



ARAŞTIRMA / RESEARCH

Attitudes of medical faculty students in Northern Cyprus towards mental illnesses

Kuzey Kıbrıs'taki tıp fakültesi öğrencilerinin ruhsal bozukluklara yönelik tutumları

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Cukurova Medical Journal 2018;43(1):115-121.

Abstract

Purpose: Medical students must not only gain knowledge and skills about recognition and management of mental problems, but they also must improve their attitudes and practices toward persons having mental disorders. The aim of this study was to investigate the attitudes of the students in the Medical School of Near East University, which is the first medical school of Cyprus and composed of students from different cultures, toward mental illnesses.

Materials and Methods: A total of 396 students (355 pre-clinical and 41 clinical) were included in the study. The Sociodemographic Data Form and Beliefs toward Mental Illness (BMI) Scale were used to collect data.

Results: The Dangerousness Subscale scores were significantly higher for students from TRNC and Turkey (22.33 ± 6.21), compared to the students from other nationalities (18.87 ± 5.20). However, the Incurability Subscale scores of the students from other nationalities (28.92 ± 9.31) were significantly higher compared to those from TRNC and Turkey (25.18 ± 9.19).

Conclusion: Our study results suggest that there is no strong relationship between beliefs toward mental illnesses and sociodemographic features; however, culture plays a key role in perceived beliefs on mental illnesses.

Keywords: Medical student, mental health, attitude, stigma.

Öz

Amaç: Tıp Fakültesi öğrencilerine ruhsal bozukluklara ilişkin bilgiler öğretilmeli ve bu bozuklukları tanılayıp yönetmeye ilişkin beceriler kazandırılmalıdır. Bununla birlikte, ruhsal bozukluk görülen hastalara karşı tutum ve uygulamalarında da gelişim göstermelerine önem verilmelidir. Bu çalışmanın amacı; Kıbrıs Adası'nın ilk tıp fakültesi olan Yakın Doğu Üniversitesi Tıp Fakültesi'nin farklı kültürel altyapılardan gelen öğrencilerinin ruhsal hastalıklara yönelik tutumlarını incelemektir.

Gereç ve Yöntem: Veriler, 396 öğrencinin sosyodemografik bilgi formunu ve Ruhsal Hastalıklara Yönelik İnançlar Ölçeği'ni (RHİÖ) yanıtladıkları anketle toplanmıştır.

Bulgular: Tehlikeli altölçeği KKTC ve Türkiye'li öğrencilerde (22.33 ± 6.21) diğer ülkelerden gelen öğrencilere (18.87 ± 5.20) kıyasla istatistiksel olarak önemli yüksek bulunmuştur ($p < 0.01$). Çaresizlik altölçeği ise diğer ülkelerden gelen öğrencilerde (28.92 ± 9.31), KKTC ve Türkiye'li öğrencilere (25.18 ± 9.19) kıyasla önemli yüksektir.

Sonuç: Sosyodemografik özellikler ile ruhsal hastalıklara yönelik tutumlar arasında ilişki gözlenmemiştir. Aynı fakültede okuyan öğrencilerin ruhsal hastalıklarla ilgili farklı kültürel altyapılara sahip olmalarına bağlı olarak farklı tutumlarının olduğu gözlenmiştir.

Anahtar kelimeler: Tıp öğrencisi, ruhsal sağlık, tutum, damga

INTRODUCTION

Globalization of medicine, particularly medical student education, has provided increased opportunities to share psychiatric knowledge and

experience and to apply innovative educational programs to institutions across international boundaries¹. Of studies which specifically assessed stigma among medical students, Mukherjee et al. found that students shared similarly negative opinions toward individuals with a mental illness as

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Geliş tarihi/Received: 31.03.2017 Kabul tarihi/Accepted: 21.05.2017

the general population in the UK². Another study showed that among the medical students having depression, only 22% were using mental health counseling services³.

In the aforementioned study, 30% of the students indicated that stigma was the barrier in using mental health services, while 37% indicated lack of confidentiality, and 24% fear of recording were the main reasons. Therefore, it is of utmost importance to overcome stigma throughout the school year within the social environment of medical schools. Throughout the medical education, students contact and interact with individuals having mental illnesses at various levels. According to the medical curriculum, the students go through a psychiatry shift during their fifth year in school. Therefore, it is expected that interaction with the mentally ill would influence the medical students positively. 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 individuals having mental illnesses⁴.

A recent review comparing the staff in mental health care and the general public's perceptions showed that beliefs from mental health providers did not differ from the general public or were more unfavorable⁵. A research carried out in the last year students of a university in Turkey revealed that social contact with psychiatric patients reduced negative opinions against mental illnesses⁶. The authors suggested that by getting in contact with the mentally ill, negative conceptions, which were shaped within the community, were able to be desensitized. In addition, there are studies in Turkey⁴, Nigeria⁷ and Sri Lanka⁸ which found stigmatizing views among medical students. According to Lyons's review from both developed and developing countries, a mixture of positive and negative views was found toward psychiatry as a career and discipline and attitudes to patients with mental illness⁹. However, no significant differences were found in these studies between developed and developing countries.

In this study, we aimed to investigate the attitudes of the students in the Medical School of Near East University, which is the first medical school of Northern Cyprus and composed of students from different cultures, toward mental illnesses.

MATERIALS AND METHODS

A total of 482 students (418 pre-clinical and 64 clinical) were registered to the faculty at the time of the study, and 86 of them did not participate at their own will. Overall participation rate was 82.2%. In the current study, the Sociodemographic Data Form and Beliefs Toward Mental Illness (BMI) Scale were used to collect data.

The approval of the Ethics Committee of the Near East University School of Medicine has been received prior to study. An informed consent was obtained from all participants. The study was conducted in accordance with the principles of the Declaration of Helsinki (revised in Edinburg 2000).

Sociodemographic data form

The form contains questions about the sociodemographic characteristics of the participants.

Beliefs Toward Mental Illness (BMI) Scale

This scale was developed by Hirai and Clum¹⁰. The validity and reliability analysis of the scale, which contains 21 items, was carried out by Bilge and Cam in Turkey¹¹. It does not include a classification in terms of psychotic or non-psychotic for mental illnesses. There are general statements in the items which evaluate beliefs toward mental illnesses, such as mental illness and individual with a mental illness. The statements in the scale involve negative beliefs associated with illnesses. Therefore, total score demonstrates the level of negative beliefs toward mental illnesses. BMI is a six point Likert-type scale and rated as 'totally disagree' (0), 'mostly disagree' (1), 'moderately disagree' (2), 'moderately agree' (3), 'mostly agree' (4) and 'totally agree'. The scale is interpreted according to both total score and subscale scores. There are three subscales of BMI.

Dangerousness Subscale: This subscale consists of eight items on dangerousness of mental illnesses and patients. The score range of the subscale is between 0 and 40.

Poor Social and Interpersonal Skills, and Incurability Subscale: Eleven items of the subscale cover influence of mental illnesses on interpersonal relationships and incurability due to such influence. The subscale expresses having frustration and despair with mentally ill individuals

within interpersonal relationships. One can obtain a score between 0 and 55 on this subscale.

Shame Subscale: The subscale contains two items which state that mental illness is a shameful situation and the score range is between 0 and 10.

Statistical analysis

Statistical analysis was performed using SPSS version 18.0 software (SPSS Inc., Chicago, IL, USA). Descriptive data were expressed in percentages and frequencies for categorical variables, and mean \pm standard deviation (SD) for continuous variables. Either Kolmogorov-Smirnov or Shapiro Wilk test of normality were applied, where appropriate. Depending on the distribution properties, parametric hypothesis testing methods were performed. For two independent groups, the Student's t test (with Levene's test for equality of variances) was used, while one way analysis of variance (ANOVA) was performed for more than

two groups. The Bonferroni's *post-hoc* test was applied, if the ANOVA result was significant. For comparison of categorical data, the chi-square test was done. A *p* value of <0.05 was considered statistically significant.

RESULTS

A total of 396 students participated in the study. Among them, 220 (56.6 %) were females and 173 (43.7 %) were males. A total of 355 (89.6 %) of the participants attended to the pre-clinical grade (term 1, 2, and 3) and 41 (10.4 %) attended to the clinical grade (term 4, 5, and 6).

The number of students from Turkish Republic of Northern Cyprus (TRNC) was 72 (18.2%), from Turkish Republic (TR) was 270 (68.2%), and from other nationalities was 52 (13.1%). A total of 58 of the participants (14.6%) had a previous psychiatric diagnosis, while 248 students (62.6%) had acquaintances with a psychiatric diagnosis (Table 1).

Table 1. Sociodemographic characteristics of the participants

Variable		
Age [Mean \pm SD (Min-Max)]	21.29 \pm 2.25 (16.00 – 38.00)	
Gender	n	%
Female	220	56.6
Male	173	43.7
Nationality		
TRNC or Turkey	342	86.8
Other Countries	52	13.2
Education Level		
Pre-Clinic	355	89.6
Clinic	41	10.4
History of Mental Illness		
Present	58	14.6
Absent	334	85.4

According to the nationality analysis using scale and subscale scores, the mean Dangerousness Subscale scores were found to be statistically significantly higher ($t=3.83$, $p<0,01$) among all students from TRNC and TR ($22,33 \pm 6,21$), compared to those

from other nationalities ($18,87 \pm 5,20$). However, the mean Incurability Subscale scores revealed that scores of students from other nationalities ($28,92 \pm 9,31$) were higher ($t=-2,73$, $p<0,01$) than those from TRNC or TR ($25,18 \pm 9,19$) (Table 2).

Table 2. Comparison of subscale and scale scores based on nationalities

(Mean \pm SD)	TRNC and TR (n=342)	Other (n=52)	t	p
Dangerousness Subscale	22.33 \pm 6.21	18.87 \pm 5.20	3.83	0.001
Poor social and interpersonal skills, and incurability Subscale	25.18 \pm 9.19	28.92 \pm 9.31	-2.73	0.007
Shame Subscale	1.37 \pm 2.22	1.92 \pm 2.26	-1.67	0.095
Total	48.88 \pm 14.97	49.71 \pm 13.13	-0.38	0.706

TR, Turkish Republic; TRNC, Turkish Republic of Northern Cyprus; SD, standard deviation.

We found no statistically significant difference in the mean scale/subscale mean scores between the students at pre-clinical and clinical education level (Table 3).

Similarly, sex, history of psychiatric diagnosis, education status of each parent did not show any significant differences, using the subscale and scale scores.

Table 3. Comparison of subscale and scale scores between pre-clinical and clinical students

	Pre-clinical (n=355)	Clinical (n=41)	t	p
Dangerousness subscale	21.98 ± 6.25	20.98 ± 5.60	0.99	0.324
Poor social and interpersonal skills, and incurability subscale	25.56 ± 9.36	26.27 ± 8.85	-0.46	0.645
Shame subscale	1.49 ± 2.24	1.00 ± 2.07	1.34	0.180
Total	49.04 ± 14.97	48.24 ± 12.55	0.33	0.745

SD, standard deviation.

In addition, the total mean scale scores of the participants who had acquaintances with a psychiatric diagnosis ($47,70 \pm 14,83$) were found to be lower ($t=-2,26$, $p<0,05$) than those who did not ($51,16 \pm 14,11$). Similarly, the mean Incurability subscale scores of the students who had acquaintances with a psychiatric diagnosis ($27,48 \pm$

$8,83$) were statistically significantly higher ($t=-2,98$, $p<0,01$) than those who did not ($24,62 \pm 9,40$) (Table 4). Total scale score of the students who have mental illness history (46.66 ± 15.94) were not significantly different from the students who had no history of mental illnesses (49.25 ± 14.53) ($p>0.05$).

Table 4. Comparison of subscale and scale scores based on presence of a psychiatric diagnosis

(Mean ± SD)	Present (n=248)	Absent (n=143)	t	p
Dangerousness subscale	21.81 ± 6.29	21.99 ± 5.82	-0.27	0.790
Poor social and interpersonal skills, and incurability subscale	24.62 ± 9.40	27.48 ± 8.83	-2.98	0.003
Shame subscale	1.27 ± 2.15	1.69 ± 2.34	-1.77	0.078
Total	47.70 ± 14.83	51.16 ± 14.11	-2.26	0.024

SD, standard deviation.

Finally, both total mean scale scores ($47,45 \pm 15,28$) and Dangerousness subscale scores ($20,99 \pm 6,20$) of the students who reported their familial income level as poor or moderate were statistically lower

than the mean total scale scores ($50,44 \pm 14,11$) and Dangerousness Subscale scores ($22,83 \pm 6,07$) of the students with higher economic status ($t=-2.01$, $p<0.05$; $t=-2,97$, $p<0,01$, respectively) (Table 5).

Table 5. Comparison of subscale and scale scores based on income

(Mean ± SD)	Poor / Moderate (n=202)	High (n=190)	t	p
Dangerousness subscale	20.99 ± 6.20	22.83 ± 6.07	-2.97	0.003
Poor social and interpersonal skills, and incurability subscale	25.04 ± 9.49	26.13 ± 9.06	-1.15	0.250
Shame subscale	1.41 ± 2.15	1.48 ± 2.33	-0.30	0.764
Total	47.45 ± 15.28	50.44 ± 14.11	-2.01	0.045

SD, standard deviation.

DISCUSSION

In general, public attitude toward mental illness may be mediated by various factors including demographic variables, sociocultural factors, familiarity with mental illness, and sources of publicity¹². However, there are specific factors

which can influence the attitude of medical students toward mental illness, such as teaching methods, educational atmosphere, medical training environment, role models, and direct patient care^{2,13}.

Considering the sociodemographic characteristics, there are controversial findings in the literature. In a study conducted in Oman, no relationship was

found between the beliefs on mental illnesses and sociodemographic characteristics¹⁴. In addition, in a German review, sex, age, education, and residency accounted for only 1.4% of the variance¹². In this present study, several factors such as age, sex, nationality, familial income level, and education status of each parent were taken into account. However, we found no significant difference between male and female sexes. This finding is consistent with the previous studies suggesting that beliefs toward mental illnesses were not identified by sex^{15,16}.

On the other hand, some authors demonstrated that women were less prejudiced than men¹⁷. In a review, Angermeyer showed that the results of previous studies on the influence of sex on the public's attitude toward mental illness were inconsistent¹². Savrun et al. also reported that the education status of the parents might represent the students' knowledge and attitude toward individuals with mental illnesses¹⁸. In another study, education was shown to determine the familiarity with mental illnesses; namely, individuals who completed more years of education were likely to have more knowledge and/or experience with psychiatric disorders which, in turn, led to less endorsement of stigma¹⁹. A further view suggested that education interacted with sex and effects on stigma; men with lower education were more likely to express prejudice and discrimination toward individuals with a mental illness²⁰. In our study, the education status of the parents had any effects on beliefs on mental illnesses.

In the present study, we categorized the participants as pre-clinical (grade 1, 2, 3) and clinical (grade 4, 5, 6). We found no difference in the beliefs on mental illnesses. Although some authors reported that psychiatry education given in the medical faculties had a positive effect on the attitudes of the students^{4,21}, some suggested no significant effect^{22,23}. In the literature, a study carried out among medical students and physicians in a teaching hospital in London demonstrated that pre-clinical students had closer attitudes toward the general public, while clinical students had improved attitudes closer to the physicians' attitudes, and that there was a progressive change in the attitudes throughout their medical career². Researchers in Nigeria also examined the attitudes toward mental illnesses among Nigerian medical personnel at three different levels of training and experience: medical

students who had not completed their psychiatry rotation, medical students who had completed their psychiatry rotation, and graduate physicians²⁴. The authors concluded that psychiatry education and particularly clinical experience resulted in more progressive attitudes toward individuals with mental illnesses. In a follow-up study from Japan, the students who were evaluated in terms mental illness beliefs in the first year of medical school were re-evaluated at five years, and the authors concluded that medical education had a critical role on changing mental illness beliefs in a positive way¹⁴. Another study which was conducted in medical school students in Ireland showed that clinical and pre-clinical students did not significantly differ, similar to our results²⁵. However, since the number of students in pre-clinical and clinical phase was not equally distributed, our findings might have been affected. In our faculty, pre-clinical students (89.6%) are the majority of all student population.

Furthermore, the present study revealed that when the students were classified based on their nationalities (TR, & TRNC vs foreigners), the Dangerousness Subscale scores of the both Turkish students were significantly higher, whereas the Incurability Subscale scores of foreign national students were significantly higher. In a study conducted with the college students in Turkey, as similar to those from Turkey and North Cyprus students in our study, had beliefs on the foreground that the individuals with mental illnesses were dangerous and a relationship with them was difficult¹⁶. In a study, Fischel et al. examined the students of two cultural backgrounds (American vs Israeli) receiving one psychiatric curriculum in Israel, and found no significant differences between the groups and no effect of the clerkship itself on the students' attitudes²⁶. However, we suggest that, considering mental illness beliefs, students in the same school, but coming from different cultural backgrounds may differ.

In another study conducted in Papua New Guinea including medical school students who were on psychiatry rotation, the authors concluded that cultural beliefs and a family history of psychiatric disorder were more influential on mental illness beliefs than psychiatry rotation²⁷. Some authors found no relationship between close personal contacts with individuals affected by mental illnesses before clerkship/or direct experience with a family member with mental illness and attitude toward

mental illness^{15,18,26}. However, there are some studies showing personal contact with individuals affected by a mental illness may positively influence the attitude of public and of students toward mental illness^{19,28}.

In our study, both total scale scores and Incurability Subscale scores of the students who had acquaintances with a psychiatric diagnosis were higher. Having an acquaintance with a psychiatric diagnosis might have influenced the mental illness beliefs positively in some countries, but might not have a remarkable impact in some others. Based on these findings, we may assume that culture plays a more critical role on mental illness beliefs. Review of the literature also showed that there were extensive ethnical differences related to the mental illness beliefs in a study including Asian immigrants living in Australia and Anglo-Australian medical school students²⁹. Nonetheless, there are some limitations to this study. The number of pre-clinical and clinical students is disproportionate.

In conclusion, our study suggest that culture plays a key role in perceived beliefs on mental illnesses. However, further large-scale studies are required to compare different cultures and to establish a definite conclusion.

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