ORIGINAL ARTICLE

# Medical Students' Experiences of Mistreatment in Educational Hospitals

Sedigheh Ebrahimi[1], MD;
Vahid Reza Zarei[1], MD

[1]Department of Medical Ethics, Shiraz University of Medical Sciences, Shiraz, Iran

Correspondence:
Vahid Reza Zarei, MD;
Department of Medical Ethics, Shiraz University of Medical Sciences, Shiraz, Iran
**Tel:** +98 71 32348980
**Fax:** +98 71 32348980
**Email:** shethmed@gmail.com
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## Abstract

**Background:** Mistreatment with medical students is a global phenomenon, which has been proved in several studies. The aim of this study is to investigate the extent of mistreatment that the medical students experience in educational hospitals of Shiraz University of Medical Sciences.

**Methods:** This cross-sectional study was carried out using descriptive-analytical method. All medical students were studied in educational hospitals of Shiraz University of Medical Sciences by census method. A questionnaire with 26 questions was used to collect data on demographic information, experience of mistreatment and observation of mistreatment towards the other students and open-ended questions. Data were analyzed using SPSS version 18 software.

**Results:** The results of the study showed that 86.3% of the students experienced at least one kind of mistreatment during the previous year; among these misbehaved students 57.5% were female and 42.5% were male. The most cases of mistreatment were verbal mistreatment (95.1%) and abuse of authority (76.2%). The highest number of mistreatment has taken place in obstetrics and gynecology (OB-GYN) departments (60.3%) and in internal departments (49.2%), respectively; most of the individuals who misbehaved toward the students were residents (73%),nurses (66.7%), and interns (60.3).

**Conclusion:** Regarding the high prevalence of mistreatment against medical students, there is a need for a plan for training communication skills and more support for students in this field.

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## Introduction

Mistreatment with medical students is a global phenomenon and is referred to as behavioral disrespect to the students' rights and dignity. This phenomenon has been described as the main source of stress in students and has negative effects on their performance and health. It can lead to loss of academic performance and ability to obtain professional training.[1-4] Also, in long time, it can lead to the occurrence of psychological disorders including depression and suicide.[1-4]

Unfortunately, the studies which were conducted during the last two decades in different countries indicated the unprofessional and abusive behavior of professors, residents, interns, and nurses, especially in hospital wards against medical students.[5] Based on previous studies, regading the definitions, the experience of mistreatment by medical student varies from 42% to 91%.[6, 7] Globally, similar studies have reported that many students mentioned experiencing at least one type of mistreatment during their study courses mostly in the form of verbal violence.[1, 3, 6-11] Diverse studies also declared that due to socio-economic, cultural, religious varieties, behaviors defined as mistreatment in one situation may be considered acceptable (e.g., corporal punishment) in another situation. Therefore, some aspects of

mistreatment with medical students during clinical education in different countries and even in different parts of a country are not similar to each other. Further research is recommended to reach a better understanding about different aspects of mistreatment in order to provide appropriate solutions and prevent this phenomenon.[2, 12]

In this regard, reviewing the viewpoints of medical students can also have strategic values. In this research, we planned to investigate various aspects of mistreatment against medical trainees in educational centers of Shiraz University of Medical Sciences, Shiraz, Iran.

## Materials and Methods

This is a descriptive-analytic cross-sectional study conducted using a cross-sectional method. All medical students (trainees) in the 4th year of educational period working in different departments of educational hospitals of Shiraz university of medical sciences were selected through census method. Those individuals who did not agree to participate were excluded.

Mistreatment against medical students was investigated in five parts consisting of Verbal mistreatment (behaviors such as improper speech, humiliation, shouting, stinging, threatening, intimidation , irascibility and impoliteness, accusation , etc.); Physical mistreatment (any movement that causes pain and physical damage); Mistreatment and sexual discrimination (behaviors that result in neglect, discrimination, loss of educational opportunities and educational promotions, lower scores, inappropriate physical and verbal behavior, etc. because of gender); Ethnic mistreatment (Behaviors that happen due to race and ethnicity, urbanity and rurality, and the type of accent and language that cause inappropriate words, neglect, lower marks, etc.);[9] and mistreatments which are caused by abuse of authority (behaviors that indicate the use of power for financial exploitation or personal actions, threats for giving lower mark, etc.).[9] A five-part questionnaire was used to collect the data including personal information and questions about the experience of mistreatment and its types, the person who has exercised mistreatment and the department in which he/she was misbehaved (13 questions), questions about the report of mistreatment to the hospital authorities and the level of satisfaction of students about performance of the authorities (8 questions), questions about observed mistreatment directed toward other students and the person who has committed the mistreatment and also about reporting the mistreatments to the hospital authorities (5 questions), and participants' perspectives on mistreatment (3 open-ended questions). A five-point Likert scale (with the range of 1=not satisfied at all to 5=very satisfied) was used to evaluate the students' viopoints. The questionnaire used was prepared by the Association of American Medical Colleges (AAMC). After the translation and back-translation of the questionnaire, it was reviewed and adapted based on Iranian-Islamic culture.[13] The face and content validities of the questionnaire were approved by a panel of 10 experts of the medical ethics and psychiatrists (CVR>0.62). After determining and calculating CVR (CVR>0.62), CVI was evaluated for each item of the questionnaire, regarding the three criteria of specificity, simplicity and clarity or transparency, based on a 4-point Likert scale (CVI>0.70). Finally, the questionnaire was reformed until the highest CVR and CVI scores were attained and both of them were satisfactory. In a pilot study, the questionnaire was distributed among 30 students and was completed twice; its reliability was confirmed with a correlation coefficient equal to 0.73.

Before completing the questionnaire by the students, the reasons and necessities of the study and its ethical issues, including the confidentiality of the questionnaire information and the freedom to participate in the study, were explained. Data were analyzed in SPSS software version 18.0 (IBM™, USA) using frequency distribution tables and descriptive statistics such as percentage, mean, and standard deviation.

## Results

In this study, 160 questionnaires were distributed, of which 139 were completed (Response rate: 86%); 122 (87.8%) participants stated that they had been misbehaved during their clinical course. 68 (55.7%) of them reported more than one case of mistreatment (it was possible for the students to report more than one type of mistreatment). Students were in the demographic profile of 20 to 25 year old ones. Their gender distribution and marital status are shown in Table 1. The most mistreatment occured was verbal mistreatment due to the use of authority, and that due to gender (Table 1).

In general, the most frequently cited sources of mistreatment were residents (75.4%), and then nurses, interns, clinical professors, patients, and other personnel (68.9%, 62.3%, 39.3%, and 32%, respectively). There was no significant difference between the married and single paticipants (P>0.05). Also, the most frequent source of physical mistreatment, authority harassment, and gender-based mistreatment were done by residents and then nurses. The highest rate of ethnic mistreatment by residents was reported by 22 students, while 18 individuals declared the highest rates were seen in clinical professors.

The setting reported with the most incidence of mistreatment was OB-GYN ward (n=76; 30%) and then internal medicine wards (62; 25.2%). The least

**Table 1:** The Number of Students Reporting their Abuse (by the type of mistreatment experienced)

| Mistreatment experienced N (%) | Demographic characteristic | N (%) | P value | Repeated mistreatment experienced N (%) | One time mistreatment experienced N (%) |
|---|---|---|---|---|---|
| Verbal 117 (95.1%) | Male | 50 (42.8) | 0.43 | 24 (19.5%) | 21 (17.1) |
| | Female | 67 (57.2) | | | |
| | Single | 95 (83.3) | 0.98 | | |
| | Married | 22 (91.6) | | | |
| Physical 12 (9.8%) | Male | 7 (58.4) | 0.15 | 1 (0.8%) | 5 (4.1) |
| | Female | 5 (41.6) | | | |
| | Single | 9 (7.8) | 0.02 | | |
| | Married | 3 (12.5) | | | |
| Power harassment 93 (76.2%) | Male | 37 (39.8) | 0.71 | 27 (22.1%) | 20 (16.4) |
| | Female | 56 (60.2) | | | |
| | Single | 74 (64.9) | 0.76 | | |
| | Married | 19 (79.1) | | | |
| Gender-based mistreatment 79 (64.7%) | Male | 34 (43) | 0.28 | 14 (11.5%) | 9 (7.3) |
| | Female | 45 (57) | | | |
| | Single | 62 (54.3) | 0.81 | | |
| | Married | 16 (66.6) | | | |
| ethnic discrimination Civil status 29 (23.7%) | Male | 9 (34.6) | 0.16 | 2 (1.6%) | 6 (4.9) |
| | Female | 19 (65.4) | | | |
| | Single | 20 (17.5) | 0.44 | | |
| | Married | 8 (33.3) | | | |
| Total 122 (100%) | Male | 51 (42.5) | 0.46 | 68 (55.7%) | |
| | Female | 69 (57.5) | | | |
| | Single | 97 (85) | 0.97 | | |
| | Married | 23 (95.8) | | | |

**Table 2:** Frequency of mistreatment in each clinical rotation

| Department | Gender | N (%) | P value |
|---|---|---|---|
| OB-GYN | Male | 37 (48.6) | 0.037 |
| | Female | 39 (51.4) | |
| | Single | 62 (81.6) | 0.061 |
| | Married | 14 (18.4) | |
| Internal medicine | Male | 29 (46.8) | 0.217 |
| | Female | 33 (53.2) | |
| | Single | 49 (79) | 0.573 |
| | Married | 13 (21) | |
| Pediatrics | Male | 20 (35) | 0.2 |
| | Female | 37 (65) | |
| | Single | 40 (70.1) | 0.006 |
| | Married | 17 (29.9) | |
| Surgery | Male | 21 (38.8) | 0.638 |
| | Female | 33 (61.2) | |
| | Single | 39 (72.2) | 0.012 |
| | Married | 15 (27.8) | |

mistreatment incidence was reported in pediatrics department (n=57;23%) of students and then in surgery department (54; 22%) (Table 2).

The most cases of verbal mistreatments had occurred in the OB-GYN ward (59.8%), with statistically significant difference compared with other rotations (P=0.007). Approximately 50% of the students reported mistreatment experiences by managers and authorities. The individuals who reported mistreatment included 33 (42.9%) faculty members, 28 (36.8%) university administrators, 6 (7.8%) student advisors, and 11 (14.3%) sessions coordinators.

In addition, 26% of the students reported mistreatment from themselves to other individuals, such as residents, sub-specialty fellows, hospital supervisors, etc. The most common reasons for those who did not report mistreatment to the authorities were fear of retaliation for the perpetrators of mistreatment in 27.5% of students (Table 3). The other reasons mentioned by the participants included lack of trust on the authorities to address their problem, being

**Table 3:** The causes of non-reflection of mistreatment

| Causes of non-reflection of mistreatment | Male N (%) | Female N (%) | P value |
|---|---|---|---|
| It was not so important to inform | 13 (68.4) | 6 (31.6) | 0.532 |
| Fear of retaliation for abusive individuals | 5 (22.7) | 17 (77.3) | 0.07 |
| I did not know what to do | 6 (31.5) | 13 (68.5) | 0.462 |
| Others | 8 (34.7) | 15 (65.3) | 0.644 |

**Table 4:** Students' satisfaction with the performance of authorities regarding mistreatment

| Question / Satisfaction | Satisfied N (%) | No idea N (%) | Unsatisfied N (%) |
|---|---|---|---|
| Satisfaction with the performance of relevant authorities in dealing with the issue of mistreatment | 7 (6.1) | 38 (28.8) | 86 (65.1) |
| Being satisfied with providing an easy and non-threatening solution to the problem of mistreatment | 25 (18.8) | 39 (29.3) | 69 (51.8) |
| Satisfaction with the clarity and guarantees provided by the authorities | 10 (7.5) | 26 (45.1) | 97 (72.9) |
| Compliance with justice in dealing with complaints and issuing sentences by authorities | 10 (7.5) | 29 (21.8) | 94 (70.7) |
| Satisfaction with approving the rights by the authorities | 8 (6) | 31 (23.5) | 93 (70.5) |

accustomed to mistreatment, boredom to pursue the problem, etc. Chi square test was applied to compare the differences between male and female subjects. ($P \leq 0.05$ was considered the level of significance).

The students' satisfaction with the performance of authorities regarding misconduct is represented in Table 4.

128 (92.1%) students had witnessed mistreatment towards other students. From the perspective of students, the most individuals who misbehaved with other students included: residents (n=105; 82%); interns (n=98; 76.6%); nurses (n=74; 57.8%); clinical professors (n=66; 51.6%); and other hospital staff (n=42;32.8%); 44 (34.4%) students reported mistreatment toward other students to the relevant authorities for investigation; 24 (17.2%) students responded the open questions at the end of the questionnaire which were related to mistreatments that were not mentioned in the form as: being disrespected by the professors, inappropriate views by some of the residents to female students, imposing off-responsibility tasks on students, throwing the patient's files toward students, and other mistreatments such as not paying attention to the students' demands in the ward, having unfair views toward them, ignoring them as one of the effective factors in treatment, using students as observers who just fill the space in seminars and congresses, and lack of attention to their training process.

## Discussion

The present study showed that 86.3% of medical trainees in medical sciences experienced at least one case of mistreatment during the previous year. The results indicated that although the rate of mistreatment against medical students in Shiraz educational hospitals was not as high as hospitals in the US (98.9%) and Nigeria (98.5%), it was higher than the neighboring countries such as Pakistan (62.5%) and Japan (68.5%).[3, 1, 9, 10] This difference may be due to different definitions of mistreatment in different cultures; probably, the greater frequency of mistreatment in the present study is due to the reason that Shiraz, as one of the large medical centers in the south, accepts patients with different cultures and ethnicities from different parts of the country as well as other countries, including the countries in the south of the Persian Gulf, and this city has a great deal of therapeutic load exposed to this center as well as the students.

In general, no significant difference was found in the overall prevalence of mistreatment with female and male students. The overall rate of mistreatment against female students (89.6%) was slightly higher than male students (82.2%). Female students compared to male ones were misbehaved more verbally, abuse of authority , sexual and ethnicity mistreatment, but they were misbehaved physically less than the male students. However, in the study of Shoukat et al., mistreatment with female students was more than male students.[10] In the study by Rautio et al., female students were misbehaved more than male ones.[11] Also, Frank and colleagues did not find any significant difference between mistreatment with male and female students.[6] As to our study, like some other studies, the rate of general mistreatment was higher for female students, so more attention should be paid to them.

In this study, it was found that the most mistreatment exercised against medical trainee students were verbal mistreatment and that caused by the use of authority, and the lowest amount committed was related to physical mistreatment; however, in the study by Uhari

et al. the most exercised mistreatment was sexual mistreatment.[14] In the study by Joyce and colleagues, the most mistreatment that have been exercised were verbal humiliation and that caused by the abuse of authority.[9] Also, in the research conducted by Owoaje et al., the most cases of mistreatment were related to shouting (92.6%) and verbal humiliation (87.4%).[1]

In the study by Rautio et al., the most cases of mistreatment included verbal humiliation (40%) and threating to give lower mark (34%).[11] A recent meta-analysis reported that the pooled prevalence of harassment and discrimination among medical students was 59.6% and that of verbal harassment was 68.8%.[8] Given that in our study, as in other studies, verbal mistreatment was more prevalent, which can be due to the fatigue and stressful workplaces, it is suggested that the authorities should pay more attention to this kind of mistreatment.

During this study, it was found that the most cases of mistreatments against medical trainees were done by residents (73%) and nurses (66.7%) and the least by clinical professors (38.1%) and other hospital staff (30.2%), while in the some other studies, the most cases of mistreatment were applied by clinical professors.[1, 3, 10] In the study conducted by Rautio et al., the most cases of mistreatment were imposed by subspecialty fellows and senior students.[11] Residents and clinical professors were most often reported as the sources of mistreatment in some other studies.[6, 9] This difference can be caused by increased excitability due to the stressful educational situation and the high clinical workload and high workload of patient care provided by residents, which leads to the transfer of job stress and anger to the medical students due to their lower position in the hierarchy.

The present study indicated that the most cases of mistreatment occurred in OB-GYN and internal medicine wards, and the least in pediatric and surgical wards; however, in the some other studies, the most cases of mistreatment occurred in the surgical wards.[1, 3, 15] In the study by Richardson et al. in the United States, the most cases of mistreatment had occurred in OB-GYN and surgery wards and the least in the family medicine ward.[16]

This difference may be justified, given the cultural differences and the fact that most of the staff in OB-GYN department in Iran are women who are more vulnerable to job stressors.[2] Also, the reason for the low rate of mistreatment in the surgical department in our study may be explained by less involvement of students in educational discussions and practical work, such as going to the operating room.

Student's suggestions and strategies in this open-survey can be broadly categorized into seven main groups, as follows:

1. Selecting the committed and expert individuals as someone who feels responsiblility for trainees

2. Appointing the trainees' responsibilities to a specialist master

3. Setting deterrent laws, rules and penalties for offenders

4. Directly supervising the responsible individuals for addressing mistreatment

5. Evaluating of professors, residents, etc. by trainees at the end of the related section

6. Reducing the impact of residents on giving mark to trainees

*Limitations*

This study has some limitation in terms of generalizing the results to all the medical schools due to the limitations of the study location. The other limitation of the study is that its results may suffer from some misperceptions that arised from misunderstanding of the mistreatment.

## Conclusion

The present study indicated that the experiences of mistreatment by medical students are common in clinical environment. Considering the impact of the first phase of entering to clinical sections to motivate and create positive attitude towards the medical students' professional identity and their future career, a lot of attention must be paid to preparing a supportive environment for them during the medical training. Appropriate educational planning should be developed for the protection of medical student against mistreatment.

## Compliance with Ethical Standards

Relevant ethical guidelines for data collection, storage, and processing were followed throughout the research. Moreover, the study objectives were discussed for all of the participants. The voluntary nature of participation was explained before completion of the questionnaire and they also signed an informed consent. They were assured about the confidentiality and anonymity of the data. The study protocol was approved by medical ethics committee of Vice-Chancellor for Research in the School of Medicine at Shiraz University of Medical Sciences, Shiraz, Iran (numbered as 5021).

**Conflict of Interest:** None declared.

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