

Forensic Aspects of Medical Student Abuse: A Canadian Perspective

Katalin J. Margittai, MD, FRCP, Rebeka Moscarello, BA, MD, FRCP, and Miriam F. Rossi, MSc, MD, FRCP, FAAP

The mistreatment and consequences of mistreatment involving medical students have only recently been recognized and studied. This article reports on the nature, frequency, and sequelae of "abuse" that is prohibited by the Criminal Code of Canada, as experienced by fourth year medical students. A 160-item, multiple choice questionnaire, the Medical Student Abuse Survey (MSAS), was administered on a voluntary and anonymous basis in February 1992 and 1993 at the University of Toronto (Canada) Faculty of Medicine. All students enrolled in their fourth year ($n = 500$) were eligible. Of those present when the survey was administered ($n = 415$), 72.5 percent (301 of 415) responded. Of all respondents, 8.3 percent (25 of 301) experienced either threats of bodily harm, assault, or assault with a weapon; 12.6 percent (38 of 301) experienced physical sexual advances; four students experienced both. Perpetrators were most often clinicians in a surgical setting. Only about one-third of these students (21 of 59) complained to someone in a position of authority within the medical school, and no one reported these incidents to the police. There is a need within medical training programs to disseminate a "code of conduct" to all parties, familiarize students with complaint procedures, and improve the identification and rehabilitation of perpetrators. The lack of objective measures for verifying students' experiences of abuse remains a limitation of this study.

Physicians' behavior has recently come under scrutiny in Canada. In 1991, the

College of Physicians and Surgeons of Ontario (the medical regulatory body of the country's most populous province), created an independent task force to investigate complaints of sexual abuse of patients. Many of its recommendations have since become law, including the requirement that doctors report their colleagues to the authorities if there is reason to believe they have committed sexually abusive acts, whether physical or verbal.¹

Physicians' conduct toward medical students, however, has been largely ignored. It is only since the 1980s that this

Dr. Margittai is an assistant professor, Department of Psychiatry, University of Toronto, and coordinator, Consultation-Liaison Service and Undergraduate Medical Education for the Department of Psychiatry, Womens College Hospital; Dr. Moscarello is an assistant professor, Department of Psychiatry, University of Toronto, and coordinator, Psychiatric/Mental Health Outpatient Clinics, Womens College Hospital; and Dr. Rossi is an assistant professor, Department of Paediatrics, and Associate Dean of Student Affairs, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada. This study was supported by the Department of Psychiatry and the Undergraduate Medical Education Office, Faculty of Medicine, University of Toronto. Address correspondence to: Dr. K. J. Margittai, 76 Grenville St, Room 941, Toronto, Ontario, Canada M5S 1B2.

topic has been explored from the medical students' perspective,²⁻⁵ and it was 1991 before the first Canadian study looking at medical students' experiences of abuse was undertaken.⁶ While the allegations may be similar, these cases are usually determined by local university policy (which defines the mistreatment, outlines the procedures for making a formal complaint, and describes the range of disciplinary measures).⁷

Although certain stresses may be inherent in the practice of medicine or in the role of "student,"^{8,9} others may be unnecessary, unethical or even illegal. This study focuses specifically on those experiences of mistreatment that are proscribed by the Criminal Code of Canada: threats of bodily harm (S264.1), physical assault (S265), assault with a "weapon" (S267), sexual assault (S265; S271-278), and exposure to pornography (S163).¹⁰ In contrast to previous studies in which abuse is broadly defined,²⁻⁶ we felt that it was important to make a distinction in the severity of abusive experiences and that the Criminal Code could provide an objective cut-off for only the most serious transgressions.

Methods

Study Design A 160-item, multiple choice questionnaire, the Medical Student Abuse Survey (MSAS),⁶ was used to collect data on students' demographic characteristics and experiences of abuse both prior to entering medical school and during their current year of studies. It was designed to be administered to large groups and completed within 30 minutes.

The MSAS separates abuse into three

distinct categories: verbal/emotional, sexual, and physical. For this study, we focused only on those questions that pertain to mistreatment that is in contravention of existing statutes (Appendix 1). The MSAS also covers the sources and settings for such mistreatment. The final section deals with the emotional, somatic, and behavioral (reporting and perpetuating) sequelae of having been abused. Students rated their perception of how severely each type of abuse had affected them on a five-point scale. Students also recorded whether they had experienced any symptoms commonly connected with posttraumatic stress (modified from DSM-III-R).¹¹

The reporting of abuse was to "no one, family/close friends, supervisor/mentor, Deans' office, and/or the police," while reasons for not reporting were chosen from a list of five common possibilities. Perpetuating abuse of others was assessed on a three-point scale (never, rarely, sometimes) by asking students "have you ever found yourself treating anyone in such a way that you regretted (i.e., made you feel uncomfortable, guilty, or ashamed) either at the time, or later?." The term "anyone" referred to a classmate/peer, subordinate/more junior medical student, patient or patients' family, nurse or other health-care worker, a secretary or other support staff, and family member/spouse or close friend.

Subject Selection All fourth-year medical students at the University of Toronto Faculty of Medicine in February 1992 and 1993 (n = 500) were eligible for this study. Only students in their final year were chosen, because previous find-

Medical Student Abuse

Table 1
Comparison of Demographic Variables by Year of Study^a

Demographics	1992, N = 146		1993, N = 155	
	(% of Respondents)		(% of Respondents)	
Age	24 to 26 years	(64)	24 to 26 years	(61)
Sex	Male	(59)	Male	(65)
Ethnicity	Caucasian	(56)	Caucasian	(54)
Civil status	Never married	(84)	Never married	(88)
Disability	Any	(01)	Any	(02)
Education	2 years/BSc	(46)	2 years/BSc	(49)
Discipline	Basic science	(70)	Basic science	(77)
Prior work	Summers only	(59)	Summers only	(69)
Religion	Catholic	(24)	Catholic	(28)
SES ^b	I, II, and III	(81)	I, II, and III	(84)

^aNo significant differences at $p < .05$.

^bSES, socioeconomic status; classes I-V as defined by Hollingshead.¹²

ings had indicated that this was the group at greatest risk for abuse.⁶ The MSAS was distributed to all students following a practice examination for licensure by the Medical Council of Canada. Attendance was not compulsory, and participation was voluntary and anonymous.

Data Analysis Computer analysis of the data was done by a consultant statistician using the Statistical Package for the Social Sciences program (version 4.1, SPSS Inc., Chicago). Relationships between different variables were determined by cross-tabulations. Probability values were calculated using the chi-square statistic. Only results with an associated probability value of less than .05 were considered significant.

Results

Survey Responses In 1992, 250 students were enrolled in their fourth year of medical school at the University of Toronto; 205 were sampled and 146 responded. In 1993, 250 students were en-

rolled; 210 were sampled and 155 responded. This gives an overall sampling rate of 83.0 percent (415 of 500), with 72.5 percent (301 of 415) of those surveyed responding. Among the 114 students who were surveyed but chose not to respond, the single most common reason for not participating was that they were "on call" and had to return to their base hospital.

The demographic make-up of both classes was similar (Table 1) and was consistent with previous data on medical student class composition at the University of Toronto.⁶ In addition, no significant demographic differences were found between students eligible for this study (N = 500), and those who participated (N = 301). Therefore, respondents were believed to comprise a representative sample of the total student population in both fourth-year classes.

Experiences of Abuse If verbal abuse is included, some form of mistreatment during the current year in medical school

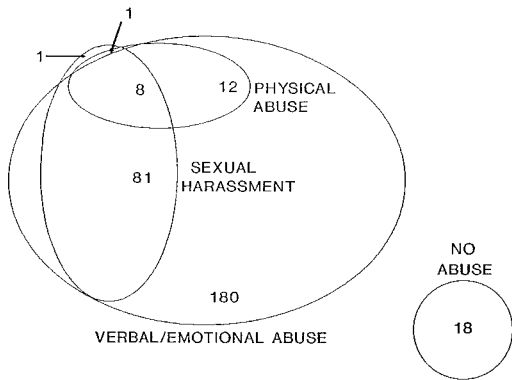


Figure 1. Types of abuse experienced by fourth-year medical students in 1992 and 1993 (N = 301). Verbal/emotional abuse only, n = 180; Sexual harassment only, n = 1; Physical abuse only, n = 0; Sexual harassment and physical abuse only, n = 1; Verbal/emotional abuse and sexual harassment only, n = 81; Verbal/emotional abuse and physical abuse only, n = 12; Verbal/emotional abuse, sexual harassment, and physical abuse, n = 8.

(Figure 1), was experienced at least once by 94% (283 of 301) of all respondents. Four male students experienced threats of physical harm (4 of 301, 1.3%). Twenty one students, 8 women and 13 men, experienced physical assault (21 of 301, 7.0%). Thirty-eight students, 34 women

and 4 men, recorded some form of physical sexual advances (38 of 301, 12.6%). Only 4 male students experienced both physical assault and sexual advances. Thus, a total of 19.6 percent of respondents (59 of 301) experienced behaviors that contravene existing statutes. Exposure to pornography was noted by another 13 percent of respondents (39 of 301).

Personal characteristics did not appear to predispose students to abuse. The only demographic variable to show an exception was sex; 30.0 percent (34 of 113) of female students, versus 2.2 percent (4 of 185) of male students, reported experiencing some form of physical sexual advances ($\chi^2 = 49.2, df = 1, p < .00001$).

Sources of Abuse The most frequently cited sources of physical abuse were clinicians (Fig. 2). The clinical rotation identified as the setting for most of this abuse was Surgery (Figure 3). Both these findings were consistent for other forms of abuse.

Sequelae of Abuse Only 35 of the 59

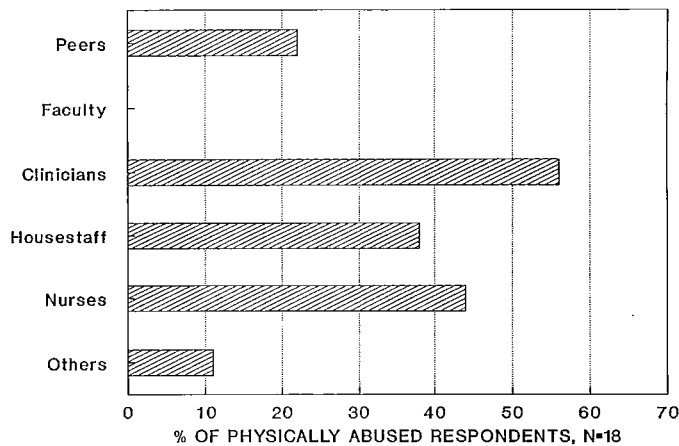


Figure 2. Sources of physical abuse in medical school, by percentage of physically abused respondents in two fourth-year classes (n = 18).

Medical Student Abuse

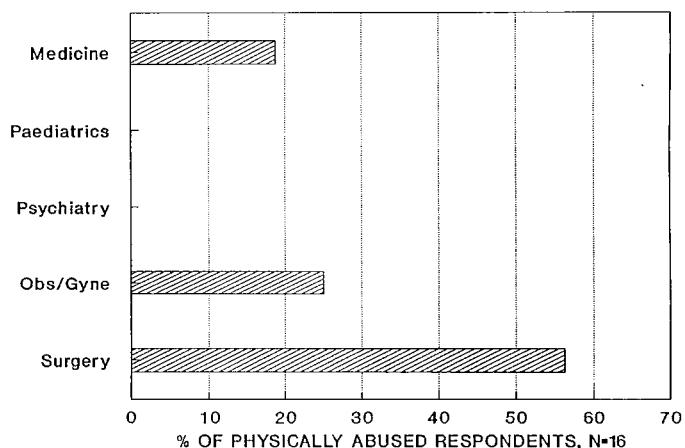


Figure 3. Relative frequency with which each clinical rotation was cited as a setting for physical abuse, by percentage of physically abused respondents in two fourth-year classes (n = 16).

students to experience mistreatment that contravened existing statutes responded to a question about the emotional impact of the abuse. Seven believed the abuse had no impact on them, while 13 felt severely affected. The most common symptoms following abuse included diminished interest in studies (33 of 59, 55.9%), recurrent intrusive memories of the abuse (18 of 59, 30.5%), and severe depression (14 of 59, 23.7%). A further 17 students considered quitting medical school (17 of 59, 28.8%). There was a direct relationship between the severity of perceived emotional impact and the number of subsequent symptoms experienced by students ($\chi^2 = 75.74$, $df = 14$, $p < .000001$). Only 4 students, all with experiences of physical sexual advances, sought professional counseling.

Reporting of Abuse None of the students complained to the police (Table 2). Most commonly cited concerns over disclosure of mistreatment included "fears of retribution" (26 of 59, 44.1%) and "wor-

ries about confidentiality being violated" (28 of 59, 47.5%). Among students who did tell someone about their experiences (49 of 59), only 5 were satisfied that appropriate action had been taken (5 of 49, 10.2%).

Perpetuating Abuse of Others Students who had experienced physical abuse during medical training were sig-

Table 2
Number of Students Who Reported Their Abuse (by type of abuse experienced) (N = 59)

Abuse Reported to	Type of Abuse		
	Threats of bodily harm (n = 4)	Physical sexual advances (n = 38)	Physical assault (n = 21)
No one	2	5 (2) ^a	5
Friends/family	2	18 (2) ^a	10
Supervisor	0	12	5
Dean's office	0	3	1
Police	0	0	0

^aFour students experienced both physical sexual advances and physical assault.

nificantly more likely to mistreat more junior medical students (4 of 21, 19.0%) than were their nonphysically abused peers (23 of 268, 8.6%); ($\chi^2 = 6.25$, $df = 2$, $p < .04$). They were also more likely to mistreat patients (7 of 21, 33.3%) than their non-physically abused peers (82 of 262, 31.3%), ($\chi^2 = 10.98$, $df = 2$, $p < .01$). This was not the case for students who experienced other forms of abuse; the majority of these were women (34 of 38).

No significant relationship was found between experiencing any form of abuse prior to medical school and subsequently mistreating more junior students or patients.

Discussion

Devised in 1991 to look at medical students' experiences of mistreatment in general, the MSAS proved a convenient instrument for surmising the extent of abuse that is proscribed by the Criminal Code of Canada. While some items seemed fairly straightforward (threats of bodily harm, S264.1; assault, S265; assault with a weapon, S267),¹⁰ others became more difficult to interpret. For example, even though one is subjected to physical sexual advances or coerced into having sexual relations, the strict legal definition of sexual assault (S265, S271–278)¹⁰ may not be met in all cases. However, these situations do contravene either section 6 of the Ontario Human Rights Code¹³ or the existing university policy against sexual harassment.⁷

Unwanted exposure to pornographic or sexually degrading pictures, perhaps the

most difficult form of mistreatment to prove objectively in a medical setting, would probably only rarely meet the strict legal criteria for pornography (S163)¹⁰ or sexual harassment.^{7, 13} For this reason, we did not include this group of 39 students in the rest of our analysis.

The MSAS has the usual drawbacks of self-report instruments: lack of objectively observed and recorded events. However, in a two-week test-retest reliability study of the MSAS using 81 fourth-year medical students in February of 1994, we found kappa values¹⁴ of .79 ($T = 7.20$) for verbal/emotional abuse, 1.00 ($T = 8.94$) for physical sexual advances, and 0.85 ($T = 7.60$) for physical abuse. While lacking external corroboration, at least students were consistent about the nature of their abusive experiences (K. J. Margittai, R. Moscarello, and M. Rossi, unpublished data).

Survey Responses The 72.5 percent response rate of students sampled (301 of 415) was similar to that of a previous administration of the MSAS to fourth-year medical students at the University of Toronto.⁶ Since attendance at academic activities was not compulsory and no prior notice was given to students about the nature of this survey, the 85 students not surveyed most likely represent a random sample of those absent from class that day for reasons unrelated to the MSAS. Given that "call" is usually one of every four days, this seems to be a legitimate reason for about one-quarter of surveyed students not to respond and is therefore unlikely to bias the results, as "call" is randomly assigned and bears no connection to the MSAS.

Medical Student Abuse

Experiences of Abuse Of the 283 respondents who experienced some form of mistreatment during the current academic year, 8.8 percent (25 of 283) of this mistreatment was clearly in violation of the Criminal Code of Canada.¹⁰ While it may be difficult to determine whether physical sexual advances were consistently non-consensual (i.e., meeting the criteria for sexual assault), 13.4 percent of the total mistreatment (38 of 283) was certainly in violation of the Human Rights Code¹³ and the university's sexual harassment policy.⁷ Our finding, that significantly more women experienced this latter form of abuse, was consistent with previous reports.¹⁵

Sources of Abuse Previous medical students rotating through the different departments have also identified Surgery as the most frequent setting for abusive experiences.⁶ This department would be the ideal site for any faculty development initiatives regarding acceptable interpersonal behavior.¹⁶

The fact that clinicians (in a hospital setting, attending staff physicians) are consistently cited as the most frequent sources of abuse should be of great interest to the College of Physicians and Surgeons of Ontario (CPSO). The CPSO is mandated by provincial legislation to uphold the standards of the medical profession.¹ Allegations of professional misconduct substantiated by the Complaints Committee are then referred to the Discipline Committee. Depending on the nature of the transgression, this committee may (1) set a fine; (2) issue a formal reprimand; (3) set restrictions on members' certificates of registration (license

to practice medicine); (4) suspend the certificate of registration for a set period of time; and/or (5) revoke the certificate of registration. The definition of professional misconduct includes "conduct unbecoming a physician."¹⁷ It seems reasonable to assume that violating the Criminal Code and the Human Rights Code, as well as University guidelines, all fit under this rubric.

Sequelae of Abuse Our finding, in at least one-third of our abused students, of symptoms commonly associated with the aftermath of traumatic events was not that surprising. In a recent survey of 212 residents selected randomly from the American Medical Association's data bank, 13 percent of the respondents were found to actually meet DSM-III-R criteria for post-traumatic stress disorder.¹⁸ While it is conceivable that their symptoms reflect other stressors, students recorded their impression of physical and psychological symptoms subsequent to and directly related to the abuse. It was worrisome that none of our physically abused students had pursued counseling, especially in view of their depressive symptoms and their increased likelihood of perpetuating abuse. Men seem particularly at risk for this behavior, perhaps because they are more likely to use psychological defenses such as identification with the aggressor, and are also more likely to externalize bad feelings by behaving aggressively toward others.¹⁵

Reporting of Abuse The underreporting of abusive incidents to people in positions of authority within the medical school seemed to reflect a fear of reprisal and a dissatisfaction with subsequent out-

comes. The medical school administration may find it useful to solicit students' suggestions for dealing with such incidents.

Perpetuating Abuse of Others The phenomenon of modeling specific behaviors in a specific setting had been noted in a previous study on medical student abuse.⁶ Students were not asked about the type of mistreatment they believed they had inflicted on others, although it would be interesting to discover what proportion constituted physical versus sexual or verbal/emotional abuse. Given the relatively large number of students acknowledging mistreatment of patients on the MSAS, we were surprised to find only one other article on abuse perpetuated by medical students.¹⁹ Overly rigid superegos may result in students exaggerating the magnitude of this problem; similarly, super-ego deficits may lead to its underestimation. This remains an area ripe for future research.

Abuse of medical students is a systemic problem that will take concerted effort on different fronts to eradicate.²⁰ Students should be aware of legal remedies for abuse that violates the Criminal Code of Canada and be familiar with the role of the CPSO in dealing with professional misconduct. The medical school administration should disseminate a "code of conduct" for staff focusing on identification and remediation of transgressors, as well as revoking teaching privileges from recidivists in order to protect students. It remains for future research to replicate these findings, using impartial observers with an objective rating scale to

document the abuse of medical students.

Acknowledgments

The authors thank Cathleen Spegg, BSc, MBA, statistics analyst, Clarke Institute of Psychiatry, for her invaluable suggestions and help with analysis of the data; and Dr. Paul Garfinkel, Chairman of the Department of Psychiatry, University of Toronto, whose support made this study possible.

Appendix 1

The following are questions from the MSAS that were used to screen for experiences of abuse that contravene the Criminal Code of Canada.

During your current year in medical school, have you experienced:

- *Threats of bodily harm*: threats to your physical integrity (e.g., threatening to hit you, to cause others to harm you, etc.)?
- *Exposure to pornography*: use of sexist teaching material: display of pornographic, sexually offensive or degrading pictures?
- *Sexual assault (physical sexual advances)*: sexual advances: unnecessary physical contact (such as touching, pinching, patting, etc.)?; sexual intimacy with or without actual intercourse; exchange of rewards for sexual favours?
- *Physical assault*: being pushed, shoved, shaken, or tripped?; being slapped, hit, punched, or kicked?; assault with a "weapon" (e.g., needle, surgical instrument, etc.); objects thrown at you?

References

1. Regulated Health Professions Act, 1991; statutes of Ontario, 1991, chapter 18; as amended by 1993, chapter 37. Toronto, Canada: Queens printer for Ontario, January 1994
2. Baldwin DC, Jr, Daugherty SR, Eckenfels EJ, Leksas L: The experience of mistreatment and abuse among medical students, in Proceedings of the 27th Annual Conference of the Association of American Medical Colleges. Chicago, Nov 11-17, 1988, pp 80-4
3. Silver HK, Glicken AD. Medical student

Medical Student Abuse

- abuse: incidence, severity and significance. *JAMA* 263:527-32, 1990
4. Sheehan KH, Sheehan DV, White K, Leibowitz A, Baldwin DC, Jr: A pilot study of medical student "abuse." *JAMA* 263:533-7, 1990
 5. Baldwin DC, Jr, Daugherty SR, Eckenfels EJ: Student perceptions of mistreatment and harassment during medical school: a survey of ten United States schools. *West J Med* 155: 140-5, 1991
 6. Margittai KJ, Moscarello R, Rossi M: Medical students' experiences of abuse: a Canadian perspective. *Ann R Coll Physicians Surg Can* 27:199-204, 1994
 7. University of Toronto Sexual Harassment Office: *Sexual Harassment on Campus: A Preventative Guide for Students*. Toronto, Canada: The University of Toronto, 1989
 8. Coburn D, Jovaisas AV: Perceived sources of stress amongst first year medical students. *J Med Ed* 50:589-95, 1975
 9. Huebner LA, Royer JA, Moore J. The assessment and remediation of dysfunctional stress in medical school. *J Med Educ* 56:547-58, 1981
 10. The Criminal Code of Canada (revised statutes of 1985), sections 163, 264.1, 265, 267, and 271-278
 11. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders* (ed 3 rev). Washington, DC: APA, 1987
 12. Hollingshead AB: *Two Factor Index of Social Position*. New Haven, CT: Yale Station, 1965
 13. The Ontario Human Rights Code, section 6 (1981)
 14. Shrout PE, Fleiss JL: Intraclass correlations: uses in assessing rater reliability. *Psychol Bull* 86:420-8, 1979
 15. Moscarello R, Margittai KJ, Rossi MF: Differences in abuse reported by female and male Canadian medical students. *Can Med Assoc J* 150:357-63, 1994
 16. Henry A: Report from the Complaints Committee 1993-1994: members dialogue. Newsletter of the College of Physicians and Surgeons of Ontario, September, 1994, pp 7-9
 17. Regulation Made Under the Medicine Act, 1991: *Definitions of Professional Misconduct*. Toronto, Canada: Queens printer for Ontario, 1991
 18. Klamen DL, Grossman L, Kopacz D, Doblin B: Post-traumatic stress disorder in residents. Presented at the 149th Annual Meeting of the American Psychiatric Association, San Francisco, May 1993
 19. Kaplan JM: Medical students as child abusers. *Bull Am Acad Psychiatry Law* 14:31-6, 1986
 20. McKegney CP: Medical education: a neglectful and abusive family system. *Fam Med* 21: 452-7, 1989