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The Influence of Psychiatry Course and Work Experience in Psychiatry on Attitudes Towards Mental Disorder

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【Abstract】 **Objective:** To explore the effects of a formal psychiatry course and clinical experience in psychiatry on stigmatized attitudes to mental disorder. **Methods:** A questionnaire addressing attitudes towards people with mental illness and its causes, was used to compare attitudes of medical students who completed a course in psychiatry(N=161) to those who did not(N=156) and to practicing psychiatrists(N=120). **Results:** Medical students who had not taken the course showed higher levels of stigma and negative attitudes towards socializing with persons with mental disorder compared to both students who had taken the course and practicing psychiatrists. Scores of medical students who completed the course were not significantly different from those of practicing psychiatrists across four factors. No significant correlations were observed between willingness to socialize and beliefs about etiology. **Conclusion:** Structured teaching may help to foster more positive attitudes and less stigma toward persons with mental disorder early in their training, while subsequent clinical experience seems to have less effect.However, simply promoting biopsychosocial understanding of etiology seems unrelated with reducing stigma.

【Key words】 Stigma; Psychiatry course; Work experience; Medical students; Practicing psychiatrists

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精神病学课程及精神科工作经历对精神疾病态度的影响

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【摘要】 **目的**:探索针对医学生的精神病学课程及精神科工作经历在改善歧视态度中发挥的作用。**方法**:采用问卷形式对156名没上过精神病学课程的医学生,161名已完成精神病学课程的医学生及120名精神科医生进行调查,通过协方差分析比较三组人群从四个因素方面对精神疾病的态度。**结果**:与已完成精神病学课程的医学生及精神科医生相比,未上过精神病学课程的医学生在与精神病人的社交意愿方面表现出更多的歧视和更负面的态度。已完成精神病学课程的大学生与精神科医生的态度不存在显著性的差异。**结论**:开展规范的精神病学课程有助于提高医学生对精神疾病的病因认识、培养对精神病人积极的态度以及降低歧视。

【关键词】 病耻感; 精神病学课程; 工作经历; 医学生; 精神科医生

1 Introduction

In recent decades scientific understanding and public concern about people with mental disorders has increased substantially as has acceptance of psychiatric treatment[1]. However, stigma towards people with mental disorder still exists widely among employers and supervisors at work, among family members, in the general community[2,3], and even among health care providers and psychiatrists[4-6], whose attitudes may directly affect the diagnosis and care of psychiatric patients.

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Public stigma toward people with mental disorder impedes the effectiveness of treatment of these illnesses and reduces the quality of life for people with mental disorder[7]. In addition, stigma towards mental disorder may have adverse impacts on the morale of mental health workers[8], which may reduce the interest of medical students in entering the field of psychiatry, and reduce public support for the development of mental health services[9,10].

Mental disorders were once widely considered to be divine punishment or possession by evil spirits and some people still hold the view that it is a sign of weakness or escaping from responsibility. In addition, people with mental disorder are thought to be dangerous and unpredictable[11,12,4]. This lack of understanding remains one of the important components of stigma[13].

It has long been unclear as to what interventions can be most effective in reducing stigma. While some studies have shown increased knowledge could improve attitudes towards psychiatry and people with mental disorder[14,15], others have not[16-18]. In many studies direct contact with patients has been thought to be the most effective approach to lessening stigma[19-22]. Nevertheless, here too, other studies have found that personal and work experience with psychiatric patients has not reduced stigmatizing attitudes[23,24]. More specifically, some studies have found that, unexpectedly, medical student internship experiences in psychiatry are not associated with improved attitudes towards people with mental disorder[25].

However, few studies on the effects of interventions to address stigma have been conducted in China, the most populous country in the world and one in which mental healthcare is expanding rapidly. In this study we use a questionnaire designed to assess attitudes towards people with mental disorder, including both comfort socializing with people with mental disorder and beliefs about the causes and proper treatment of mental illness, to study students in medical school and professionals at four mental hospitals in Hunan Province, China. The medical school, based in Changsha, the capital of Hunan province, offers a formal course in psychiatry(48 hours), which includes a 32-hour basic didactic introduction and 16-hour of hands-on clinical training. At the time of the survey, senior students had received the full psychiatry course, while junior students had not.

Our study aims at investigating the attitudes towards people with mental disorder among medical students early and late in their training and among practicing psychiatrists, and exploring differences in attitudes among students and graduates at different levels of training and experience, as well as the association between attitudes towards socializing with people with mental illness, representing stigma most directly, and beliefs about the etiology of these disorders.

2 Method

2.1 Sample

This study surveyed a small sample of junior and senior medical students at Xiangya Medical College in Changsha, in Central South University and psychiatrists in four mental hospitals of Hunan Province. The study was approved by the ethics committee of the Second Xiangya Hospital of Central South University.

2.2 Instruments

The questionnaire[26,18] was designed to explore attitudes toward mental disorder and was derived from three previously developed attitude scales, the Fear and Behavioral Intentions toward the mentally ill(FABI) questionnaire[27], the Community Attitudes to Mental Illness(CAMI) scale[28], and a modified version of a questionnaire developed for the World Psychiatric Association Program to Reduce Stigma and Discrimination because of Schizophrenia(WPA)[29]. It consists of four main domains: ①the cause of mental illness based on questions of the WPA, ②possible treatment options based on the CAMI, ③social distance, with questions derived from the FABI, and finally, ④social acceptance and social stigma as assessed by a series of questions based on the CAMI. The questionnaire was translated into Chinese by a bilingual psychiatrist and reviewed by another bilingual psychiatrist.

The final version consisted of 43 dichotomous questions with both positive and negative wordings, for example, "In interacting with someone with mental illness I would be afraid to have a conversation" and "In interacting with someone with mental illness I could maintain a friendship."

In addition, the survey included seven demograph-

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ic variables, including age(in years), gender(1=male, 2=female), marital status(1=not married, 2=married), years of education, medical occupation(student=1, psychiatrist=2, nurse=3), area where born and area where currently residing(1=urban, 2=semi-urban, 3=rural).

2.3 Analyses

For the 43 dichotomous questions, responses reflected negative attitudes towards mental disorder were coded as "0", and responses reflected positive attitudes were coded as "1". So when responses were compiled and averaged, higher scores indicated more positive, progressive, or more scientific attitudes toward mental disorder.

The whole sample was randomly divided in half. Exploratory varimax factor analysis with orthogonal matrix rotation was conducted in one half to identify latent relationship between the variables. Principal component extraction method resulted in identification of four factors and retention of 30 items having factor weights greater than 0.4. Cronbach's alpha was used to evaluate the internal consistency of the factors. The factorial validity was assessed by confirmatory factor analysis (CFA) in the whole sample, using the qui-square statistic over degrees of freedom(χ^2/df), the comparative fit index(CFI), the goodness of fit index(GFI), and the root mean square error of approximation (RMSEA), as the goodness of fit index. And then average score of each item and factor in the whole sample was calculated.

Descriptive statistics were performed for demographic characteristics of three groups. Chi-square test and analysis of variance were used to identify any differences among the three groups. Analysis of covariance (ANCOVA) was used to compare scores on the four attitudinal factors among three groups, and then post-hoc tests between pairs of groups were conducted. Demographic variables in which there were significant differences among three groups were used as control variables. Finally, partial correlation analysis was conducted between the three groups on the four factors, controlling for demographic variables(age, gender, marital status, years of education, area where born and area where currently residing).

We chose two-tailed p-value, and considered p-value less than 0.05 to be statistically significant. Analyses were conducted using IBM SPSS Statistics version 19.0 and AMOS version 17.0.

3 Results

3.1 Distribution and average scores of 30 items in four factors

Factor analysis identified four factors based on 30 of the original 43 questions, each with an item weight greater than 0.4. The cumulative rate of variance was 56.932%. The four factors were interpreted as representing ①Personal willingness to socialize with people with mental disorder, ②Rejecting supernatural explanations of mental disorder, ③Agreeing with a biopsychosocial view of the etiology of mental disorder, ④Tolerance of mental disorder and people with mental disorder.

Cronbach's alpha showed high internal consistency for factors 1, 2, 3 and 4(alpha 0.843, 0.858, 0.741 and 0.704, respectively). Average scores of four factors in the whole sample were respectively 0.63, 0.82, 0.95 and 0.96. The results of CFA in the whole sample indicated good fit of four factorial structure(χ^2/df=2.090, GFI=0.867, CFI=0.886, RMSEA=0.050).

3.2 Demographic characteristics of three groups

A total of 156 medical students who had not received a formal psychiatry course, 161 medical students who had received such a course, and 120 psychiatrists completed the questionnaire(Table 1). There were significant overall differences in age, marital status, years of education, area where born and the area where they were currently residing. In comparison between pairs of groups practicing psychiatrists were older and more likely to be married and were more educated than both medical students who had received the course and those who had not. In addition, more practicing psychiatrists were born in rural areas and semi-urban areas and were currently living in urban areas (P<0.05). Medical students who had received the course were older and more educated than those who had not, while more medical students who had received the course were born and residing in semi-urban areas (P<0.05).

3.3 Comparison among three groups on four attitudinal factors

ANCOVA was used to compare the three groups on each factor, controlling for age, marital status, years

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of education, area where born and area where they were currently residing. All three groups scored relatively high on biopsychosocial factor(mean=0.95, sd=0.139) and the tolerance factor(mean=0.96, sd=0.117), and no significant differences were shown between the groups on these factors(Table 2). On the socializing factor all three groups scored fairly low(mean=0.63, sd=0.261), with psychiatrists higher than medical students who had received the course(5.9% percent difference), and medical students who had received the course scored significantly higher than those who had not (6.4% percent difference). On the non-belief in supernatural explanations factor(mean=0.82,sd=0.322), medical students who had received the course scored highest, and medical students who had not scored lowest.

Post Hoc paired comparisons were conducted on the socializing factor and the supernatural factor. On the socializing factor, psychiatrists and medical students who had received the psychiatric course scored significantly higher than medical students who had not received it, while there was no significant difference between practicing psychiatrists and medical students who had received the course. On the supernatural factor, there were no significant differences between psychiatrists and either of the two groups of medical students. However, medical students who had received the course scored significantly higher than those who had not.

Table 1 Comparison of demographic characteristics of three groups

	Students not Exposed[n=156 (%)]	Students Exposed[n=161 (%)]	Psychiatrists[n=120 (%)]	*P*
Female	103 (66.0)	90 (55.9)	66 (55.0)	0.081
Married	0 (0.00)	1 (0.6)	74 (61.7)	0.000
Mean age (range)	20.9 (19-23)	22.3 (19-25)	30.8 (11-52)	0.000
Born urban	82 (52.6)	71 (44.4)	28 (23.3)	
Born semi-urban	14 (9.0)	36 (22.5)	30 (25.0)	0.000
Born rural	60 (38.5)	53 (33.1)	62 (51.7)	
Live urban	103 (66.0)	93 (58.1)	94 (78.3)	
Live semi-urban	17 (10.9)	34 (21.2)	20 (16.7)	0.000
Live rural	36 (23.1)	33 (20.6)	6 (5.0)	
Mean years of education	15.26	16.22	17.73	0.000

Note: Students not Exposed, medical students who had not received a formal psychiatry course; Students Exposed, medical students who had received a formal psychiatry course.

Table 2 Comparison of the attitudes of three groups

Factors (means)	Students not Exposed	Students Exposed	Psychiatrists	*F*	*P*			
					Total	NE-E	NE-P	E-P
1. Socializing	0.59	0.66	0.72	3.300	0.038	0.040	0.024	0.235
2. Non-supernatural	0.73	0.83	0.80	3.310	0.037	0.011	0.322	0.601
3. Biopsychosocial	0.95	0.96	0.96	0.139	0.870	-	-	-
4. Tolerance	0.95	0.95	0.98	1.114	0.329	-	-	-

Note: Total, among three groups; NE-E, between medical students who had not received the formal psychiatry course and those who had; NE-P, between medical students who had not received the formal psychiatry course and practicing psychiatrists; E-P, between medical students who had received the formal psychiatry course and practicing psychiatrists.

3.4 Correlations between four factors

Correlation analysis of the four factors showed positive and significant correlations between tolerance factor and both the socializing factor and the biopsychosocial factor(Table 3). However, no significant correlations were shown between supernatural factor and any of the other three factors or between the biopsychosocial factor and the socializing factor.

Table 3 Correlations between four factors

Factors	Factor 1 Socializing	Factor 2 Non-supernatural	Factor 3 Biopsychosocial	Factor 4 Tolerant
Factor 1	1			
Factor 2	0.023	1		
Factor 3	0.083	-0.058	1	
Factor 4	0.174*	0.047	0.231*	1

Note: Factor 1. Personal willingness to socialize with people with mental disorder; Factor 2. Rejecting supernatural explanations of mental disorder; Factor 3. Agreeing with a biopsychosocial view of the etiology of mental disorder; Factor 4. Tolerance of mental disorder and people with mental disorder. *P=0.000.

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4 Discussion

In our sample from Hunan Province China, most medical students and psychiatrists showed positive attitudes on rejecting supernatural causes of mental illness (82%), endorsing biopsychosocial causes of mental disorder(95%), and tolerance of mental disorder and people with mental disorder(96%). However, our sample expressed moderately negative responses to personal willingness to socialize with people with mental disorder(63%). Although both medical students who had completed their medical school course and practicing psychiatrists who had completed their training, had better understanding of mental disorder, and higher tolerance of psychiatric patients, they still expressed fears about social contacts with the patients in daily life[21], especially in intimate personal and working relationships[4].

This study compared attitudes toward people with mental disorder between medical students who had received a psychiatry course and those who had not. Both groups expressed relatively positive attitudes toward the biopsychosocial view of the causes of mental disorder and reported tolerance of mental disorder and people with mental disorder, which may be related to their medical education and/or selection of psychiatry as a professional. However, medical students who had attended the psychiatry course more strongly rejected supernatural causes of mental disorder than those who had not. This suggests that a formal course in psychiatry may play an important part in rejecting supernatural explanations of mental disorder. For socializing with people with mental disorder, medical students who had taken the psychiatry course also showed a more positive attitude, which is consistent with previous studies on brief education and clinical training in psychiatry[26, 30, 31]. But some other research has found that further educational interventions and clerkship experiences did not reduce stigma[17, 24]. These differences in findings may have resulted from different content and methods of teaching as well as the different environments in which educational and clinical experiences took place. However, about a third of the responses of medical students who had received the psychiatry course still expressed negative responses to socializing with people with mental disorder, suggesting that the formal psychiatry education still played a limited role in promoting acceptance of people with mental disorder, and further de-stigmatization efforts are needed. These differences between medical students who had not taken a course in psychiatry and those who had are similar to the findings from a recent study from Ibadan, Nigeria, that also found medical student who had completed their basic course in psychiatry expressed less stigmatizing attitudes among students who had not completed the course[32].

Attitudes toward people with mental disorder were also compared between practicing psychiatrists and each of the two groups of medical students. Psychiatrists scored significantly higher than medical students who had not taken course on socializing with people with mental disorder, although still relatively low at 0.72. However, from this we cannot judge whether their higher scores are a product of additional clinical experience, or whether they reflect self-selection to specialize in Psychiatry which may be a confounding factor. Of course these psychiatrists had also received didactic psychiatry courses similar to those to which the students were exposed during their training. Practicing psychiatrists held similar attitudes to medical students who had taken the course. The finding argues against the conclusion of previous studies that clinical contact has a greater de-stigmatizing effect than didactic education[33, 20]. Although the lack of significant differences may be explained by the small sample size(a Type II error), clinical experience in psychiatry may actually generate negative attitudes among some psychiatrists. On one hand, there are only 1.24 psychiatrists per 100, 000 inhabitants in China[34]. The acute shortage of psychiatrists results in the large caseloads which may in itself increase stigmatized attitudes towards patients[35]. On the other hand, some negative experiences in the process of treating serious patients may also have negative impact on clinician attitudes. Further research is needed to clarify these processes. In any case the findings from Changsha are similar to the relatively negative responses to the same questions concerning socializing with people with mental illness recorded from a sample of mental health professionals in nearby Guang-

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zhou, China where the mean value for socializing was 0.69 and lower than responses from professionals in several other countries[36]. Why these negative responses emerge in Chinese sample deserves further examination and interpretation.

Our study also explored the correlations between the four factors. Greater tolerance was associated with stronger belief in biopsychosocial causes of mental disorder, suggesting that didactic education on the causes of mental disorder may lead to more tolerant public attitudes. There was also positive and significant correlation between tolerance of people with mental disorder and socializing with them, suggesting tolerance may be a catalyst to some extent in socializing with these patients. However, no significant correlations were found between a biopsychosocial understanding of the causes of mental disorder and personal willing to socialize with people with mental disorder. A recent systematic review has also found that increasing public understanding of the biological correlates of mental disorder seems not to result in any greater social acceptance of people with mental disorder[36], perhaps because public images of mental disorder are generally dominated by the stereotypes of unpredictability and dangerousness [16]. Simple promotion of understanding of the etiology of mental illness may be an inadequate way of reducing stigmatization of people with mental disorder. It was also notable that in this sample there was no significant correlation between non- superstitious attitudes towards the cause of mental illness and belief in bio-psychosocial causation. It might be expected that greater belief in biopsychosocial causes of mental illness would be associated with less acceptance of superstitious ideas about etiology. A recent study that included health professionals from West Africa, where superstitious beliefs about the causes of mental illness are much more frequent, even among health professionals also found was no association between non- superstitious attitudes towards the cause of mental illness and belief in bio-psychosocial causation[37].

Identifying ways to reduce stigma towards mental illness has long been an important area of research. Although educational intervention appears to have some positive effects, optimal educational content has yet to be identified. The influence of clinical experience may be more complicated than our study revealed but further studies are needed.

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