ORIGINAL RESEARCH

A study of schizophrenia literacy among medical students- impact of educational intervention

Pandey Pulkit[1], Loya S Mitali[2], Dubey Vaibhav[3], Bharti Alok[4]

[1]PGMO Psychiatry, District Hospital, Ujjain, India
[2]Assistant Professor, [3]Professor and Head, Department of Psychiatry, Peoples Medical College & Research Centre, Bhopal, India
[4]Consultant Psychiatrist, Satna, India

Corresponding Author
Dr. Bharti Alok
Consultant Psychiatrist, Satna, India

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ABSTRACT

Background: A primary goal of medical education should be to create positive attitudes toward the mentally sick and psychiatry in order to ensure optimal care for the mentally ill. We aimed to find out efficacy of one-hour didactic lecture in improving attitude of medical students.

Methodology: This study was conducted as an intervention study on 363 medical students who attended the scheduled lecture on schizophrenia conducted by the Department of psychiatry at our hospital. Pretest attitude of medical student regarding schizophrenia was observed. One hour didactic lecture was conducted and students were asked to fill post test form.

Results: Initially, 363 students were enrolled in the study but only 314 students filled the post test form.Educational intervention was helpful in change in the attitude towards only one factor i.e. about 43.8% students will not feel ashamed if people knew someone in their family was diagnosed with schizophrenia whereas that was observed in 46.5% students ($p<0.05$). However, attitude remained almost same before and after intervention ($p>0.05$).

Conclusions: A small one-hour lecture maybe efficient in short term knowledge but is not enough to induce a change in the attitudes of medical students. Such lectures have to be conducted at regular intervals for a proper change in attitude and must include practical aspects of dealing with such patients. Such destigmatization will improve the quality of care received by the mentally ill tremendously. This non-stigmatizing approach will also improve the medical morbidities and mortalities among the schizophrenic patients.

Keywords: Schizophrenia, educational intervention, medical students, attitude.

INTRODUCTION

Mental health disorders are quite prominent in our society with an incidence of 2,443 DALYs per 100,000 population. the age adjusted suicide rate per 100,000 population is 21.1 and the economic loss due to mental health conditions, between 2012-2030, is estimated at 1.03 trillion US dollars (WHO). Among these disorders, schizophrenia is a prominent one, since in India, where about 1.1 billion population resides, the prevalence of schizophrenia is about 3/1000 individuals. About 3.3 million people are suffering from schizophrenia in India. About half of all lifetime mental disorders begin before the age of 14 years.[1] Prevalence of schizophrenia worldwide is approximately 0.23% in age between 13 and 18yrs.[2] People suffering from mental health disorders are still very hesitant to seek mental health services, due to the existence of stigma surrounding the mental health, even if there is a significant impairment in their daily life.[1] Stigma and discrimination that come as undesirable companions with the mental illnesses renders the all the mental health advances meaningless and the efforts unfruitful. These occur not only in the general public but also among medical professional and medical students. Attitude towards patients with mental illnesses e.g., schizophrenia, is one of the major factors that severely affect the lives of these patients and even may dictate their prognosis in many cases. This has been accepted internationally and the World Psychiatric Association (WPA) started the WPA Global Program against Stigma and Discrimination because of Schizophrenia.[4] One of the major predictors of the outcomes of schizophrenia is the duration of untreated psychosis (DUP) which refers to the time period between onset of psychotic symptoms and the start of pharmacological

treatment.[5] As the impact of stigma and DUP is quite severe on the outcomes of schizophrenia, we must find some way to reduce these as much as possible for managing this lifelong, untreatable but manageable disease. Since there are no conclusive screening tests, biological investigations, imaging techniques or advanced biological markers available which are pathognomonic for this diagnosis, the simplest possible way to do it is to educate the population most vulnerable to the disease. A positive educational and personal experience increases the likelihood of a positive student attitude toward psychiatry. A primary goal of medical education should be to create positive attitudes toward the mentally sick and psychiatry in order to ensure optimal care for the mentally ill.[6] Education will not only help people understand the disease but will reduce the overall stigma related to the disease and also will help people to identify the disease early. This will lead to a significant reduction in the DUP. In order to assess the attitude about mental illnesses in India, we must first assess the attitude of the medical students who are supposed to be the future medical force of the country and will see such cases firsthand in their practice. With the above background, we aimed to find out efficacy of one-hour didactic lecture in improving attitude of medical students.

METHODOLOGY

This study was conducted as an intervention study after obtaining ethical clearance from Institutional Ethical Committee on 363 medical students who attended the scheduled lecture on schizophrenia conducted by the Department of psychiatry, PCMS Bhopal, during the study period (November 2019-April 2021). All the medical students of different levels of studies and giving consent for the study were included. The sociodemographic data of study participants and Attitude towards schizophrenia was assessed using a semi-structured instrument, which was a self-report questionnaire. This instrument was an online form created on 'Google Forms'. Its link was shared to the students using a messaging app. It contained the following sections: A demographics form collected information on participant gender, age, and year of study. The instrument used in this study was previously used to assess participant beliefs and attitudes towards People with schizophrenia in various surveys addressing lay people, medical students and patients with schizophrenia in Canada and Greece. The first section referred to beliefs and attitudes, and encompassed 17 items addressing various beliefs and attitudes towards People with schizophrenia. Answers were rated on a 5-point Likert scale ranging from 'always' to 'never'. Some items were negatively phrased in order to avoid response bias. The internal consistency of the scale was found to be low (Cronbach a: 0.47–0.53). After completing the questionnaire, an interactive educational session on the schizophrenia of 60-minute duration was conducted and then a post-test was conducted following the session. And the new responses were recorded. The final section assessed the experience of students with patients of schizophrenia using five items. The answers were recorded in a yes /no pattern. The one-hour didactic lecture was conducted in the lecture hall. It was non-judgmental, unbiased and covered several aspects of schizophrenia. The lecturer simulated an interview between a psychiatrist, schizophrenic patient and his family members. No direct answers to the questions in the form were suggested in the lecture. The deductive reasoning of the students was assessed as most of the information regarding the symptomatology, possible causes, presentations, course, treatment and prognosis related to schizophrenia was discussed indirectly with the students.

STATISTICAL ANALYSIS

All the Data was compiled using MsExcel and analyzed using IBM SPSS (Statistical Package for the Social Sciences) software version 20. Categorical variables were expressed as frequency and percentage. Attitude scores were compared before and after educational intervention using chi-square test. P value less than 0.05 was considered statistically significant.

RESULTS

This study was conducted on a total of 363 medical students studying in various professional years.

Table 1: Distribution of study participants according to baseline variables (pretest and post test)

Baseline variables		Pretest (n=363)		Post test (n=314)	
		Frequency	Percentage	Frequency	Percentage
Age	≤ 20	97	26.7	80	25.5
	21 – 25	259	71.3	226	72.0
	>25	7	1.9	8	2.5
Gender	Male	184	50.7	156	49.7
	Female	179	49.3	158	50.3
Professional year	1st year	133	36.6	107	34.1
	2nd year	77	21.2	78	24.8
	3rd year	79	21.8	76	24.2
	Final year	74	20.4	53	16.9

Majority i.e. 71.3% cases belonged to 21 to 25 years of age and about 50.7% cases were males. About 36.6% students were from first professional year.Initially, 363 students were enrolled in the study but only 314 students filled the post test form.

Table 2: Comparison of attitude of students regarding schizophrenia before and after educational intervention

Attitude Questionnaire	Pre test			Post test			P value
	Yes	No	Not sure	Yes	No	Not sure	
Would you decide to live in house/building where a person with schizophrenia also resides?	188 (51.8)	63 (17.4)	112 (30.9)	186 (59.2)	45 (14.3)	83 (26.4)	0.150
Feel afraid to have a conversation with someone who has schizophrenia?	178 (49)	94 (25.9)	91 (25.1)	152 (48.4)	103 (32.8)	59 (18.8)	0.056
Be upset or disturbed about working with someone who has schizophrenia?	163 (44.9)	94 (25.9)	106 (29.2)	140 (44.6)	97 (30.9)	77 (24.5)	0.240
Feel upset or disturbed about rooming with someone who has schizophrenia?	190 (52.3)	77 (21.2)	96 (26.4)	154 (49.0)	84 (26.8)	76 (24.2)	0.239
Feel ashamed if people knew someone in your family was diagnosed with schizophrenia?	105 (28.9)	159 (43.8)	99 (27.3)	110 (35.0)	146 (46.5)	58 (18.5)	**0.020**
Feel annoyed or disturbed about sitting next to someone who has schizophrenia in the bus?	124 (34.2)	130 (35.8)	109 (30)	128 (40.8)	113 (36.0)	73 (23.2)	0.088
Be unable to maintain a friendship with someone who has schizophrenia?	151 (41.6)	99 (27.3)	113 (31.1)	137 (43.6)	90 (28.7)	87 (27.7)	0.623
Would marry someone who has schizophrenia?	107 (29.5)	142 (39.1)	114 (31.4)	80 (25.5)	133 (42.4)	101 (32.2)	0.487
Would lend anything of yours to someone with schizophrenia?	164 (45.2)	86 (23.7)	113 (31.1)	148 (47.1)	81 (25.8)	85 (27.1)	0.499
Would you accept a person with schizophrenia as your hairdresser?	136 (37.5)	113 (31.1)	114 (31.4)	124 (39.5)	100 (31.8)	90 (28.7)	0.731
Would you rent your house to someone with schizophrenia?	149 (41)	99 (27.3)	115 (31.7)	136 (43.3)	88 (28.0)	90 (28.7)	0.689
Would you hire someone with schizophrenia?	120 (33.1)	105 (28.9)	138 (38)	115 (36.6)	93 (29.6)	106 (33.8)	0.474
Would you decide to live in neighbourhood?	182 (50.1)	77 (21.2)	104 (28.7)	172 (54.8)	57 (18.2)	85 (27.1)	0.441
Would you start a friendship with someone with schizophrenia?	187 (51.5)	61 (16.8)	115 (31.7)	181 (57.6)	50 (15.9)	83 (26.4)	0.243

Educational intervention was helpful in change in the attitude towards only one factor i.e. about 43.8% students will not feel ashamed if people knew someone in their family was diagnosed with schizophrenia whereas that was observed in 46.5% students ($p<0.05$). However, attitude remained almost same before and after intervention ($p>0.05$).

DISCUSSIONS

Our study with the objectives of finding out the knowledge and attitude of medical students regarding schizophrenia and finding out the efficacy of one-hour didactic lecture in improving the knowledge and attitude of medical students, was done on 363 medical students. The posttest sample had 314 students, which means that 49 students did not fill the form after the lecture. The attitude assessment of these Students before the didactic lecture showed that more than 50% of the students would live in the neighbourhood of a person with schizophrenia (50.1%), or in the same house or building where a person with schizophrenia also resides (51.8%). Despite the fact that majority of the students say that people with schizophrenia are unpredictable (66.4%) and violent (50.1%), such responses might suggest social likability bias. In contrast to this finding, most of the students would feel upset/disturbed about having someone with schizophrenia as their roommate (52.3%). These findings were similar to the findings of study by Jyothi et al,[7] where people believed that it is a good idea to stay away from mentally affected people. According to the responses in our study, many of them would not feel ashamed if someone in their family was diagnosed with schizophrenia (43.8%) and would not be hesitant to start friendship with someone with schizophrenia (51.5%). However, the highest

negative response was elicited in the item where the subjects were asked if they would marry someone who has schizophrenia (39.1%). Still all the items elicited responses where more than 25% students were not sure what they would do if they were put in such a situation especially hiring someone who has schizophrenia. The responses to having someone with schizophrenia as their roommate and marrying someone who has schizophrenia was similar to this study conducted by Economou et al.[8] Singh et al in their study on stigma and its correlates in patients with schizophrenia found that 29% of the participants had internalized stigma and 67% patients experienced significant restrictions, which might suggest an actual high amount of stigmatizing attitude of people which the patient internalizes. This study also suggests that the patient himself/herself might feel inferior to others and embarrassed about their mental illness due to high component of alienation and thus not worthy of getting married. Also, due to high stereotype endorsement, independently incorporating in them the thought that mentally ill patients should not get married.[9] The impact of didactic lecture on the attitude of the medical students showed a significant change in two of the items only, while the changes in all other items were non-significant. On one hand they were more likely to not feel afraid to have a conversation with someone who has schizophrenia. On the other hand, some were more likely to feel ashamed if people knew that someone in their family was diagnosed with schizophrenia (28.9% pretest vs 35% posttest, P=0.020). Thus, there was a positive as well as a negative change in attitudes of the students following the intervention. This was in accordance with a study by Korschorke et al[10] where stigma experienced by PwS was assessed. It was found that providing' knowledge of schizophrenia' can influence the stigma process in both positive and negative ways. They recommend that in choosing anti-stigma messages to be communicated, educational approaches need to consider context-specific factors. The percentage of “not sure” responses declined just like the knowledge scale. In contrast to this study, positive changes in the attitude of the medical students towards psychiatrist, psychiatrists and mental illness following the psychiatric training in their 4th year were noticed immediately following the intervention conducted by Baxter.[11] Neutral to moderately positive changes in the attitudes of the students of first professional year and the third professional year in a long term study by Singer et al[12] was correlated with the study material provided to the students in the lecture as well as their clinical patient interactions. These results might suggest few of the reasons for the failure of the one-hour didactic lecture to impact the attitude of the students. Like the short duration of the lecture, theinefficiency of the content of the lecture to induce a change, no follow up lecture and no student patient interaction. These results might suggest few of the reasons for the failure of the one-hour didactic lecture to impact the attitude of the students. Like the short duration of the lecture, inefficiency of the content of the lecture to induce a change, no follow up lecture and no student patient interaction. A study by Baxter et al[11] concluded that the positive changes in the attitudes of medical students towards mental illnesses is temporary and diminishes over one year. Meise et al also supported this via a study conducted on 114 high school adolescents in the Netherlands, where only a group in which psychiatrist and an affected person interacted had significant reduction in fear of mentally ill.[13] Svensson et al[14] concluded in his studies that to minimize negative attitudes and biases between students towards people with schizophrenia, it is important that the learning involves personal contact with people with mental illness experiences.

CONCLUSIONS

A small one-hour lecture maybe efficient in short term knowledge but is not enough to induce a change in the attitudes of medical students. Such lectures have to be conducted at regular intervals for a proper change in attitude and must include practical aspects of dealing with such patients. Such destigmatization will improve the quality of care received by the mentally ill tremendously. Such a huge amount of support will also improve the prognosis of schizophrenia and its comorbidities independently. This non-stigmatizing approach will also improve the medical morbidities and mortalities among the schizophrenic patients.

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