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*Major Contribution/Research Article*

## Attitudes of Preclinical Medical Students towards Psychiatric Patients Before and After an Early Clinical Experience

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### Abstract

**Background:** Stigma or negative discriminatory attitudes towards psychiatric patients are common in the general public. These attitudes are also demonstrated by medical practitioners and by medical students, which can lead to medical harm to psychiatric patients. This study aimed to improve attitudes of medical students towards psychiatric patients before their clinical rotations.

**Methods:** Second year preclinical medical students participated in a brief structured early clinical experience which involved introduction to a psychiatric patient in a hospital/clinic setting or in a community vocational setting. Students were randomized to either setting. Data were collected one week before, one week after, and 3 months after the early clinical experience by administering the Medical Condition Regard Scale.

**Results:** The students' attitudes towards psychiatric patients improved, particularly at follow up. Only male student attitudes improved significantly.

**Conclusion:** Further study is required to understand and improve medical students' attitudes towards psychiatric patients, perhaps particularly in relation to female students' attitudes.

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## Introduction

The medical profession stigmatizes, i.e., holds stereotyped negative attitudes towards, psychiatric patients, which may contribute to deficient healthcare provided to these patients.<sup>1</sup> Medical students also express such psychiatric stigma towards psychiatric patients.<sup>2,3</sup> Medical students train in psychiatry during clinical rotations, which either improve such attitudes,<sup>4,5</sup> have no effects,<sup>6</sup> or have a negative effect.<sup>7</sup> Also, medical students stigmatize psychiatric patients, more than they stigmatize other patients, during their training.<sup>8</sup> Given that clinical rotations are focused on psychopathology and deviance, it may be necessary to intervene earlier for students to develop positive attitudes towards psychiatric patients. One way of improving attitudes of medical students may be to facilitate their human contact with psychiatric patients before the students' clinical rotations. Such early educational contact with psychiatric patients can be a part of a broader program of early clinical experiences.<sup>9</sup> This experience may be particularly important to conduct in non-medical community settings, as these settings may be more normalizing than hospital settings.<sup>10</sup> Structuring may be required, because the mere contact with psychiatric patients may not reduce stigma, as illustrated in research with other healthcare students.<sup>11</sup> Indeed, combining unstructured contact with education on misconceptions about psychiatric patients improved attitudes of medical students towards psychiatric patients.<sup>12</sup>

The primary purpose of the present study was to determine whether structured contact of preclinical medical students with psychiatric patients reduces student stigma towards such patients, i.e., improves student attitudes towards psychiatric patients. Second, we assessed the impact on these student attitudes of a supposedly stigmatizing learning setting, i.e., mental health centres (hospitals and clinics), as compared to a supposedly normalizing learning setting, i.e., community vocational rehabilitation units (where a mentally ill individual can be seen as a productive person rather than primarily as a patient). Third, we examined differences between male and female student attitudes before and after the educational intervention.

## Methods

All participants were second year medical students attending the Tel Aviv University School of Medicine. These preclinical students participated in structured early clinical experiences, each lasting approximately 4 hours.<sup>9</sup> Each student participated in 4 such experiences, with 3 to 7 other students during one of their preclinical years. Each experience had a different focus yet all experiences addressed socially disadvantaged populations, e.g., one experience occurred in a homeless shelter and another experience occurred in a clinic for illegal immigrants. The clinical experiences with psychiatric patients occurred either in mental health centres (MHC) affiliated with the Tel Aviv University School of Medicine, or in community vocational rehabilitation units (CVRU) supervised by the Israeli Ministry of Health mental health services. A total of 82 students - which was the total number of students in that particular year's class - were randomized to 14 small groups, consisting of 4 to 8 students per group, with each group allocated to one of the 2 types of settings. Teaching guidelines for the group instructors were uniform. In both types of settings, students started the experience with a group orientation to the setting, then each student had a psychiatric patient selected for them to converse with and to join for their routine as much as possible. The experience concluded with a group summary and discussion.

Data were collected at 3 points in time: one week pre-intervention and one week post-intervention as well as a 3 month follow-up. All of the data were collected during mandatory student discussion groups, which were conducted bi-weekly throughout the academic year. A code-identified anonymous form of the Medical Condition Regard Scale (MCRS), which is an 11-item self-report questionnaire, was used to measure the attitudes of the medical students (see appendix). The MCRS has been previously used to study stigma of medical students towards psychiatric (as well as other) patients and has demonstrated satisfactory internal consistency and reliability.<sup>8</sup> The questionnaire, which was translated into Hebrew and then back-translated into English successfully, focused on psychiatric disorders. Analysis of the summative (total) attitude score is reported here. The students were requested to note their sex and learning setting on the questionnaire

form. Data were analyzed using SPSS software, with a significance threshold less than or equal to 0.05.

The attrition rate was 6.2% at the first point in time, 16.9% at the second point in time, and 40.0% at the third point in time. There was a significant difference in the number of male students (66.7%) compared to female students (41.2%) who responded to the questionnaire ( $\chi^2 = 3.661$ ;  $df = 1$ ;  $p < 0.05$ ). To account for these missing cases, mean values of total scores were used in the repeated measures analysis. The mean and standard deviation of all total scores for each of the 3 points in time were 48.67 (5.27) for the first point in time, 48.81 (6.31) for the second point in time, and 50.65 (5.44) for the third point in time.

Repeated measures analysis of co-variance (ANCOVA), utilizing SPSS General Linear Modeling (GLM), was used to compare pre-, post-intervention, and follow-up ratings by (type of) setting - MHC versus CVRU - and by sex, with pre-intervention rating included as a baseline covariate. For significant differences, pairwise multiple comparisons in GLM were planned to further investigate any significant interaction effects. For time-by-sex and setting-by-sex interactions, pairwise comparisons were computed separately for men and women, using Bonferroni's test.

## Results

Only those students with complete data across all 3 points in time were included, resulting in a total sample of 65 students (52% female; 48% attended a MHC). There was no baseline difference in student attitudes by sex. The reliability (Cronbach's alpha) of the total attitude score with imputed missing values was as follows: first point in time,  $\alpha = 0.62$ ; second point in time,  $\alpha = 0.75$ ; third point in time,  $\alpha = 0.80$ .

The results of the GLM analysis revealed a significant time effect for total attitude scores ( $F = 4.01$ ,  $p < 0.05$ ). Specifically, total attitude improved between the first point in time and the third point in time, with a mean difference of 1.79 ( $p < 0.05$ ). Post-hoc analysis revealed that the total attitude score improved from the first point in time to the third point in time for male students ( $F = 7.03$ ,  $p < 0.01$ ), with a significant mean difference of 0.78 ( $p < 0.01$ ). There were no such significant time differences for female students, and there were no significant differences between settings.

## Discussion

The early clinical experience of preclinical medical students with psychiatric patients was associated with improvement of the students' total attitude scores towards such patients, particularly at follow up. This improvement was shown in male - but not female - students' total attitude scores. There was no difference between types of learning settings. The findings of this study suggest that supposedly normalizing learning settings, such as community vocational rehabilitation units, may not be less stigmatizing than orthodox medical learning settings, such as hospitals and clinics (although the community vocational rehabilitation units used for this study were segregated, which may have induced stigma). The findings also suggest that students' baseline attitudes towards psychiatric patients are not dependent on student sex, but that student sex may determine whether these attitudes improve, as only male student attitudes improved. It should be noted that these students' baseline attitudes were better than those previously shown with this questionnaire for American medical students regarding psychiatric patients,<sup>8</sup> hence, there may be cross-cultural differences in psychiatric stigma of medical students.

This study has limitations. Theoretically, one encounter, even though structured, may not be sufficient to impact attitudes and stigma in the long term. Methodologically, the sample was not large, so its power to reveal positive findings is restricted, therefore only the total score was used. The attitudes measured could be confounded by attitudes towards the psychiatric profession, rather than only towards psychiatric patients, as both have been shown to be negative in medical students.<sup>13</sup> Also, the teaching may have varied across groups within and between settings, as each group had a different teacher. The sample was taken from one class of one medical school in one country, so that it may not represent many other medical students.

The findings reported here suggest that structured early clinical experiences of medical students with psychiatric patients may be educationally beneficial for male students, and that this effect is relatively long-lasting (for months) and not dependent on type of learning setting. Further study of such educational interventions is in order, with larger student samples, in different settings, and with additional evaluation tools such as

interviews. It is important to find ways of improving attitudes of medical students towards psychiatric patients, perhaps particularly for female students, e.g. by arranging student meetings with family members of psychiatric patients, as some students may be able to empathize more easily with family members than with these patients. Such educational developments have the potential to improve the health care of psychiatric patients.

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## Appendix

### Medical Condition Regard Scale

Please use the scale below to rate your degree of agreement or disagreement with each of the following items regarding patients with psychiatric disorders.

1	2	3	4	5	6
strongly disagree	disagree	not sure but probably disagree	not sure but probably agree	agree	strongly agree

**Please Circle**

1.	Working with patients like this is satisfying.	1	2	3	4	5	6
2.	Insurance plans should cover patients like this to the same degree that they cover patients with other conditions.	1	2	3	4	5	6
3.	There is little I can do to help patients like this.	1	2	3	4	5	6
4.	I feel especially compassionate toward patients like this.	1	2	3	4	5	6
5.	I prefer not to work with patients like this.	1	2	3	4	5	6
6.	I wouldn't mind getting up on call nights to care for patients like this.	1	2	3	4	5	6
7.	Treating patients like this is a waste of medical dollars.	1	2	3	4	5	6
8.	Treating patients like this are particularly difficult for me to work with.	1	2	3	4	5	6
9.	I can usually find something that helps patients like this feel better.	1	2	3	4	5	6
10.	I enjoy giving extra time to patients like this.	1	2	3	4	5	6
11.	Patients like this irritate me.	1	2	3	4	5	6