statistically significant for men and women for both disorders (Table 2).

Concerning depression, the sixth year students had improved attitudes about visiting a physician, disclosing this condition, and using medications. Of the second and last year students, 11.3 and 7.7%, respectively, perceived this condition as dangerous ($p>0.05$). Ninety percent of the last year students perceived this condition as temporary and curable as compared with 75.7% of the second grades. The difference was statistically significant ($p<0.001$).

**Fig. 1** Depression score (t score) of second and sixth year students by gender**Fig. 2** Schizophrenia score (t score) of second and sixth year students by gender

Concerning schizophrenia, the sixth year students had improved attitudes about visiting a physician, disclosing this condition, and using medications than the second year students. However, the perceived likelihood of dangerousness was higher among the last year students. Of the second and last year students, 25.7 and 38.7%, respectively, perceived this condition as dangerous ($p=0.01$). In addition, 31.8% of the sixth year students disagreed that this situation was curable compared with 11.7% of the second graders. This difference was also statistically significant ($p<0.001$).

Discussion

One of the major limitations of this survey was related to the sampling method used. In all the three medical schools, the attendance to the theoretical lectures was not compulsory. While the practical sessions were obligatory, the students were allocated to many different clinics as small groups. Hence, it was not possible to utilize a probability sample and to interview the selected students. Yet, the survey covered a high number of students, which is nearly a quarter of all the second and sixth graders, and the response rate was high. In addition, while not representative, low scores on some of the items such as curability or dangerousness draw attention to the stigmatization problem within the medical environment. The other limitation was related to the nonstandardized scales used. In Turkey, a scale for evaluating attitudes toward schizophrenia and another one for depression are present. However, both of these scales consist 32 items each, making a total of 64. Hence, the researchers of the present study considered constructing a much shorter

Table 2 Depression and schizophrenia scores (*t* score) of second and sixth year students by gender

	Women		<i>p</i> Value	Men		<i>p</i> Value
	Second grade	Sixth grade		Second grade	Sixth grade	
Depression score						
Mean±SD	48.1±8.1	56.1±8.0	<0.001	45.3±10.0	52.4±10.0	<0.001
Median	49.1	57.2		45.1	52.7	
25th–75th Percentile	42.8–54.2	50.3–62.2		38.7–51.0	44.7–61.1	
Schizophrenia score						
Mean±SD	49.8±9.3	52.7±7.9	0.04	47.4±9.6	50.2±10.2	0.04
Median	50.1	52.9		50.0	50.7	
25th–75th Percentile	43.2–57.0	49.0–57.8		40.9–54.0	44.3–57.1	

scale which can conveniently be used by medical students in the light of the literature and the existing scales.

The researchers were assuming to achieve a similar internal consistency for the depression and schizophrenia scales since most of the questions and even the wording used in these scales were nearly the same. However, the internal consistency of the schizophrenia scale was lower than that of the depression scale. The attitudes toward schizophrenia could be more complex to determine because a person can have more divergent opinions on himself. There could be both positive and negative opinions toward people who have schizophrenia rather than a shaped attitude.

This study showed that sixth grade students had better attitudes toward the mentally ill compared with the second grade students for both depression and schizophrenia. While this was not a cohort study and does not show stigma reduction throughout the school years, such a significant attitude change might reflect the impact of getting into contact and interacting with mentally disabled persons. Throughout the medical education, students contact and interact with persons having mental disorders at different levels. According to the medical curriculum, the students go through a psychiatry shift during their fifth year in school. Hence, we expect that interaction with the mentally ill would influence the medical students positively. In a study carried out among medical students and physicians in a teaching hospital in London, it was demonstrated that while preclinic students had closer attitudes toward the general public, clinic students had improved closer attitudes toward physicians. There was a progressive change in attitudes throughout their medical career [17]. Another study in Turkey revealed improved attitudes toward schizophrenia among medical students compared with their nonmedical peers [1]. In addition, promising results are achieved through different educational interventions among students [9, 14, 16].

Studies carried out in different communities other than medical schools indicated that contact with people having mental disorders improved attitudes toward them [2, 3, 10, 11, 23]. A study conducted in Italy indicated that persons who had never met or talked

with persons having mental disorders had more stigmatizing attitudes [23]. It has been shown that familiarity with persons having mental disorders had positive impact on perceived dangerousness, social distance, and fear [2]. In addition, a research carried out in the last year students of a university in Turkey revealed that social contact with a psychiatric patient reduces negative opinions against mental disorders. The authors suggest that by getting in contact with the mentally ill, negative conceptions, which are shaped within the community, are desensitized [3].

Furthermore, observing and experiencing the benefits of treatment programs might act as one of the factors for stigma reduction. As students get aware of treatment programs and their effectiveness, they might show less discriminating behavior toward the mentally ill. A research carried out in Turkey indicated that participants who believed that mental disorders were treatable had more positive attitudes. It was indicated that with more awareness of treatment opportunities, the perceived dangerousness was reduced [4]. In this survey, we did not evaluate the students' awareness concerning the effectiveness of treatment strategies; nevertheless, the last year students are expected to be more knowledgeable about mental health treatment programs than the second graders.

In contrast to the overall improvement, perceived likelihood of dangerousness for schizophrenia and the proportion of students who believed that this disorder was not curable were higher among the last year students compared with the second graders. To understand this deterioration in some of the attitude items, we need to understand the influence of the medical curriculum together with the social environment. Most human behavior is learned through modeling within the social environment [7], and research pointed out that stigmatization exists in the hospital environment [6, 21]. In a qualitative study, persons who had schizophrenia indicated that they had experienced stigmatizing behavior from health care professionals. They stated that, especially, in the hospital, when they are referred to departments other than psychiatry, they were treated with disrespect; they had to wait for longer periods compared with other patients, and their physical complaints were not taken seriously [21]. In

this context, students are expected to observe and apply the stigmatizing attitudes and behaviors of their role models in the hospital environment.

A recent review, which examined the impact of contact on attitude change, points out to some studies that do not determine such a relationship [11]. A research from a medical school in Turkey compared the attitude changes of students who went through a 3-week psychiatric training program with students going through an ophthalmology shift and reported no significant difference [5]. It was suggested that contact during job training might not impact attitudes because of the nature of the interaction. This might be due to the fact that attitude change cannot be achieved rapidly, rather, it is a continuous process, which involves a change in the individual's belief model together with the alterations within the social environment.

Conclusion

Stigma increases the burden of mental disorders by forming a barrier for seeking treatment and continuation of therapy. Stigma does not exist only among selected groups, rather it is present at different degrees within the community and among the medical professionals. Medical education can both aggravate and reduce stigma. The knowledge achieved through lectures and written sources might serve as a mode of decreasing stigma. But at the same time, the students' lack of acquiring the appropriate problem solving skills for managing severe patients in the hospital might increase the stigma. In addition, some of the role models in the medical schools might deteriorate the students' attitudes toward the mentally disabled. The challenge is to encourage medical schools to serve as social environments for overcoming stigma and discrimination. The first step could be to shape a comprehensive approach within the medical environment, which recognizes the individual as a whole within its social, psychological, and cultural context. Any stigma-reducing program would be more effective if the entire hospital environment is included, not only the students.

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