

Social Distances of Medical Students from a Person in a Depression Vignette; A cross-sectional study

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Abstract

Background: Negative attitudes toward psychiatric disorders are prevalent among health professionals, and little is known about the effects of medical education on the attitudes of students in Turkey. The study aims to evaluate the effects of medical education on the students' social distance from a person with depression.

Methods: Medical students were compared to two other student groups. The data were collected in 2004 by using a questionnaire that included socio-demographic variables, a depression vignette and Social Distance Scale.

Results: A total of 649 students responded to the questionnaire. Faculty students had a greater desire for social distance from a person with depression than did students in a public education centre. The first year faculty students also had higher social distance scores than students in a public education centre. The differences in social distance by faculties and the years were not statistically significant. Most of the first year medical students defined the vignette as “a person with some problems,” while most of the final year medical students defined the vignette as “a person with illness.” Optimism about the person's prognosis did not differ by the medical students' years. The percentage of medical students who stated that hospitalization necessary was higher in the sixth year than in the first year. Nearly half of the students felt disturbed by the prospect of contact with the person.

Conclusion: Our data supported the hypothesis that current medical education did not significantly influence students' social distance from a person with depression.

Keywords: Depression, social distance, medical students, attitudes, and behaviours.

Introduction

At the beginning of the 21st century the World Health Organisation (WHO) estimates that one in four families has at least one family member suffering from a mental or behavioural disorder[1] Moreover, negative attitudes and behaviours toward psychiatric disorders are still prevalent and have a large impact on communities [2-7]. Negative attitudes have increased these diseases' social burden for centuries, preventing people

from seeking help for early diagnosis, treatment and care. Millions of people with mental illness still do not receive adequate treatment, and suffer from the social exclusion and isolation associated with negative attitudes. The life quality of people with mental disorders continues to be poor even after recovery from their disease, because of social factors such as stigma and discrimination [1].

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Although attitudes toward depression are more positive than toward other mental disorders, depression remains very important with respect to public health because it is a highly prevalent disorder, and will become the second leading cause of disability adjusted life years lost by 2020 [1]. Moreover, negative attitudes toward people with depression arise frequently [3, 6, 8]. Even worse, some studies have found that health professionals were more negative than the general public toward people with mental diseases [8, 9, 10]. For many reasons, physicians are key personnel in health care, and their attitudes need more attention. First of all, physicians' attitudes may play a significant role in the general population's attitudes toward mental illness. They also are crucially important to good health care. Negative attitudes of health professionals may be an important barrier to receiving proper mental health care.

Medical schools with effective educational programs may provide an opportunity to reduce physicians' negative attitudes and behaviours. There is no special subject in medical curriculum to reduce social distance in Turkey, and current medical education can be described as a bio-medical model. Social and psychological factors are not important as biological factors in this model. Moreover, the results of studies carried out on medical students were also inconsistent. Some of them pointed out that medical education positively affects social distance [11, 12] while others indicated transient effect or no

significant effect [13, 14]. With regard to mental disease, optimism about the effectiveness of treatment and prevention was lower in the sixth year than in the first year [15]. In a study from Turkey, sixth year students had better attitudes toward people with depression than did second year students [11]. It seems that the effects of medical education on attitudes are neither clear nor unique.

In Turkey, few studies have examined the effects of medical education on attitudes and behaviours toward people with depression [11, 16, 17]. The previous studies compared medical students by 4th or 5th year (generally before and after their psychiatry training). This study, in addition to comparing first and final year students, compared medical students to both engineering students and students in a public education centre (PEC), regarding their social distance from people with depression. In other words, two control groups were used to compare medical students' attitudes. Therefore, the study provided opportunities to evaluate attitudinal changes within the medical students, and to compare two different groups. The study's main aim is to evaluate medical education's effects on social distance from a person with depression. Our hypotheses is; "There is no significant effect of the current medical education on social distance". The study also gives some additional information about the relationship among social distance, attitudes and the opinions of students with a medical education.

Methods

Sample

This cross-sectional study was carried out in 2004 in Erzurum (a province in Eastern Turkey).

The study's sample consisted of three student groups which included Medical

Faculty, Engineering Faculty of Atatürk University and the Public Education Centre (PEC). Engineering students were selected because their academic ability was similar to medical students'. PEC students were included in the study because their ages

were similar to faculty students'. However, they had a high school or lower educational level and were attending specific courses related to car repair, sewing, hairdressing, etc.

The study's sample consist of 716 students (249 medical students, 292 engineering students and 175 PEC students), and the response rate was 90.6%. There were a total of 541 faculty students, accounting for 290 in their first year and 251 in their final year. Final year refers to sixth year for medical students and fourth year for engineering students. The students were between 15 and 32 years old, and their mean age was 20.6 ± 2.8 . Of the subjects, 79.2% were male.

At the beginning of the interview the study's aim was explained and verbal informed consent was obtained from the subjects. No identifiable data related to the students were collected.

Instruments

General questions: A structured questionnaire was used to collect the subjects' socio-demographic features. The form asked about age, gender, education, parents' education, marital status, economic level, household number, residential area of the family and psychiatric history.

Vignette: A vignette depicting a case of depression fulfilling the respective DSM-IV criteria was used, and then the subjects were asked closed-ended questions about the health status of the person in the vignette. "How is his health status?" The responses were "1- Illness," "2- Healthy person" and "3- Person with some problems." "Whom should he seek treatment from?" Possible responses were "1- General practitioner," "2- Imams, religious leaders," "3- Specialist," "4- Psychiatrist" and "5- No one." "What do you think about the person's recovery if you say that he is ill?" Response options

were "1- Fully recoverable," "2- Partially recoverable" and "3- No improvement."

Social Distance Scale: Social distance is the amount of distance that individuals of one group would hypothetically place between themselves and members of another group in certain personal contact situations. The Bogardus Social Distance Scale is a psychological testing scale created by Emory S. Bogardus to empirically measure people's willingness to participate in social contacts of varying degrees of closeness with members of diverse social groups [18]. This study assessed social distance between the students and the person in the vignette with a social distance scale, which has 14 items. The validity and reliability of the Turkish version of the scale was studied by Arkar and it was found reliable and valid [19]. Each item is rated on a 7-point scale, ranging from 1 (absolutely no discomfort) to 7 (absolute discomfort). The points were summed in order to calculate the total score, with a minimum 14 points and a maximum of 98 points. The items in the scale were about the social relations with a person at home, workplace, public bus and shop. This study's reliability analysis of the scale revealed high internal consistency ($\alpha = 0.90$), with a corrected item-total correlation range of 0.42 to 0.70.

Statistical Analysis

T-test, analysis of variance and covariance were used to compare the mean scores by socio-demographic variables. Partial correlation was used to control covariates. In terms of frequencies, differences between groups were evaluated using a Chi-square test. Regression analysis was also used to clarify independent variables' effects on social distance score. All statistical tests were two-sided, and a p value of <0.05 was accepted as statistically significant. Statistical procedures were carried out using Epi Info version 3.3.2, developed by the Centers for Disease Control and Prevention.

Results

A total of 649 (response rate 90.6%) students completed the questionnaire. In terms of parental education, 18.5% of the mothers and 2.8% of the fathers were illiterate, and 87.2% of the mothers were

housewives. Their descriptive characteristics are shown in Table 1. 79.2% of the students are male. Of these students, 83.1% stated that their income level was medium.

Table 1: Descriptive characteristics of the subjects

Characteristics	n	%
Age groups		
15-19	305	47.0
20-24	288	44.4
25-32	56	8.6
Gender		
Male	514	79.2
Female	135	20.8
Economic level		
Low	65	10.0
Medium	539	83.1
High	45	6.9
School		
Medical Faculty	228	35.1
Engineering	270	41.6
Public Education Centre	151	23.3
Total	649	100.0

The analysis of partial correlation (controlling for the school type) found no significant correlation between age and social distance scores ($r=0.03$, $p=0.4$).

Table 2 displays social distance scores by socio-demographic variables. Among these variables, only school type was associated

The faculty students had greater desire for social distance than the PEC students ($F=20.6$, $p < 0.001$). Multiple comparisons with the Bonferroni method showed that the differences in social distance by faculties were not statistically significant. Both first and final year medical students had greater social distance than PEC students.

With regard to the years of education and social distance, there was no significant difference between first and final year students of the faculties ($p > 0.05$). There

with social distance. Concerning family history, 6.0% of the subjects had a family member with a mental disorder. In terms of their individual problems, 5.9% of the subjects used psychiatry services. Social distance scores by use of psychiatry service were very close to each other.

was a slight decrease in the final year medical students, while there was a slight increase in the final year engineering students. However, the differences were not significant ($p > 0.05$).

Age, gender, school type, psychiatric history, income level, parents' education, household number, rural-urban residential area and social distance were included into multivariate regression analysis, and only school type showed statistically significant differences in social distance scores ($F=20.6$, $p < 0.001$).

Table 2: Social distance by the subjects' psychosocial variables

Psychosocial variables	n	Mean	SD	Statistics
Gender				t= 1.3, p= 0.18
Male	514	57.2	17.9	
Female	135	59.5	17.4	
School				F=20.6, p<0.001
Medical faculty	228	59.9	17.3	
Engineering faculty	270	60.2	17.0	
Public Education Centre	151	49.8	17.9	
Medical Faculty				t=0.2, p=0.8
First year	112	60.2	17.5	
Final year	116	59.7	17.2	
Engineering				t=1.3, p=0.18
First year	156	59.1	16.7	
Final year	114	61.9	17.4	
Economic status of family				F=0.2, p=0.8
Low	65	59.0	21.8	
Moderate	538	57.5	17.1	
High	45	58.4	19.8	
Mother's education				F= 0.7, p=0.6
Illiterate	120	57.3	18.1	
Primary school	303	56.7	17.7	
Secondary school	72	58.9	17.7	
High school	94	59.7	18.7	
University	59	59.1	16.5	
Where did you live most of your life?				F=0.6, p=0.6
Province	454	58.3	17.2	
Town	129	56.1	18.6	
Village	62	56.6	20.3	
Family history of psychiatric disorders				t=0.7, p=0.4
Yes	39	55.59	17.82	
No	610	57.83	17.82	
Use of psychiatric services				t=0.1, p=0.9
Yes	38	58.11	17.03	
No	609	57.72	17.89	
Total	649	57.7	17.8	

SD: standard deviation

The medical students' opinions about the person in the vignette are presented by the years in Table 3. There were significant differences between the first and final year students regarding health status and hospitalization of the person. Most of the first year medical students defined the status as "a person with some problems,"

while most of the final year medical students defined the status as "a person with an illness" ($X^2 = 46.3$, $p < 0.001$). The percentage of medical students who stated that hospitalization was necessary was higher in final year students than in first year students ($X^2 = 14.7$, $p = 0.001$). Optimism about the person's anticipated

prognosis did not differ by medical school the years.

Table 3: The medical students' opinions by their years of education

Opinions	Education year				Total		Chi square
	First		Final		n	%	
Health status of the person	n	%	n	%	n	%	
Illness	33	29.5	85	73.3	118	51.8	$X^2 = 43.8$
Others	79	70.5	31	23.3	110	48.2	p < 0.001
Application for healing							
Health professionals	106	94.6	110	94.8	216	94.7	$X^2 = 0.04$
Others	6	5.4	6	5.2	12	5.3	p = 0.9
Anticipated prognosis							
Fully recoverable	71	63.4	63	54.3	134	58.8	$X^2 = 1.9$
Partially recoverable/no improvement	41	36.6	53	45.7	94	41.2	p = 0.18
Hospitalization of the person							
Necessary	60	53.6	90	77.6	150	65.8	$X^2 = 14.6$
Unnecessary	52	46.4	26	22.4	78	34.2	p = 0.001
Total	112	49.1	116	50.9	228	100.0	

Nearly half of the students felt disturbed about contact with the person in the vignette. The percentages of students who

stated a little discomfort, discomfort or absolute discomfort (points 5, 6 and 7) are presented in Table 4.

Table 4: Percentages of the students who stated negative attitudes by school type

Attitudes	Negative attitudes by school type (%)			
	Medicine	Engineering	PEC*	Total
With the person or like the person ...				
That your sister wants to marry ...	91.7	85.9	58.9	81.7
Sharing a room in your workplace ...	68.4	68.9	36.4	61.2
Your lease holder ...	62.7	62.2	39.1	57.0
Your hairdresser or coiffeur ...	57.5	56.7	35.1	51.9
Sitting side-by-side on a bus during a long travel ...	55.3	50.7	36.4	49.0
Talking about your daily problems ...	58.8	48.9	28.5	47.6
A doorkeeper in your apartment ...	49.1	52.2	31.8	46.4
A close neighbour ...	49.6	48.1	27.2	43.8
To play a game ...	39.0	43.3	45.0	42.2
Talking about your country's problems ...	39.0	39.3	27.2	36.4
Working in a different room in same workplace ...	37.7	33.0	23.2	32.4
Joining a family meeting ...	33.8	37.8	26.5	33.7
Sitting side-by-side on a bus during a short travel ...	32.9	28.1	19.2	27.7
Shopping from a shopkeeper ...	24.1	30.4	16.6	25.0

* Public Education Centre ... refers to with the person or like the person

The most disturbing relations with the person are having him marry their sister, sharing a room with him in a workplace, renting a flat with him and being his

hairdresser. More than half of the students stated disturbances related to these issues. Working in a different room in the same workplace, sitting side-to-side on a public

bus during a short travel and shopping from a shopkeeper caused lower

disturbance than the other issues.

Discussion

This study provides additional information related to medical education's effects on the students' social distance. Socio-demographic variables' and medical education's effects on social distance, and opinions about depression, were discussed based on the present data and related literature.

Influence of socio-demographic variables on social distance

Having a mentally ill family member, using psychiatry services, income level, age, gender and mother's education were not associated with social distance. These results are consistent with previous studies [5, 20, 21] that reported no relationship between attitudes toward people with mental illness and demographic variables such as age, gender, education, marital status and personal exposure. Some studies have reported that the desire for social distance increased with age [3, 22], while another study suggested that positive beliefs, attitudes and behavioural intentions were higher among the youngest [23]. No differences by age groups were found in a study from Australia [14]. With regard to gender and attitudes, our findings are consistent with the studies [3, 9, 23] that indicated no significant differences. However, some other studies have reported that females maintained greater social distance than males [2, 13, 22, 24]. With regard to previous contact and social distance, our results were similar to the results of studies that reported no differences [7, 19, 25]. Based on these results, it can be said that all the variables mentioned above had a minimal effect on social distance.

A significant relationship was observed between social distance and school type in this study. Our data imply that education level may increase the desire for social distance. This result was supported by numerous studies that implied an inverse relationship between educational level and social distance [3, 8, 10]. Faculty students had greater social distance than PEC students in our study. However, we thought that this was not an effect of faculty education because the first year students also had greater distance scores than PEC students. This finding implied that the difference may be associated with education before the faculty education.

Influence of medical education on social distance

Our data indicated that current medical education did not significantly reduce the desire for social distance from a person with depression. In a study carried out on medical students, Yanik et al reported no significant differences on social distance by school years except for one item [17]. A study from Turkey reported no statistically significant difference in the attitudes of first and final year medical students in terms of marriage, relationship, danger and physical examination, while the attitudes related to job opportunity were improved [16]. Another study carried out in a nursing school found that education of health professionals did not significantly affect their attitudes toward the mentally ill [26]. Our findings are also consistent with the numerous studies suggesting that health professionals had more negative attitudes than the public toward people with mental illness, including depression [8, 9, 10].

However, another study suggested that social distance from people with mental illness was lower in medical students than in the general public [24]. Another study reported that last year students had improved attitudes toward the mentally ill; however, they still had strikingly stigmatizing opinions and judgments [11]. A five-year follow-up study observed significantly favourable and unfavourable changes in medical students' attitudes toward people with mental disorders, while some of their attitudes were unchanged [15].

Baxter indicated that positive changes in medical students' attitudes toward psychiatry, psychiatrists and mental illness after their fourth-year psychiatry training were transient and decayed over the final year [13]. Our result also supports the assertion that medical education's effect on attitudes toward people with mental disorders is transient or minimal [10, 13, 15, 17].

Influence of medical education on opinions

As a result of their increased knowledge, final year medical students were able to recognize depression better than first year students. Our study indicated that some opinions had changed during medical education. Students who stated that hospitalisation was necessary for the person in the vignette were more frequent in the final year than in the first year. This result may be related to the biomedical education model without a psychosocial perspective. Today, it is known that most mental illnesses are influenced by biological, psychological and social factors. The WHO has reported that shifting patients from hospitals to community care is cost-effective [1], and may promote patients' quality of life and recognition of their human rights.

However, the final year medical students were less optimistic about the recovery from depression than the first year

students. Our results are consistent with some other studies in this regard [9, 16]. A follow-up study indicated that optimism about the effectiveness of treatment and prevention was lower in the sixth year than in the first year [15]. However, another study carried out in Istanbul asserted that 90% of the last year students perceived this condition as temporary and curable, compared to 75.7% of second year students [13]. The misconception that a person with depression can never be normal is common among medical students. Erasing these misconceptions may be useful for reducing discrimination and stigma.

Attitudes' frequency

Negative attitudes toward people with depression are common among the students. A majority of the students stated disturbances at the prospect of their sister marrying the person in the vignette. Nearly two-thirds stated that they would feel uncomfortable sharing a room in the workplace, and one-third subjects would feel uncomfortable about working with the person. The results of Ozmen's study reported that negative attitudes toward people with depression were common among the public [6]. These results were also similar to the results of studies from different countries [2, 4 5, 7].

The current medical education model, which can be defined as a biomedical approach, does not effectively promote positive attitudes toward patients with depression. Attitudinal change is a big challenge but it plays a significant role in public health education and in reducing discrimination and stigma. Humanity perspective in medicine may be useful to reduce social distance.

One of this study's limitations is that its subjects do not represent all of the medical students in Turkey. Other limitations are related to the study's cross-sectional methodology, and to the fact that the causal relationship is weak. The results

may be affected by a cohort effect or unobserved factors. The biomedical approach of the faculty is a typical model for most of the faculties. In order to clarify medical education's effects on students' attitudes and behaviours, further studies need to be carried out with more representative samples.

Conclusion

Medical students maintained greater social distance from people with depression than

did students who were at a lower educational level. We concluded that current medical education did not reduce social distance from people with depression. Negative attitudes toward people with depression were common among faculty students. Our findings may be useful to improve the medical curriculum and the perspective of medical education.

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