

Medical students' attitudes towards mental disorders and their correlation with academic performance

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SUMMARY

They are probably not interested in mental illnesses during their studies or other kinds of factors may be causing this. Objective. Identify which mental disorders were most interesting to a group of medical students and how that preference correlates with academic performance. Methods. After three months of theoretical lessons and a four-hour practice, 93 medicine students at the Universidad de los Andes of Venezuela, expressed and justified their preference for a specific topic of psychiatry. These data were correlated to academic performance. Results. The most popular topic was alcoholism with a 34.4% of preference, followed by bipolar disorder with 26.9%. The main reasons for selection were having had some contact with the illness and finding the topic interesting. A total of 52.2% "failed" students preferred alcoholism versus 28.6% of "passed" students ($p=0.039$). Conclusions. Students with higher academic average were attracted to bipolar disorder because they found it interesting whereas the students with lower academic average preferred alcoholism because family members or acquaintances exhibited the symptoms or had drinking habits. (MÉD.UIS. 2010;23(3):181-5).

Keywords: Medical students. Mental disorders. Psychiatry.

RESUMEN

Actitud de los estudiantes de medicina hacia las enfermedades mentales y su relación con el rendimiento académico.

Los estudiantes de medicina no parecen sentirse atraídos hacia la psiquiatría como especialidad con el mismo interés como medicina interna o cirugía. Es probable que durante la carrera no sean motivados por las enfermedades mentales o existan otros factores involucrados en este hecho. Objetivo. Determinar cuáles son las enfermedades mentales de mayor interés para los estudiantes de medicina y su relación con el rendimiento académico. Métodos. Luego de haber recibido clases teóricas durante tres meses y una clase práctica de cuatro horas, 93 estudiantes de medicina de la Universidad de los Andes de Venezuela, manifestaron su preferencia por un tema de psiquiatría en particular y explicaron la razón por la cual ese tema les había llamado la atención. Estos datos fueron relacionados con su promedio académico. Resultados. El tema más escogido fue alcoholismo en un 34,4%, seguido de trastorno bipolar en un 26,9%. La razón principal fue porque habían tenido contacto con la enfermedad o porque el tema les había parecido interesante. Los alumnos reprobados escogieron alcoholismo en un 52,2% vs el 28,6% de los alumnos aprobados ($p=0,039$). Conclusiones. Los estudiantes con mejor rendimiento académico se vieron atraídos hacia el tema de trastorno bipolar porque les había parecido interesante. Los estudiantes con bajo rendimiento académico se vieron atraídos hacia el tema de alcoholismo porque algún familiar o persona conocida presentaba los síntomas de la enfermedad o hábitos alcohólicos. (MÉD.UIS. 2010;23(3):181-5).

Palabras clave: Estudiantes de Medicina. Trastornos mentales. Psiquiatría.

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INTRODUCTION

The teaching of psychiatry in Venezuela varies according to the university. In some colleges, the subject is studied during several years while in others it is taken for a few weeks, only during one term. Educators have to balance the need to stimulate the students' interest in psychiatry with the responsibility to provide appropriate teaching and training, since around 95% of students choose another medical specialty after graduation¹.

In Venezuela, psychiatric educators perceive that the students' interest in this subject has decreased. Moreover, the time allocated to it in the colleges of medicine is not enough and neither is the exposure of students to mental health patients. These perceptions are common in other countries like the United States, where the Association of Directors of Medical Student Education in Psychiatry has started programs that seek to improve teaching of psychiatry².

Psychiatry as medical specialty seems to be losing its appeal. At the end of World War II, between 7-10% of medicine majors in the United States used to choose psychiatry as a career. In the early 70s this percentage started to decrease and in the late 90s it came down to 3%³. Two different reasons have been presented as explanations. Either medicine students nowadays are less attracted to psychiatry in comparison with other alter-natives, or their experience while taking the undergraduate course was unsatisfactory and this led to their rejection of that specialty^{4,5}.

As an attempt to clarify this dilemma, in 1992 Fishman et al.⁶, carried out a study in american universities. They found that 13% of medicine freshmen experienced vocational interest in psychiatry; thus, they concluded that any loss of interest toward the end of the program could be caused by the kind of experience they had with psychiatry later in their undergraduate studies.

Afterward, in 2005 Galka et al.⁷, designed a study that aimed at measuring the attitudes toward mental illnesses of 672 thirdyear medical students at the University of Indiana, before and after psychiatry rotations for a period of six weeks. It was found that there were differences between the students' perceptions of psychiatry and mental illnesses before and after the rotations; mainly they gained a better understanding that these illnesses may have a biological or social cause and that pharmacotherapy and psychotherapy are truly effective treatments. Nevertheless, the rotations did not have any impact on the students' choice of psychiatry as a career. It is likely that the advances in other areas of medicine have made them more attractive as specialties, since these outcomes differ from studies carried out in the 80s in which students did change their career choice to psychiatry after rotations^{8,9}.

In 1999 Feifel et al.¹⁰, compared the career preferences of american medical students during the first two weeks of their studies and how those related to aspects such as life style. Although american students preferred psychiatry over other specialties based on life style, the answers regarding income, work satisfaction, ability to help patients, promise of interesting future, and swiftness of treatment advances had lower scores for psychiatry than for surgery, pediatrics, and internal medicine.

Nowadays, only one study carried out in Venezuela has evaluated the attitudes of medical students toward psychiatry¹¹. A total of 490 lastyear students from different universities were studied. These findings did not display differences in academic average as related to their attitude toward psychiatry, and in most of the answers students showed slight to moderate interest for the specialty.

Different studies have evaluated the attitudes of medical students toward psychiatry¹²⁻¹⁶; however, have not been found any research that assesses students' attitude toward various mental illnesses and the reasons why one disorder could be particularly interesting to them.

This study explores that kind of perceptions among fourthyear medical students at the Universidad de los Andes of Venezuela, and it seeks to determine whether there is a relationship between those perceptions and the students' academic performance. The presented hypothesis is that students with a higher average are attracted to different illnesses with marked psychotic symptoms, such as schizophrenia or bipolar disorder, and that their preference is attributable to clinical interest. On the other hand, students with a lower average are drawn to topics that are considered to be more social, such as alcoholism and behavior disorders, since these could be easier for them to study. All the authors are members of the Escuela de Medicina at the Universidad de los Andes in San Cristobal, Venezuela. OMO is a fulltime professor of psychiatry, health psychology, and sleep disorders medicine. NSM is a full-time professor of histology, pulmonology, and sleep disorders medicine. The other authors are medical students and members of the Mental Health and Sleep Disorders Research Group. All of the students surveyed are enrolled in the same university. The design of this study was approved by the committee of ethics at the Universidad de los Andes.

MATERIALS AND METHODS

This is a descriptive transversal study; the participants were 93 four-year students of the Escuela de Medicina at the Universidad de los Andes in San Cristobal, Venezuela. In the course of psychiatry, 13 topics considered the most relevant pathologies were taught (see Table 1), and each student completed a four-hour practice with mental health inpatients. The one-hour

theoretical lessons were taught for three months, since March to June of 2008, once or twice a week. Two tests were administered during that period; then a final exam was given. The tests were graded in a scale of 0 to 20, the minimum passing grade being 10. On the date of the final, students already had a partial grade, which represented the average of the two previous tests and the fourhour practice. The final test consisted of two essay questions. First, students were asked to write about their preferred topic and then, they had to explain why they had chosen that topic. Once the topics chosen by students were identified, they were categorized into five groups, based on the frequency of selection and on the diagnosis of all the patients interviewed during the practice. The reasons for topic selection were categorized into four groups, based on the frequency and relationship among them.

Table 1. Chosen topics in the course psychiatry

Topics	n	%
Topic 1: Psychiatric history (IP)	0	0
Topic 2: Mental examination (OM)	3	3.2
Topic 3 Psychopharmacology (IP)	0	0
Topic 4: Schizophrenia (OM)	3	3.2
Topic 5: Bipolar disorder (OM)	25	26.9
Topic 6: Anxiety disorders I: Generalized anxiety disorder and Panic disorder (OM)	4	4.3
Topic 7: Depression (OM)	13	14.0
Topic 8: Delirium and dementia (IP)	7	7.5
Topic 9: Anxiety disorders II: Specific phobia, social phobia and obsessive compulsive (OM)	0	0
Topic 10: Alcohol related disorders (OM)	32	34.4
Topic 11: Somatoform disorders (IP)	3	3.2
Topic 12: Conduct disorder (OM)	3	3.2
Topic 13: Personality disorders (IP)	0	0
Total	93	100

IP: Professor Italo Pierini. OM: Professor Oscar Medina

The results of the questions in the final exam were correlated to the partial grade as well as the variables of the study. Students were told they could withdraw their answers from the study by stating this at the end of their final exam; otherwise they would be giving their consent to participate.

STATISTICAL ANALYSIS

The computer program SPSS 12.0 was used for the analysis. First, a Kolmogorov-Smirnov test was run in order to verify the normality of the sample. Then, the Chi square test helped to determine the relationship

between the categorical variables. Next, the univariate Analysis of Variance was used to determine the effect of the different factors on the dependent variable. The grade average was set as the dependent variable, whereas the topic chosen, the reasons for selection, and the participant gender were set as factors, and the Tukey multiple comparison test was used to determine the relationship among each of them. The statistical significance value was less than 0,05.

Table 2. Chosen reasons for topic selection in the course psychiatry

Reasons	n	%
Interesting	24	25.8
Social importance	17	18.3
Relative with the disease	14	15.1
Friends with the disease	9	9.7
Suffers symptoms	6	6.5
Experience with patients	6	6.5
High prevalence	4	4.3
No answer	3	3.2
Underdiagnosed	2	2.2
Important	2	2.2
Liked the class	1	1.1
Short to explain	1	1.1
Identification with the topic	1	1.1
First thing that came to mind	1	1.1
Emblematic	1	1.1
Useful in my job	1	1.1
Total	93	100

CONFLICTS OF INTEREST

None conflict of interest was presented. None of the authors have received any remuneration and this study has been financially supported in full by the authors.

RESULTS

None of the students refused to let their data be used in the study. From the total of participants, the 68% (n=64) were women and 31.2% (n=29) were men. The mean age was 23.01 years ($\delta=2.05$; range: 21-29) and the mean for the grades of the whole class was 12.28 ($\delta=2.95$; range: 6,1 – 20) distributed as follows, 18 points or higher (4.3%), between 15 and 17.9 points (18.3%), between 10 and 14.9 points (52.7%), and less than 10 points (24.7%).

The topic that students chose most was mental disorders caused by alcohol (34.4%), followed by bipolar disorder (26.9%). The main reasons for selection were: have had any kind of contact with the illness (31.3%) either through a friend (9.7%) or relative (15.1%) or for

having interviewed a patient (6.5%); and the interest students found in the topic (25.8%) (Table 1 and Table 2). No gender differences were found for the selection of the topic or the reason of that selection. Also were analyzed the characteristics of the groups that selected the topics and the reasons for the selection according to the academic grades.

When each topic was dichotomically compared with the other choices of topics (others), it was noticed that among the students with grades above 10 points and those with grades below 10 only the topic of mental disorders caused by alcohol was significant ($p=0.039$). That topic was chosen by 28.6% of passed students compared to 52.2% of failed students. Moreover, there were no significant differences between failed and passed for any of the other topics selected or for any of the reasons for selection (Table 3).

Table 3. Comparison between failed and passed students

Chosen topic	FS* (n)	%	PS* (n)	%	p
Alcoholism Vs.	12	52.2	20	28.6	0.039
Other topics	11	47.8	50	71.4	
Total	23	100	70	100	
Depression and Anxiety Vs.	2	8.7	15	21.4	0.170
Other topics	21	91.3	55	78.6	
Total	23	100	70	100	
Psychosis Vs.	6	26.1	22	31.4	0.628
Other topics	17	73.9	48	68.6	
Total	23	100	70	100	
Reason for topic selection					
Contact with the illness	11	47.8	25	35.7	0.301
Other reason	12	52.2	45	64.3	
Total	23	100	70	100	

* FS: Failed Students; PS: Passed Students

DISCUSSION

This is an innovative study, since there was not found any previous research on the attitude of medicine students towards mental illnesses. Most of studies have been focused on the evaluation of medical students' attitudes toward psychiatry as medical specialty.

The study by Baptista et al. in Venezuela was designed with that purpose in mind¹¹. They showed that 5% of medical students at a university where practice with mental health patients is mandatory in the last year of the major, had chosen a psychiatry career; in

contrast with 4% of medicine students that made such decision in another university where the practice is not mandatory. The similarity of these findings may suggest that the low interest of medical students in psychiatry as specialty can be the result of the insufficient time devoted to psychiatric pathology in the curricula.

In this study, it was noticed that the great majority of participants were highly motivated in the semiological evaluation of the psychotic symptoms when the disorder was highly manifest.

They were more interested in the interviews when they noticed that the patient had the symptoms and signs described in the theoretical lessons, such as hallucinations, paranoid delusions, certain behaviors or descriptions explained by the patients in relation to mood swings, from a depressive state to a euphoric one.

The students claimed to be amazed at how an illness can be characterized by a mood change in the same person. A further study with the same group of students after graduation could demonstrate whether their attitudes toward psychiatry and mental disorders have changed. The purpose of this research was not to determine whether or not the students would be attracted to psychiatry as specialty after the rotations, or whether they would choose that specialty after graduation.

The findings in this study reveal that the group that chose alcoholism happened to be the one with the lowest grades, since 58,3% of the failed students chose that topic, and the reason of selection they provided was having had some kind of social contact with the illness, through a friend or relative that either suffered from it or had strong drinking habits. In contrast, most of the passed students that also chose alcoholism expressed having done it because they had been in contact with a patient with the disorder. On the other hand, the selection of bipolar disorder, which was included in the psychosis group (bipolar disorder 26,9% + schizophrenia 3,2%), was prominent among all the passed students. Students manifested that the main reason for selection was they had found it interesting, or they had been in contact with a patient with this disorder.

These results reveal an interesting situation, since they show that students with the lowest grades might be living in an environment where a relative or even themselves have drinking habits. This could be related to their low academic performance, either because the conditions at home interfere with their readiness to study or because drinking does not allow them to dedicate enough time to their studies. The situation is evident when the groups that chose psychosis with those that selected alcoholism are compared, taking into account the mean for grades and the reasons for selection.

Another factor that has been mentioned by students in other studies is the rejection to psychiatric patients. The students that participated in this research went to hospitalization units for a period of four-hours on a Saturday morning, and they had direct contact with a psychiatric patient. At first, there were signs of tension and suspicion; however, once the interview had started the students seemed more calmed and confident. This contact with psychotic patients could have determined that 28% of students chose topics such as bipolar disorder and schizophrenia, especially the students with passing grades, who manifested they were attracted to the topic because it was interesting and because they had interviewed patients with this kind of disorders. It is then relevant to consider the possibility that increasing the strategies of direct interviews with patients will make students get used to them and lose their fears, which are mainly the consequence of a general belief that psychiatric patients exhibit violent or dangerous behavior¹⁷.

LIMITATIONS

This research has some limitations that might complicate the generalization of the data to a bigger population or to other universities:

The lessons were taught by two different instructors, which could have interfered with its dynamics.

Attendance was not mandatory; some students could have not attended all the lessons.

Not every topic of psychiatry was included in the course syllabus; the instructors chose the ones they considered to be more relevant.

The students spent little time on the psychiatry rotations and only half a day in direct contact with the patient.

In the practice, the patients were randomly selected for the interview, so it was not possible to observe the symptoms of all the illnesses described in the theoretical lessons.

CONCLUSION

Once students had been exposed to patients that present psychotic symptoms, they showed a higher interest in them, especially those students with good or excellent grades. On the other hand, a group that had also been in contact with another disorder, alcoholism, but mainly because a relative, friend or acquaintance suffers from it, happened to be the group with most failed students.

It is likely that, whichever their reason of interest, they start feeling motivated to pursue further studies in this field after graduation.

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