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# The Attitude of Iranian Students Toward Patients with Mental Illnesses in Different College Majors

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## Abstract

**Background:** This study was conducted to understand and compare the Iranian students' attitudes toward patients with mental illnesses in different college majors.

**Methods:** In this cross-sectional study, information about students' attitudes toward patients with mental illnesses was gathered through "The social distancing" and "The dangerousness" questionnaires.

**Results:** A total of 243 Iranian students in four different college majors: medicine, art, law, and engineering, participated in the study. The "social distance scale" was significantly different between the college majors (p=0.03), as the art students had the least stigmatizing attitude. Furthermore, there was no significant difference in the "dangerousness scale" between different college majors (p=0.93).

**Conclusion:** Understanding the attitude of students toward patients with mental illnesses and their differences is vital to perform proper interventions on stigmatizing behaviors for students as future specialists. Also, the underlying reasons for having a less stigmatizing attitude in certain groups should be recognized and employed to reduce stigmatizing attitudes in other groups.

**Keywords:** Attitude, College students, Education, Mental illnesses, Social stigma

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## Introduction

In ancient Greek society, the "Stizien" was a symbol given to enslaved people to distinguish them from others, determining their different social system positions and worthlessness. Today, the newer word "Stigma" is used from the same ancient roots, but with a new function to distinguish a particular group of people from others (1-5). Throughout history, certain groups of people, especially the mentally ill, have suffered from stigmatizing attitudes in almost every society, regardless of cultural and social differences. Patients with mental illnesses typically lose their reputation in the family and among friends, acquaintances, and the community (6). The stigmatizing attitude to mental illnesses can stem from a lack of understanding or information (7).

For centuries, patients suffering from mental illnesses have been treated brutally and primitively, and supernatural causes were believed to cause mental illnesses. Today, with scientific progress and the study of the causes, management, and treatment of mental illnesses, as well as advances in the production of psychiatric drugs, the world's attitude toward mental illnesses, in general, has changed (8).

The burden of mental illnesses worldwide is 1623 DALYs/100,000 in men and 2099 DALYs/100,000 in women (9). Mental illnesses are highly prevalent in Iran, and different studies showed that 16.7% to 36.4% of Iranian people suffer from mental health problems (10).

Stigmatizing attitude is not an individual's problem or part of a patient's illness but a social issue with more consequences than the illness itself. Almost 300 million patients with mental illnesses do not seek medical attention, since they fear being stigmatized (11). Research demonstrates that people's stigmatizing attitudes toward themselves and their fear of being rejected by others can lead people with mental illnesses to not taking advantage of life opportunities (12,13).

Understanding this stigmatizing attitude and reducing it may be as beneficial as eliminating the patient's underlying disease. Stigmatizing attitude disappears from society when the public sees people with mental illnesses capable of doing jobs and playing their role as spouses, children, parents, and neighbors. Research shows an inverse relationship between being associated with a person with mental illness and a stigmatizing attitude toward them (14,15).

Knowing the difference in the attitudes of university students toward mental illnesses, especially based on their college majors, is essential, as it can aid the policymakers and the providers of the educational materials to tackle the stigmatizing attitude inappropriate manners and reduce it in universities, as the most science-related places in the country. Yet, there are limited local studies regarding this matter. This cross-sectional study aims to determine and compare students' attitudes toward mental illnesses in four college majors of medicine, engineering, art, and law. Knowing that these four college majors are the four most popular ones with the greatest enrollment proportion, their graduates will be future legislators, doctors, artists, engineers, *etc*, playing crucial roles in society.

## Materials and Methods
### Design and participants

This study was performed at the University of Tehran in 2020. The University of Tehran is the most prominent university in Iran, including students in different majors, which was pivotal for comparison. The students come from all around the country, with different cultures, beliefs, and ethnicities.

Information about stigmatizing attitudes toward mental illnesses among the students of medicine and bachelor of science students of art, law, and engineering was gathered through questionnaires. The samples were collected randomly from first to third-year students of these majors, in order to exclude the role of fourth-year medical students' experience of clinical rotations on their judgment

### Inclusion criteria were as follows

Students studying in each of the four college majors, Students consenting to collaborate in the study, Individuals without a previously diagnosed mental illness based on self report.

### Exclusion criteria were as follows

Previously educated in another college major.

### Study instruments and research steps

In this study, stigmatizing attitudes toward patients

with mental illnesses were assessed using two measures: the "social distance scale" and the "dangerousness scale".

The students were given a self-administered questionnaire that consisted of two sections. The first section investigated the study population's demographic data, *i.e.*, year of study, age, sex, history of medical illness, and whether they have someone with mental illness in their family.

The second section was about a patient suffering from schizophrenia, whose illness was in remission, and the information about the patients' previous symptoms. After reading this part, the participants were asked to answer two measures, the "social distance scale" and the "dangerousness scale".

### The social distance scale

The social distance concept was first defined by Robert Park. By his definition, this scale shows the willingness of a person to have social relationships. In 1957, Cumming used this questionnaire about patients with mental illnesses (16). Further studies revealed that the "social distancing scale" has a high level of validity and reliability and can be employed to assess the stigmatizing attitudes toward patients with mental illnesses (14,17). In 2016, Kermani et al suggested that this scale is valid for ascertaining attitudes toward mental illnesses in the Persian language. Cronbach's alpha was 0.92, the test-retest reliability coefficient was 0.89, the content validity coefficient was 0.75, and factor analysis of the scale yielded one factor (18).

The "social distance scale" has seven questions and the participants rated each of them on a 4-point Likert scale (0 = "definitely willing" to 3 = "definitely unwilling"). Question 1 is: "How do you feel about renting a room in your home to that person?", question 2: "What do you think about working as a colleague in the same job as that person?", question 3: "How do you feel if someone like that person is your neighbor?", question 4: "What do you think about someone like that person taking care of your children for an hour or two?", question 5: "What do you think about your children marrying someone like that person?", question 6: "How do you feel about introducing someone like that person to a young lady who is your friend?", and question 7:

"How do you feel about advising someone like that person to a friend for a job?". A measure of social distance is derived by averaging the points of all statements. Higher scores show more discrimination and stigmatization.

### The dangerousness scale

The "dangerousness scale" can be utilized to assess ones' beliefs about whether a mentally ill individual is likely to be a danger to others.

The "dangerousness scale" was developed by Link in 1987 (16). Further studies indicated that it has a high level of validity and reliability and can be employed to assess the stigmatizing attitudes toward patients with mental illnesses (14,17). In 2016, Kermani *et al* showed that this scale is valid for ascertaining attitudes toward mental illnesses in the Persian language. Cronbach's alpha was 0.96, the test-retest reliability coefficient was 0.88, the content validity coefficient was 0.77, and factor analysis of the scale yielded one factor (18).

The scale contains eight statements. Statement 1 is: "If a group of former mental patients lived nearby, I would not allow my children to go to the movie theater alone", statement 2: "If a former mental patient applied for a teaching position at a grade school and was qualified for the job, I would recommend hiring him/her", statement 3: "One important thing about mentally ill people is that you could not say what they will do in the next minute", statement 4: "If I knew someone had been mentally ill before, I would be less likely to trust them", statement 5: "The main purpose of psychiatric hospitals is to protect the community from the dangers of the mentally ill people", statement 6: "If a former mental patient lived nearby, I would not hesitate to allow young children under my care on the sidewalk", statement 7: "Although some mentally ill people may look very good, it is dangerous to forget for a moment that they are mentally ill", and statement 8: "There should be a law forbidding a former mental patient the right to obtain a hunting license". The participants rated each of the statements on a 7-point Likert scale from "strongly disagree = 1" to "strongly agree = 7". A measure of dangerousness is derived by averaging the points of all statements. Higher scores show more discrimination and stigmatization.

**Table** 1. Demographic information of the participants and their distribution in college majors

| | | Medicine | | Engineering | | Art | | Law | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N=63 | 25.92% | N=67 | 27.57% | N=59 | 24.27% | N=54 | 22.20% | N=243 | 100% |
| Gender | Male | 33 | 52.38% | 38 | 56.71% | 27 | 45.76% | 29 | 53.70% | 127 | 52.26% |
| | Female | 30[1] | 47.61% | 29 | 43.28% | 32 | 54.23% | 25 | 46.29% | 116 | 47.74% |
| Marital status | Single | 58 | 92.06% | 65 | 97.01% | 55 | 93.22% | 52 | 96.29% | 230 | 94.66% |
| | Married | 5 | 7.93% | 2 | 2.99% | 4 | 6.77% | 2 | 3.70% | 13 | 5.34% |
| Family history of mental illnesses | Positive | 4 | 6.34% | 3 | 4.47% | 1 | 1.70% | 1 | 1.85% | 9 | 3.70% |
| | Negative | 59 | 93.65% | 64 | 95.52% | 58 | 98.30% | 53 | 98.15% | 234 | 96.3% |
| Age | | Mean=20.20 SD=0.49 | | Mean=20.22 SD=0.45 | | Mean=20.37 SD=0.58 | | Mean=20.66 SD=0.77 | | Mean=20.35 SD=0.6 | |

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**Table 2.** Social distancing scale average points (each question and the questionnaire) in college majors and all students

| | Medicine | Engineering | Art | Law | All students |
|---|---|---|---|---|---|
| How do you feel about renting a room in your home to that person? | Mean=1.49 SD=1.01 | Mean=1.44 SD=1.06 | Mean=1.06 SD=1.11 | Mean=1.46 SD=1.07 | Mean=1.37 SD=1.07 |
| What do you think about working as a colleague in the same job as that person? | Mean=1.53 SD=1.11 | Mean=1.47 SD=1.14 | Mean=1.55 SD=1.16 | Mean=1.33 SD=1.06 | Mean=1.48 SD=1.12 |
| How do you feel if someone like that person is your neighbor? | Mean=1.46 SD=0.98 | Mean=1.52 SD=1.13 | Mean=1.37 SD=1.01 | Mean=1.46 SD=1.09 | Mean=1.45 SD=1.05 |
| What do you think about someone like that person taking care of your children for an hour or two? | Mean=1.60 SD=0.97 | Mean=1.65 SD=1.09 | Mean=1.44 SD=1.07 | Mean=1.51 SD=1.09 | Mean=1.55 SD=1.05 |
| What do you think about your children marrying someone like that person? | Mean=1.76 SD=0.97 | Mean=1.73 SD=1.09 | Mean=1.37 SD=1.06 | Mean=1.42 SD=1.19 | Mean=1.58 SD=1.08 |
| How do you feel about introducing someone like that person to a young lady who is your friend? | Mean=1.71 SD=0.97 | Mean=1.55 SD=1.06 | Mean=1.40 SD=1.14 | Mean=1.33 SD=1.06 | Mean=1.51 SD=1.06 |
| How do you feel about advising someone like that person to a friend for a job? | Mean=1.41 SD=1.04 | Mean=1.73 SD=1.08 | Mean=1.52 SD=1.08 | Mean=1.46 SD=1.11 | Mean=1.53 SD=1.08 |
| Social distancing scale average point | Mean=1.56 SD=0.53 | Mean=1.58 SD=0.43 | Mean=1.39 SD=0.38 | Mean=1.42 SD=0.41 | Mean=1.50 SD=0.45 |

**Table 3.** Dangerousness scale average points (each question and the questionnaire) in college majors and all students

| | Medicine | Engineering | Art | Law | All students |
|---|---|---|---|---|---|
| If a group of former mental patients lived nearby, I would not allow my children to go to the movie theater alone. | Mean=3/61 SD=2/03 | Mean=3/34 SD=2/02 | Mean=3/84 SD=2/04 | Mean=3/92 SD=1/88 | Mean=3/66 SD=2/00 |
| If a former mental patient applied for a teaching position at a grade school and was qualified for the job, I would recommend hiring him/her. | Mean=4/07 SD=1/87 | Mean=4/13 SD=1/81 | Mean=3/93 SD=2/07 | Mean=4/33 SD=1/85 | Mean=4/11 SD=1/89 |
| One important thing about mentally ill people is that you could not say what they will do in the next minute. | Mean=3/53 SD=1/97 | Mean=2/26 SD=1/89 | Mean=4/40 SD=1/87 | Mean=3/68 SD=2/12 | Mean=3/98 SD=1/98 |
| If I knew someone had been mentally ill before, I would be less likely to trust them. | Mean=4/00 SD=1/93 | Mean=4/11 SD=1/83 | Mean=4/15 SD=1/93 | Mean=4/07 SD=1/77 | Mean=4/08 SD=1/86 |
| The main purpose of psychiatric hospitals is to protect the community from the dangers of the mentally ill people. | Mean=4/34 SD=1/71 | Mean=4/14 SD=1/78 | Mean=3/76 SD=2/14 | Mean=3/75 SD=2/09 | Mean=4/02 SD=1/93 |
| If a former mental patient lived nearby, I would not hesitate to allow young children under my care on the sidewalk. | Mean=3/63 SD=1/79 | Mean=3/56 SD=1/97 | Mean=3/86 SD=1/88 | Mean=4/16 SD=1/79 | Mean=3/79 SD=1/87 |
| Although some mentally ill people may look very good, it is dangerous to forget for a moment that they are mentally ill. | Mean=3/98 SD=3/01 | Mean=4/25 SD=2/03 | Mean=3/64 SD=1/92 | Mean=4/35 SD=1/78 | Mean=4/05 SD=1/95 |
| There should be a law forbidding a former mental patient the right to obtain a hunting license. | Mean=4/20 SD=2/04 | Mean=3/98 SD=1/86 | Mean=4/33 SD=1/75 | Mean=3/77 SD=1/71 | Mean=4/08 SD=1/85 |
| Dangerousness scale average point | Mean=3/92 SD=0/56 | Mean=3/97 SD=0/71 | Mean=3/99 SD=0/79 | Mean=4/00 SD=0/69 | Mean=3/97 SD=0/69 |

**Table 4.** Comparing the average points of questionnaires in different college majors

| | Medicine | Engineering | Art | Law | p-value |
|---|---|---|---|---|---|
| Social distancing scale average point | Mean=1.56 SD=0.53 | Mean=1.58 SD=0.43 | Mean=1.39 SD=0.38 | Mean=1.42 SD=0.41 | 0.031 |
| Dangerousness scale average point | Mean= 3.92 SD=0.56 | Mean=3.97 SD=0.71 | Mean=3.99 SD=0.79 | Mean=4 SD=0.69 | 0.934 |

**Table 5.** Comparing the average points of questionnaires in men and women

| | Female | Male | p-value |
|---|---|---|---|
| Social distancing scale average point | Mean=1.52 SD=0.47 | Mean=1.47 SD=0.43 | 0.385 |
| Dangerousness scale average point | Mean=4.02 SD=0.68 | Mean=3.93 SD=0.69 | 0.437 |

**Table 6.** Comparing the average points of questionnaires based on family history

|  | Positive family history of mental illnesses | Negative family history of mental illnesses | p-value |
|---|---|---|---|
| Social distancing scale average point | Mean=0٫90 SD=0٫34 | Mean=1٫52 SD=0٫44 | 0٫001 |
| Dangerousness scale average point | Mean=3٫83 SD=0٫63 | Mean=3٫98 SD=0٫69 | 0٫521 |

### *Data Analysis*

The results were expressed as mean and standard deviation (SD) for quantitative variables and percentages for qualitative variables. The statistical package (SPSS 22) was used to analyze the data. ANOVA compared the scores between different college majors. Mann–Whitney U test was applied to compare the scores between genders and groups with/without having at least one person suffering from mental illnesses in their families. For testing the significant differences, p-values were considered significant if less than 0.05.

## Results

A total of 243 students participated in the study. Table 1 contains the demographic data of the participants. The mean and standard deviation of the participants' scores in the "social distance scale" and "dangerousness scale" by college majors are listed in tables 2 and 3. Higher scores show more discrimination and stigmatization.

Scores obtained from the "social distance scale" were significantly different among students of different college majors (p=0.031). The order of scores obtained from less to more among these students was art, law, medical, and engineering students. There was no significant difference between the scores obtained on the "dangerousness scale" among students of different college majors (p=0.934) (Table 4).

There was no significant difference between the scores obtained in the "social distance scale" (p=0.385) and the "dangerousness scale" (p=0.437) scores among male and female students (Table 5).

The social distance scores obtained from the students in contact with a person with a known mental illness in the family were significantly different from other students (p=0.001). There was no significant

difference between the scores obtained on the "dangerousness scale" among these two groups of students (p=0.521) (Table 6).

## Discussion

In the present study, the "social distance scale" scores were significantly different among students in various college majors. Individual differences that cause people to tend to different college majors plus cultural and social conditions can cause differences in students' attitudes toward patients with mental illnesses, yielding this significant difference. Although few studies examine stigmatizing attitudes to patients with mental illnesses among students, especially in non-medical college majors, art students had significantly less stigmatizing attitudes than science students to patients with mental illnesses, as reported in previous studies. For example, in a study in Scotland on 642 students from different disciplines by conducting a questionnaire to assess their stigmatizing attitudes toward patients with mental illnesses, it was found that art students had a significantly less stigmatizing attitude to these patients, like our study (19). The stigmatizing attitudes among the students of all these college majors can influence the lives of patients with mental illnesses differently, based on the role of that college major and specialty in society. Less stigmatizing attitude in art students is essential, as they are future artists and persons who can change how patients with mental illnesses are viewed by their products. The stigmatizing attitudes in law students should be delicately considered, as they are future policymakers and legislators, as a means of diminishing stigmatizing attitudes toward patients with mental illnesses by the power of rules. Last but not least, medical students, whose stigmatizing attitudes can impact the way they treat patients with

mental illnesses and can even disturb their medical approach to them (20).

It was discovered that there is no significant difference between the scores obtained in the "dangerousness scale" among students of different disciplines. One of the reasons for this can be the lack of appropriate educational content to familiarize students with mental illnesses (21). People in the community are widely influenced by inaccurate or incomplete information received from the media about mental illnesses (22,23) through which their attitudes toward these patients are formed (24,25), and no academic education or knowledge in this area is given to members of the community. Another reason for this could be due to medical students not being fully engaged in the clinical sections of the psychiatric wards, thus increasing their chance of developing stigmatizing attitudes toward patients with mental illnesses. Numerous studies show that clinical education in psychiatric wards causes a significant change in medical students' views. For instance, in a study in the United Kingdom, a one-year follow-up of students using a questionnaire revealed that their stigmatizing attitudes had decreased after completing psychiatric rotations (26). Another study of 168 medical students at Tehran University of Medical Sciences found that their attitudes toward patients with mental illnesses improved significantly after undergoing psychiatric internships (27). Another study in Malaysia comparing stigmatizing attitudes between 108 first-year medical students and 85 final-year medical students found a significant difference between the two groups; final-year students showed significantly less stigmatizing attitudes (28). This possible reduction of stigma among medical students entering clinical rotations was the reason for excluding the fourth-year students from the study.

There was no significant difference between stigmatizing attitudes to patients with mental illnesses in the "social distance scale" and "dangerousness scale" between men and women in the present study. Other studies also have indicated this lack of difference, concluding that the stigmatizing attitudes toward patients with mental illnesses have been considered unrelated to the participants' gender (27). In the present study, people who had a family history of mental illnesses showed a significantly less stigmatizing attitude to patients with mental illnesses on the "social distance scale" than people without such a person in their family, and they had lower scores. However, there was no significant difference between the two groups on the "dangerousness scale" in the study; this can be due to the small sample size. Other studies have shown that stigmatizing attitudes toward the mentally ill are lower in persons with the previous contact with these patient, similar to our study (14,15). In another study in Indonesia, 1269 respondents were examined, which showed that having a person with mental illnesses in the family reduces stigmatizing attitudes toward patients with mental illnesses, as our results demonstrated. (29). Having a person with a mental illness in the family can be considered a long-term and effective contact with these patients, which is more effective than any other occupational or transient contact. In fact, family ties and emotional bonds come with it. Moreover, this seems to justify a less stigmatizing attitude among these people.

In the current study, 54 people (22.2%) were reluctant to work with a psychiatric patient. Another study of 1,444 adults in the United States found that more than half of the participants were reluctant to work with the mentally ill (30). In another study in Canada, using the "11 Indirect Index of Discrimination against the Mentally Ill", police officers' stigmatizing attitude toward their co-workers with mental illness was measured and found that 85% of the participants avoided having a superior or co-worker with a mental illness, 62% showed discriminatory behavior toward a co-worker with a mental illness in the workplace, and the majority did not want to have a manager with a history of mental illnesses (31). Overall, the students in this study have a better view of cooperation with patients with mental illnesses than other studies. Cultural and social differences and environmental factors in the academic environment can be significant factors in this regard.

### *Research limitations and suggestions for future research*

The lack of the students' cooperation in answering the questionnaires was the limitation of this study. Further studies are required to understand attitudes

toward patients suffering from mental illnesses. Different study designs such as a longitudinal study and a greater sample size can bring more accurate results. Following up on the study samples and using more measures and questionnaires also can be helpful. The current comparative study findings between different college majors of medicine, art, law, and art may not reflect entire university students' actual attitudes. Specific studies on each of these groups of students, based on their role in society, and even interventional studies on methods to reduce stigmatizing attitudes, are highly recommended.

## Conclusion

The stigmatizing attitudes toward patients with mental illnesses in the students of different college majors were studied, and it is concluded that it is different in the "social distance scale". Art students had the least stigmatizing attitudes, while the most stigmatizing attitudes belonged to engineering students. This difference is vital in order to implement the interventions on stigmatizing attitudes for the students as future specialists. The more stigmatizing attitude among a college major, the more interventions should be done. Knowing that there is a less stigmatizing attitude in certain groups, like art students, might lead the studies to understand the underlying reason and employ it to reduce stigmatizing attitudes in other groups. The groups with less stigmatizing attitudes, like ones with a positive family history of mental illnesses, can also be participated as a part of stigmatizing attitude-reducing programs, sharing their views and experiences about patients with mental illnesses.

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