

Brief Research Communication

**Opinions about people with schizophrenia among medical students. Findings from an Italian cross-sectional study**

MEDICAL STUDENTS' VIEW OF SCHIZOPHRENIA

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## **Opinions about people with schizophrenia among medical students. Findings from an Italian cross-sectional study**

### **Abstract**

**Background:** Accumulating evidence suggests that stigmatisation toward people with schizophrenia (PWS) is common among healthcare professionals and represents a major barrier to care.

**Aim:** The study aimed at comparing the opinions about PWS among Italian medical students at different stages of education.

**Methods:** Study participants were 234 medical students, attending either the first three-years pre-clinical or the following three-years clinical stage. Participants read an unlabelled case-vignette of schizophrenia and completed the Opinions on Mental Illness Questionnaire.

**Results:** A greater proportion of students at the clinical stage identified schizophrenia in the clinical description, compared to their younger colleagues. They were also more optimistic about the efficacy of drug and psychological treatments and sceptical regarding the possibility of PWS to establish their own family.

**Conclusion:** This study suggests that medical training may benefit from providing information about recovery from schizophrenia and contact with PWS in the community.

**Key-words:** medical students, recovery, schizophrenia, stereotypes, stigma

## **Background**

Accumulating evidence has suggested that stigmatisation toward people with schizophrenia (PWS) is common among healthcare professionals <sup>[1-3]</sup>. According to a broad international survey, at least 15% of PWS has experienced some discriminations in healthcare contexts <sup>[4]</sup>. Studies on primary care professionals found that stereotypes about PWS were related to low willingness to deal with the patients' needs, to involve them in their clinical decisions, and to refer them for specialist care when appropriate <sup>[5-7]</sup>. This suggests that it is of major importance to address mental health stigma among future medical professionals.

Studies reported that medical students often expressed a stereotyped view of severe mental disorders <sup>[8,9]</sup>. Common stereotypes included the idea that treatments for schizophrenia had limited efficacy <sup>[10-12]</sup> and that PWS were not able to achieve a fulfilling, meaningful life in the community (e.g., to find a job or to get married) <sup>[13,14]</sup>. Although psychiatry training during the medical education is essential to provide correct information about the course and treatment of schizophrenia, some cross-sectional studies found that stereotypes towards PWS may be still present at the final, clinical stage of medical degree <sup>[10, 12, 15]</sup>. It suggests that an educational approach might be not sufficient to modify stigmatising beliefs in this population <sup>[16]</sup>. To date, only a few studies have investigated opinion toward PWS among Italian medical students, and none of them in Sicily, Southern Italy.

## **Aim**

The study was a cross-sectional survey on a convenience sample of Italian medical students aimed at comparing the view of schizophrenia across different stages of medical education (i.e. the first three-year pre-clinical stage versus the final three-year clinical stage). We aimed at investigating: a) students' capacity to recognise schizophrenia in an unlabelled case-vignette and to identify the most appropriate referrals (e.g., psychiatrist or psychologist); b) students' opinions about the effectiveness of drug and psychosocial treatments; and c) students' opinions on the outcome and psychosocial adjustment of PWS. We hypothesised that, compared with their younger colleagues, students

attending the final clinical stage would be: a) more able to identify schizophrenia in an unlabelled case-vignette; b) more positive towards treatments' efficacy; c) more sceptical about the outcome and the psychosocial adjustment of PWS.

## **Methods**

Study participants were 234 medical students attending either their pre-clinical (i.e. the third year, n = 98) or the clinical stage (i.e., the fifth/sixth year, n = 136) of the School of Medicine at the University of Palermo, Palermo (Italy). The duration of the Italian medical school is six years, with a three-year pre-clinical stage and a following three-year clinical stage. Theoretical and practical lessons of psychiatry are provided during the fifth year. In this sample, fifth- and sixth-year students did not differ in gender, family social class, and capacity to identify schizophrenia in an unlabelled case-vignette, therefore were grouped.

After consenting to the study, participants were asked to read an unlabelled case-vignette of schizophrenia and to complete a short demographic questionnaire and the Opinions on Mental Illness Questionnaire <sup>[17]</sup>. For this study, only items related to treatment, outcome, and affective and employment limitations were analyzed. Confidentiality was guaranteed using anonymous questionnaires. The study was approved by the Ethical Committee of the University Hospital "P. Giaccone" of Palermo (Italy). Associations between study groups, demographic characteristics, and opinions towards PWS were assessed using Students't test and  $\chi^2$  test. Data were analysed using STATA v. 12 IC.

## **Results**

Study participants were equally distributed in terms of gender (male: 110, 47.0%). They were mostly full-time students (171, 73.4%), living with their parents (225, 96.1%), and belonging either to the upper (98, 42.6%) or the middle social class (68, 37.8%). Students attending the pre-clinical and the

clinical stage were similar in terms of demographic characteristics, except age (mean, M 21.71 (standard deviation, SD = 1.12) vs. M 24.15 (SD 2.26), t-test = -9.808,  $p < 0.001$ ).

A greater proportion of the students in the final stage of education identified schizophrenia in an unlabelled case-vignette (56, 60.9% vs. 111, 81.6%;  $\chi^2 = 12.055$ ,  $p = 0.001$ ). A similar percentage of third year and fifth/sixth year students thought that persons with the disorder described in the case-vignette should be referred to a psychiatrist (90 (93.75 %) vs. 134 (98.53 %); Fisher's exact test  $p = 0.068$ ) or to a psychologist (49 (51.04 %) vs. 79 (58.09%);  $\chi^2 = 1.130$ ,  $p = 0.288$ ), and less frequently to a general practitioner (12 (12.50 %) vs. 20 (14.71 %);  $\chi^2 = 0.230$ ,  $p = 0.631$ ). Moreover, fewer fifth and sixth year students would have addressed these people to a neurologist (47 (49.47%) vs. 17 (12.50%);  $\chi^2 = 38.174$ ,  $p < 0.001$ ).

Compared to their pre-clinical colleagues, a greater proportion of the students attending the clinical-stage thought that people affected with schizophrenia would be well again, and they were confident in the usefulness of drug, psychological, and rehabilitative treatments (Table 1). However, they were more pessimistic regarding the possibility of these patients to find a stable relationship, establish their own family, and, only at trend level ( $p = 0.055$ ), to work competently (Table 2).

## **Discussion and conclusion**

Consistently with the study hypothesis, we found that students in the final stage of medical studies showed greater capacity to recognise schizophrenia in an unlabelled case-vignette and to identify the most appropriate healthcare professionals. Moreover, these students expressed greater confidence in the effectiveness of drug, psychological, and rehabilitation treatments. This is in line with previous studies reporting an improved view of drug treatment among students in the final stage of studies [10, 12, 14] and suggests that these students also became more aware of integrated psychological and rehabilitation treatments.

We found that a larger proportion of fifth and sixth-year students partially agree with the idea that PWS will be well again, compared to the smaller proportion of third-year students. On the other hand,

fifth and sixth-year students were more sceptical regarding the possibility of PWS to establish their own family and to get a job. These findings suggest that, although psychiatry training may be effective in contrasting the idea that schizophrenia is an untreatable disorder, this may be less successful in addressing students' prejudices towards the idea that schizophrenia is compatible with a good functional outcome. This preconception may be related to the so-called "clinician bias" [18]. That means, during the psychiatry internship, medical students were more in contact with the most impaired PWS who usually attend in-patients and out-patients services, but had less contact with those who were able to live independently. This practice could have reinforced their original stereotypes on social role limitations imposed by schizophrenia [11, 15]. Indeed, studies on medical students and medical professionals found that greater familiarity with people affected with severe mental disorders was related to lower stigmatising attitudes [19, 20]. Therefore, improving medical students' view of PWS should include more extensive contact with PWS in the community, in order to provide them with a more balanced view of the course of the disorder and the idea of "recovery as a process".

The findings of this study should be interpreted in light of several limitations: 1) the cross-sectional study design prevented any inference about the effect of psychiatry training on students' opinions; 2) the lack of comparison with other less stigmatised mental disorder, such as depression, did not allow to investigate the specificity of students' opinions towards PWS; 3) the use of a convenience sample might have reduced the representativeness of the sample; 4) the use of anonymous questionnaires might not have entirely ruled-out the wish of the participants to provide a more desirable image of their opinions, thus leading to underestimate students' negative stereotypes. This study suggests that psychiatry training may take advantage of providing information about functional recovery from schizophrenia as well as about mental health treatments for PWS aimed at supporting an independent life, such as psychosocial rehabilitation interventions, supportive employment, and peer support. Improving students' attitudes towards PWS would further benefit from more extensive contact with

PWS who conduct a meaningful life in the community and successfully cope with symptoms, disabilities, and stigma related to the disorder.

### **Sources of support**

None

### **Conflict of interest**

None

### **References**

1. Henderson C, Evans-Lacko S, Thornicroft G. Mental illness stigma, help seeking, and public health programs. *Am J Public Health* 2013;103:777–780.
2. Thornicroft G, Rose D, Kassam A. Discrimination in health care against people with mental illness. *Int Rev Psychiatry* 2007;19:113–122.
3. Shrivastava A, Bureau Y, Rewari N, Johnston M. Clinical risk of stigma and discrimination of mental illnesses: Need for objective assessment and quantification. *Indian J Psychiatry* 2013; 55:178–182.
4. Thornicroft G, Brohan E, Rose D, Sartorius N, Leese M, INDIGO Study Group. Global pattern of experienced and anticipated discrimination against people with schizophrenia: a cross-sectional survey. *Lancet* 2009; 373:408–415.
5. Corrigan PW, Mittal D, Reaves CM, Haynes TF, Han X, Morris S, Sullivan G. Mental health stigma and primary health care decisions. *Psychiatry Res* 2014; 218:35–38.
6. Lam TP, Lam KF, Lam EWW, Ku YS. Attitudes of primary care physicians towards patients with mental illness in Hong Kong. *Asia Pac Psychiatry* 2013; 5:E19-28.
7. Jorm AF, Korten AE, Jacomb PA, Christensen H, Henderson S. Attitudes towards people with a mental disorder: A survey of the Australian public and health professionals. *Aust N Z*

- J Psychiatry 1999; 33:77–83.
8. Mukherjee R, Fialho A, Wijetunge A, Checinski K, Surgenor T. The stigmatisation of psychiatric illness: The attitudes of medical students and doctors in a London teaching hospital. *Psychiatr Bull* 2002; 26:178–181.
  9. Aruna G, Mittal S, Yadiyal MB, Acharya C, Acharya S, Uppulari C. Perception, knowledge, and attitude toward mental disorders and psychiatry among medical undergraduates in Karnataka: A cross-sectional study. *Indian J Psychiatry* 2016; 58:70–76.
  10. Ay P, Save D, Fidanoglu O. Does stigma concerning mental disorders differ through medical education? A survey among medical students in Istanbul. *Soc Psychiatry Psychiatr Epidemiol* 2006; 41:63–67.
  11. Economou M, Peppou LE, Louki E, Stefanis CN. Medical students' beliefs and attitudes towards schizophrenia before and after undergraduate psychiatric training in Greece. *Psychiatry Clin Neurosci* 2012; 66:17–25.
  12. Magliano L, Read J, Sagliocchi A, Patalano M, Oliviero N. Effect of diagnostic labeling and causal explanations on medical students' views about treatments for psychosis and the need to share information with service users. *Psychiatry Res* 2013; 210:402–407.
  13. Hutchinson G, Neehall JE, Simeon DT, Littlewood R. Perceptions about mental illness among pre-clinical medical students in Trinidad & Tobago. *West Indian Med J* 1999; 48:81–84.
  14. Esen Danacı A, Balıkçı K, Aydın O, Cengisiz C, Uykur AB, Bildik T, et al. The Effect of Medical Education on Attitudes Towards Schizophrenia: A Five-Year follow-Up Study. *Turk Psikiyatri Derg* 2016; 27:176–184.
  15. Magliano L, Read J, Sagliocchi A, Patalano M, D'Ambrosio A, Oliviero N. Differences in views of schizophrenia during medical education: A comparative study of 1st versus 5th-6th year Italian medical students. *Soc Psychiatry Psychiatr Epidemiol* 2013; 48:1647–1655.
  16. Thornicroft G, Mehta N, Clement S, Evans-Lacko S, Doherty M, Rose D, et al. Evidence for



effective interventions to reduce mental-health-related stigma and discrimination. *Lancet* 2016; 387:1123–1132.

17. Magliano L, Fiorillo A, De Rosa C, Malangone C, Maj M. Beliefs about schizophrenia in Italy: A comparative nationwide survey of the general public, mental health professionals, and patients' relatives. *Can J Psychiatry* 2004; 49:322–330.
18. Cohen P, Cohen J. The Clinician's Illusion. *Arch Gen Psychiatry* 1984; 41:1178.
19. Arvaniti A, Samakouri M, Kalamara E, Bochtsou V, Bikos C, Livaditis M. Health service staff's attitudes towards patients with mental illness. *Soc Psychiatry Psychiatr Epidemiol* 2009; 44:658–665.
20. Eksteen H-C, Becker PJ, Lippi G. Stigmatization towards the mentally ill: Perceptions of psychiatrists, pre-clinical and post-clinical rotation medical students. *Int J Soc Psychiatry* 2017; 63:782–791.

**Table 1: Students' view of treatment and outcome of people with schizophrenia**

	Completely true n (%)	Partially true n (%)	Not true n (%)	Unsure n (%)	Fisher's exact test's p
<b>Medications are useful in the treatment of*</b>					<0.001
Pre-clinical students	30 (30.61)	60 (61.22)	1(1.02)	7 (7.14)	
Clinical students	88 (64.71)	45 (33.09)	1(0.74)	2 (1.47)	
<b>Psychological interventions are useful in the treatment*</b>					<0.001
Pre-clinical students	32 (32.99)	49 (50.52)	6 (6.19)	10 (10.31)	
Clinical students	75 (55.15)	59 (43.38)	2 (1.47)	0	
<b>Family support is useful in the treatment of*</b>					0.636
Pre-clinical students	87 (88.78)	10 (10.20)	0	1 (1.02)	
Clinical students	123 (90.44)	13 (9.56)	0	0	
<b>Rehabilitative interventions are useful in the treatment of*</b>					0.024
Pre-clinical students	62 (63.92)	28 (28.87)	2 (2.06)	5 (5.15)	
Clinical students	99 (72.79)	36 (26.47)	1 (0.74)	0	
<b>*will be well again</b>					0.033
Pre-clinical students	13 (13.27)	67 (68.37)	4 (4.08)	14 (14.29)	
Clinical students	17 (12.59)	107 (79.26)	6 (4.44)	5 (3.70)	

\* Persons with a condition like that described in the case-vignette

**Table 2: Students' view of affective and employment problems of people schizophrenia**

	<b>Completely true</b> n (%)	<b>Partially true</b> n (%)	<b>Not true</b> n (%)	<b>Unsure</b> n (%)	$\chi^2$ / <b>Fisher's exact test (p)</b>
<b>Family is a burden for *</b>					(0.025)
Pre-clinical students	1 (1.05)	20 (21.05)	44 (46.32)	30 (31.58)	
Clinical students	5 (3.70)	50 (37.04)	50 (37.04)	30 (22.22)	
<b>It is difficult for * to have a love relationship</b>					16.435 (0.001)
Pre-clinical students	13 (13.40)	52 (53.61)	6 (6.19)	26 (26.80)	
Clinical students	46 (34.07)	62 (45.93)	10 (7.41)	17 (12.59)	
<b>It is difficult for * to get married or to live with a partner</b>					7.054 (0.070)
Pre-clinical students	19 (19.59)	43 (44.33)	7 (7.22)	28 (28.87)	
Clinical students	46 (33.82)	55 (40.44)	10 (7.35)	25 (18.38)	
<b>* are able to take care of their own children</b>					(0.022)
Pre-clinical students	15 (15.46)	31 (31.96)	5 (5.15)	46 (47.42)	
Clinical students	33 (24.44)	58 (42.96)	5 (3.70)	39 (28.89)	
<b>* are able to work competently</b>					(0.055)
Pre-clinical students	24 (24.74)	39 (40.21)	5 (5.15)	29 (29.90)	
Clinical students	34 (25.19)	68 (50.37)	12 (8.89)	21 (15.56)	

\* Persons with a condition like that described in the case-vignette