Medical Student Abuse During Clinical Clerkships in Japan

Shizuko Nagata-Kobayashi, MD, PhD,¹ Miho Sekimoto, MD, MPH, PhD,²
Hiroshi Koyama, MD, PhD,¹ Wari Yamamoto, MD, PhD, FJSM,³ Eiji Goto, MD, PhD,⁴
Osamu Fukushima, MD, PhD,⁵ Teruo Ino, MD,⁶ Tomoe Shimada, MD,⁷
Takuro Shimbo, MD, PhD,¹ Atsushi Asai, MD, MBioeth, PhD,⁸ Shunzo Koizumi, MD, FACS,⁷
Tsuguya Fukui, MD, MPH, PhD⁹

¹Department of General Medicine and Clinical Epidemiology, Kyoto University Graduate School of Medicine, Kyoto, Japan; ²Department of Healthcare Economics and Quality Management, Kyoto University Graduate School of Medicine, Kyoto, Japan; ³Department of Community and General Medicine Graduate School of Medicine, Program of Community Health and Comprehensive Medicine, Division of Community and Comprehensive Medicine, Clinical Epidemiology, Sapporo Medical University School of Medicine, Hokkaido, Japan; ⁴Department of Medical Education, Yokohama City University School of Medicine, Kanagawa, Japan; ⁵Office of Educational Development, the Jikei University School of Medicine, Tokyo, Japan; ⁶Department of Medicine, Fujita Health University School of Medicine, Aichi, Japan; ⁷Department of General Medicine, Saga University Hospital, Saga, Japan; ⁸Department of Bioethics, Faculty of Medical and Pharmaceutical Science, Kumamoto University, Kumamoto, Japan; ⁹St. Luke International Hospital, Tokyo, Japan.

OBJECTIVE: To assess the prevalence of medical student abuse during clinical clerkships in Japan.

DESIGN: A cross-sectional questionnaire survey.

SETTING: Six medical schools in Japan.

PARTICIPANTS: Final year (sixth-year) and fifth-year medical students in the period from September 2003 to January 2004. From a total of 559 students solicited, 304 (54.4%) returned the questionnaire, and 276 (49.4%: 178 male and 98 female) completed it.

MEASUREMENTS: Prevalence of medical student abuse in 5 categories: verbal abuse, physical abuse, academic abuse, sexual harassment, and gender discrimination; differences in abusive experience between male and female students; types of alleged abusers; reporting abusive experiences to authorities; and emotional effects of abusive experiences.

RESULTS: Medical student abuse was reported by 68.5% of the respondents. Verbal abuse was the most frequently experienced abuse (male students 52.8%, female students 63.3%). Sexual harassment was experienced significantly more often ($P < .001$) by female students (54.1%) than by male students (14.6%). Faculty members were most often reported as abusers (45.2% of cases). Abuse occurred most frequently during surgical rotations (42.0% of cases), followed by internal medicine (25.1%) and anesthesia rotations (21.8%). Very few abused students reported their abusive experiences to authorities (8.5%). The most frequent emotional response to abuse was anger (27.1% of cases).

CONCLUSIONS: Although experience of abuse during clinical clerkships is common among medical students in Japan, the concept of "medical student abuse" is not yet familiar to Japanese. To improve the learning environment, medical educators need to take action to resolve this serious issue.

KEYWORDS: clerkships; education; Japan; medical student abuse; questionnaire; sexual harassment.

DOI: 10.1111/j.1525-1497.2006.00320.x

J GEN INTERN MED 2006; 21:212–218.

In 1982, Silver¹ reported that while many medical students were "eager, alert, enthusiastic, and excited" on entrance to

medical school, they became "cynical, dejected, frightened, depressed, or frustrated" over time. He also found that these characteristics are similar to those found in abused children, and may be the result of enduring the same conditions—unnecessary and harmful abuse that could be avoidable. He called this phenomenon "medical student abuse."

A number of subsequent studies have continued the investigation of medical student abuse.^{2–7} Compared with non-abused students, abused students reported more anxiety, depression, difficulty with learning, thoughts of dropping out, and problem alcohol use.^{4–7} Other studies showed that stress associated with being abused impacted negatively on career decisions.^{8,9} Taken together, these findings indicate that medical student abuse is likely to have a considerable negative effect.

In contrast to the increasing attention focused on the issue of medical student abuse in Western countries, to date there have been no reports on this issue from Asian countries, including Japan. Therefore, in the present study we explored medical student abuse during clinical clerkships in Japan.

METHODS

This cross-sectional survey of final year (sixth-year) and fifth-year medical students used written questionnaires to estimate the frequency of medical student abuse during clinical clerkships. The study population comprised 559 medical students (413 males and 156 females) in the following 6 medical schools in Japan: 94 students at Kyoto University (KU); 125 at Yokohama University (YU); 106 at Jikei University (JU); 91 at Sapporo Medical University (SMU); 90 at Saga University (SU); and 54 at Fujita Health University (FHU). These medical schools were selected to represent the diversity of Japanese medical schools: 2 national schools (KU and SU), 1 prefecture school (SMU), 1 municipal school (YU), and 2 private schools (JU and FHU); 3 universities (KU, YU, and JU); and other 3 colleges (SMU, SU, and FHU). One of the medical schools is located in northern Japan (SMU), 4 are located in central areas (KU, YU, JU, and FHU), and 1 is located in southern Japan (SU).

The authors have no conflicts of interest to declare for this article or this research.

Address correspondence and reprint requests to Dr. Nagata-Kobayashi: Department of General Medicine and Clinical Epidemiology, Kyoto University Graduate School of Medicine, 54 Kawahara-cho Shogoin, Sakyo-ku, Kyoto 606-8507, Japan (e-mail: sea@kuhp.kyoto-u.ac.jp).

Manuscript received September 20, 2004

Initial editorial decision July 20, 2005

Final acceptance October 3, 2005

Table 1. Traditional Curriculum in Japanese Medical Schools

Curriculum of 6-year course
2 basic science and general education years (1 to 2 grades)
2 clinical science years including pre-clerkship education (3 to 4 grades)
2 clinical clerkship years including bedside and/or experiential learning with patients (5 to 6 grades)
Program of clinical clerkships at Saga University
12 wk for internal medicine rotation
4 wk for surgery rotation
4 wk for anesthesia and emergency rotation
4 wk for obstetrics and gynecology rotation
4 wk for pediatrics rotation
4 wk for psychiatry rotation
1 to 2 wk each for other department rotation
7 wk for out-of-hospital clinical clerkships
14 wk for elective

Medical training in Japan takes 6 years and the majority of students enter medical school directly from high school. Most medical schools follow a traditional curriculum (Table 1). Ordinarily, fifth-year and sixth-year students are assigned to clinical clerkships in each department, 1 to 4 weeks in duration, and experience bedside learning with patients. The total duration of clinical clerkship programs among the schools surveyed ranged from 9 to 18 months.

From September 2003 to January 2004, the questionnaires were distributed during class. Both a research facilitator and written instructions informed the students that participation in the survey was voluntary and that responses were confidential.

The questionnaire asked for students' characteristics of sex, age, and duration of clinical clerkships, but no other demographic information (e.g., name of particular school, or region) in order to ensure confidentiality. As there are few international students in Japan, ethnicity was not included as a demographic characteristic. Stamped envelopes addressed to KU were attached to all questionnaires to permit their anonymous return. Reminder letters were not sent because medical schools refused to provide us with students' home addresses. KU Ethics Committee approved the research protocol.

To develop the questionnaire, we collected questions reported in previous studies via a MEDLINE search, using the text words "medical student," "training," "harassment," and "abuse," for articles published from 1966 to April 2002. We reviewed previous studies of medical student abuse, abuse during residency programs, and gender issues.^{3-6,10-12} Additional questions were developed from interviews with several graduate students at KU. Furthermore, to validate the questionnaire, a pilot study was conducted among 8 graduate students at KU, all of whom had participated in clinical clerkships in medical schools in Japan.

Using the questionnaire shown in Table 2, students were asked about their experience of abuse during clinical clerkships. Because the concept of "medical student abuse" is not familiar to medical students in Japan, to assist their recall and classification of abusive episodes, students were given a list of examples of abuse they might have experienced. The frequency of their abusive experience required rating on a Likert-type scale of 1 to 5 ("never" to "many times"). The last page was reserved for open comments on their abusive experiences and

suggestions for improving the environment of clinical clerkships. These comments were counted, categorized by abusive experience or recommendation, and summary phrases created as representations of the students' comments. These procedures were performed by 2 investigators.

Answer sheets were analyzed using the statistical package, STATA (version 7.0, STATA Corporation, College Station, Tex). The prevalence of abuse was analyzed in 2 categories, as "never" or "at least once during clinical clerkships." Chi-square statistics were used to test for statistical difference in proportion or distribution of nominal data between male and female students. We considered a *P* value of less than .05 to be statistically significant. The consistency of responses was checked by comparing answers and descriptive comments.

RESULTS

Demographics

Of the 559 questionnaires distributed to students, 304 (54.4%) were returned, 276 of which (49.4%, 178 males and 98 females) were satisfactorily completed. The response rate for males was 43.1%, and for females, 62.8%. The female response rate was significantly higher than the male ($P < .001$). The respondents' ages ranged from 23 to 33 years, with a mean age of 24.7 years (SD 2.80). The ages of male and female respondents did not differ significantly. The mean duration of their experience of clinical clerkships was 13.8 months (SD 4.8).

Prevalence of Abusive Experiences

A total of 189 respondents (68.5%) experienced abuse at least once during their clinical clerkships (Table 3). The experience of abuse among female students ($N=80$, 81.6%) was significantly more frequent than among male students ($N=109$, 61.2%) ($P < .001$). The prevalence of verbal, physical, and academic abusive experiences did not differ significantly between male and female respondents, but the experience of sexual harassment and of gender discrimination was significantly higher among female respondents ($P < .001$ and $P = .019$, respectively).

Verbal abuse was the most frequently reported type of abuse. More than half of the female respondents ($N=53$, 54.1%) were allegedly sexually harassed at least once during clinical clerkships. The type of gender discrimination with the most significant difference between male and female respondents was experience of a biased view on career choice. Students reported all other types of abuse infrequently.

Most students who reported any type of abuse responded such events occurred "a couple of times" or "sometimes." Only 28 students (14.8% of all students reporting abuse) reported experiencing abusive events with greater frequency ("often" or "frequent") in the following categories: verbal abuse, $N=15$ (5.4% of respondents); academic abuse, $N=2$ (0.7%); sexual harassment, $N=7$ (2.5%); and gender discrimination, $N=6$ (2.2%).

Source of Abuse

The most frequent abusers were faculty members ($N=85$, 45.2%), residents, and house staff ($N=49$, 26.1%). Other abusers were reported as follows: nurses ($N=41$, 21.8%),

Table 2. Questionnaire Items

- Q1. Have you experienced medical student abuse during clinical clerkships? If you have, how often have you experienced abuse?*
1. Verbal abuse (e.g., being yelled or shouted at; someone was inappropriately nasty, rude, or hostile to you; being belittled or humiliated during conferences or rounds; being cursed or sworn at)
 2. Physical abuse (e.g., being threatened with or subjected to physical harm)
 3. Academic abuse (e.g., being assigned tasks as punishment; being threatened with an unjustifiably bad grade; being unfairly threatened with failure in class or during clerkships; experiencing malicious or unfair competition; someone made negative remarks to you about becoming a physician or pursuing a career in medicine)
 4. Sexual harassment
 - (1) Offensive comments (e.g., sexual comments)
 - (2) Unwanted attention
 - (3) Unwelcome verbal advances (e.g., expressions of sexual interest or sexual inquiries)
 - (4) Unwanted, persistent personal invitations
 - (5) Unwelcome explicit proposition
 - (6) Offensive material display (e.g., display of offensive sexual pictures or cartoons)
 - (7) Offensive body language (e.g., repeated leering; standing too close)
 - (8) Unwanted physical advances
 - (9) Sexual bribery (e.g., offers of better grades, other advantage, or threat in exchange for sexual favors)
 5. Gender discrimination
 - (1) Denied or restricted the opportunity of examining patients
 - (2) Denied the opportunity of practicing a medical technique
 - (3) Assignments made on gender
 - (4) Denied attending a conference or meeting
 - (5) Restriction of career choice
 - (6) Other
- Q2. If you have experienced abuse, who abused you during your clinical clerkships?*
- (1) residents or house staff, (2) lecturers or instructors, (3) associate professors, (4) professors, (5) nurses, (6) medical technicians, (7) staff of the hospital, (8) patients, (9) medical students, (10) others
- Q3. If you have experienced abuse, by which department(s) have you experienced abuse?*
- (1) internal medicine, (2) surgery, (3) obstetrics and gynecology, (4) anesthesia, (5) emergency medicine, (6) radiology, (7) psychiatry, (8) dermatology, (9) otolaryngology, (10) ophthalmology, (11) general medicine, (12) others
- Q4. Did you report your abusive experiences to someone in authority? If you did, how often did you report an abusive experience?*
- Q5. If you experienced abuse and did not report your experiences, what was the reason(s) for not reporting the experience?*
- I did not recognize the experience as abuse at the time that it happened
- Although I considered the experience abusive, I judged that it was not a significant matter to be reported to those in authority
- I did not think that reporting medical student abuse would accomplish anything
- I considered that reporting medical student abuse would become more troublesome than it was worth
- I dealt with the problem directly myself
- I did not know to whom I should report medical student abuse
- I was afraid that reporting medical student abuse would adversely affect my evaluation
- The medical student abuse stopped
- I was afraid that the reporting would not be kept confidential
- I did not think that the problem would be dealt with fairly
- I did not want to be labeled
- I was afraid of not being believed
- I was concerned about being blamed
- I did not want to think about the abusive experience further
- I was afraid that the reporting would negatively influence my professional career in the future
- I despaired of current learning situation during my apprenticeship
- Others (please describe in detail):
- Q6. If you have experienced abuse, what was your reaction to this abuse?*
- Anger
- Little impact
- Dismissal of the abusive experiences
- Diminished eagerness to learn
- Uncomfortable, nervous
- Depressed
- Afraid
- More eager to learn
- Insomnia, appetite loss
- Thought about dropping out
- Other (please describe in detail):
- Q7. What is your age, sex, and duration of clinical clerkships (in weeks)?*
- Q8. Please describe your abusive experiences and your opinion about current clerkship here.*

The original questionnaire was written in Japanese.

The following content was provided on the first page: the purpose of the survey; explanations of the concept of medical student abuse; confidentiality of the content; anonymity; process of conducting the survey; researcher's contact address; other general instructions.

Q1, Q2, Q3, and Q4 were answered using a Likert 5-point scale ranging from never (0 times); a couple of times (1 to 2 times); sometimes (3 to 5 times); often (6 to 10 times); and many times (over 10 times). Respondents could provide more than 1 answer for Q5 and Q6. Q7 was answered by providing factual information. Q8 was an optional open-ended question.

Table 3. Prevalence and Types of Medical Student Abuse Experienced at Least Once During Clinical Clerkships

	N(%)			P
	Male Students (N=178)	Female Students (N=98)	Total (N=276)	
Experienced some type of medical student abuse	109 (61.2)	80 (81.6)	189 (68.5)	<.001
Verbal abuse	94 (52.8)	62 (63.3)	156 (56.5)	.094
Physical abuse	10 (5.6)	2 (2.0)	12 (4.4)	.094
Academic abuse	45 (25.3)	19 (19.4)	64 (23.2)	.267
Sexual harassment*	26 (14.6)	53 (54.1)	79 (28.6)	<.001
Offensive comments	3 (1.7)	4 (4.1)	7 (2.5)	.226
Unwanted attention	15 (8.4)	21 (21.4)	36 (13.1)	.002
Unwelcome verbal advances	3 (1.7)	18 (18.4)	21 (7.6)	<.001
Unwanted, persistent invitations	1 (0.6)	7 (7.1)	8 (2.9)	<.001
Unwelcome explicit proposition	0 (0)	5 (5.1)	5 (1.8)	.002
Offensive material displayed	10 (5.6)	13 (13.3)	23 (8.3)	.028
Offensive body language	4 (2.3)	17 (17.4)	21 (7.6)	<.001
Unwanted physical advances	0 (0)	24 (24.5)	24 (8.7)	<.001
Sexual bribery	0 (0)	0 (0)	0 (0)	
Gender discrimination†	34 (19.1)	31 (31.6)	65 (23.6)	.019
Denied the opportunity of examining patients	24 (13.5)	12 (12.2)	36 (13.0)	.77
Denied the opportunity of practicing medical technique	16 (9.0)	9 (9.2)	25 (9.1)	.957
Assignments made on gender	18 (10.1)	7 (7.1)	25 (9.1)	.411
Denied attending a conference or meeting	2 (1.1)	2 (2.0)	4 (1.5)	.542
Restriction of career choice	2 (1.1)	17 (17.4)	19 (6.9)	<.001
Others	3 (1.7)	10 (10.2)	13 (4.7)	.001

*Sexual harassment: students who experienced some type of sexual harassment at least once during clerkships.

†Gender discrimination: students who experienced some type of gender discrimination at least once during clerkships.

patients (N=37, 19.7%), medical students (N=20, 10.7%), medical technicians (N=9, 4.8%), the staffs of the hospital (N=9, 4.8%), and others (N=4, 2.13%). Abusive experiences occurred significantly highest in the rotations of surgery (N=79, 42.0%), second highest in internal medicine (N=47, 25.1%), and significantly lowest in ophthalmology and general medicine (N=6, 3.74%) ($P<.001$ for all). The prevalence of abuse during other rotations were as follows: gynecology (N=28, 15.1%), pediatrics (N=21, 11.2%), anesthesia (N=20, 10.6%), emergency (N=13, 6.9%), radiology (N=9, 4.8%), psychiatry (N=10, 5.3%), dermatology (N=8, 4.3%),

otolaryngology (N=20, 10.6%), and others (N=16, 8.5%). In surgery rotation particularly, female respondents (N=40, 50.6%) reported a greater number of abusive experiences than did male respondents (N=39, 40.0%, $P=.042$).

Reactions of Medical Students to Abuse

Most students (N=172, 91.5% in total) did not report their experience of abuse to someone in authority; only 9 male students and 7 female students did so. Reasons for not reporting the abuse are shown in Table 4. The reactions to abuse among

Table 4. Reasons Given by Students for not Reporting Medical Student Abuse

	N(%)			P
	Male Students (N=178)	Female Students (N=98)	Total (N=276)	
Thought that although the experience abusive, it was not so significant problem as to be reported to those in authority	35 (32.1)	40 (50.6)	75 (39.9)	.01
Considered that reporting medical student abuse would become more troublesome than it was worth	36 (33.0)	27 (34.2)	63 (33.5)	.869
Did not recognize the experience as abuse at the time that it happened	31 (28.4)	24 (30.4)	55 (29.3)	.773
Did not think that reporting medical student abuse would accomplish anything	28 (25.7)	21 (26.6)	49 (26.1)	.89
Was afraid that reporting medical student abuse would adversely affect evaluation	14 (12.8)	18 (22.8)	32 (17.0)	.073
Did not think that problem would be dealt with fairly	12 (11.0)	11 (13.9)	23 (12.2)	.547
Despair of learning situation during apprenticeship	9 (8.3)	10 (12.7)	19 (10.1)	.323
Did not know to whom medical student abuse should be reported	12 (11.0)	5 (6.3)	17 (9)	.269
Did not want to think about abusive experience further	6 (5.5)	10 (12.7)	16 (8.5)	.083
Was concerned about being blamed	8 (7.3)	6 (7.6)	14 (7.5)	.947
Was afraid that the reporting would not be kept confidential	2 (1.8)	10 (12.7)	12 (6.4)	.003
Was afraid that the reporting would negatively influence professional career in the future	6 (5.5)	4 (5.1)	10 (5.3)	.894
Dealt with problem directly by themselves	3 (2.8)	3 (2.8)	6 (3.2)	.687
Did not want to be labeled	1 (0.9)	4 (5.1)	5 (2.7)	.081
Was afraid of not being believed	2 (1.8)	0 (0)	2 (1.1)	.226
Medical student abuse stopped	0 (0)	0 (0)	0 (0)	
Other	6 (5.5)	5 (6.3)	11 (5.9)	.812

Table 5. Students' Responses to Open-Ended Questions

Response Category (Number of Total Comments) Summary Phrases Defining Category	Illustrative Quotations of Students
Experience of verbal abuse (26) Teaching physician shouted at students in public Students' personal life or character criticized by teaching physician about in clinical setting Teaching physician cursed or made slanderous maligning remarks	(1) During student presentations, faculty members overawed us, with their arms crossed. Hardly had one student made a wrong answer when faculty members shouted at the student "That's nonsense!" (2) I was often asked how old I was. Once, when I was observing an operation, operating doctors talked exclusively about my age. Another time at a meeting, I was persistently asked about my age in front of many students and physicians. (Comments from a 31-year-old student.) (3) Clearly, shouting is a not an appropriate way of communicating. "Reprimanding medical students" and "shouting at medical students" in an outburst of rage are different. Because I was shouted at by teaching physicians, I may well shout at medical students in the future
Experience of physical abuse (2) Forced to drain a glass of alcohol	(1) I felt pressured into listening to physician's bragging late into the night and was forced to drain a glass of alcohol (2) I was forced to drain a glass of alcohol at a social meeting
Experience of academic abuse (16) Neglected by teaching physician Disregarded by teaching physician Teaching physician neglected to answer student's question	(1) Some teaching physicians do not think to teach medical students at all. Their attitudes severely damage student's motivation to learn (2) Because a teaching physician misunderstood the reason for my absence from class, chastised me for 2 wk and said "You are not suited to be a doctor"
Experience of sexual harassment (23) Unwanted physical advances Unwanted, persistent invitations	(1) I experienced unwanted physical advances while learning medical techniques and at a social meeting
Experience of gender discrimination (32) Male teaching physician used a discriminative term to refer to female students Male teaching physicians appeared to treat male students more severely than female students	(1) A male teaching physician said "Why would a woman want to become a physician?," "Female physicians are impudent," "I would not trust a female physician," "Our department does not allow female physicians to join us," "You will miss out on marriage," "Women should stay at home and raise children," and "You women enter medical school only to get a medical license for a trousseau" (2) A male physician called male students by their family name but called female students only by the general label of "woman"
Comments on the attitudes of teaching physicians (17) Instruct teaching physicians how to teach medical students	(1) Teaching physician should not take charge of medical students if he or she isn't committed to teaching
Comments on the conflict between nurses and students (8) Nurses maligned medical students in public Nurses think students are a disturbance	(1) Nurses ignored medical students frequently; they do not answer students' questions such as where to find the sphygmomanometer (2) It is necessary for nurses to understand the purpose of medical students' clinical clerkships because nurses are indispensable staff of a teaching hospital
Suggestions to improve clinical clerkship (21) Do not favor students because of their club activities Establish ombudsman or committee to manage cases of medical student abuse	(1) It is strange that teaching physicians treat juniors in their activity clubs with favor during clerkship (2) Placing a suggestion box is needed
Request of students themselves (8) Wear sensible clothes Use common sense Show great initiative during clinical clerkship	(1) Do not look showy (2) Behave with good sense (3) Study eagerly
Others (6) Despair	(1) I despair of the status of clinical clerkship. It is impossible to improve the current situation of medical student abuse

abused students were as follows: anger ($N=51$, 27.1%), little impact ($N=38$, 20.2%), diminished eagerness to learn ($N=36$, 19.2%), uncomfortable, nervous ($N=33$, 17.6%), depressed ($N=29$, 15.4%), dismissal of abusive experience ($N=29$, 15.4%), afraid ($N=11$, 5.6%), more eager to learn ($N=10$, 5.3%), insomnia, appetite loss ($N=4$, 2.1%), thought about dropping out ($N=4$, 2.1%), and other ($N=4$, 2.1%).

In response to the open-ended survey question "Please describe your abusive experiences and your opinion about current clerkship," students wrote 179 comments. Comment categories, summary phrases representing students' responses, and illustrations from student responses are shown in Table 5. The category of gender discrimination elicited the most comments. Several students made suggestions for improving the clerkship experience. Thirteen students wrote a qualitative comment that the neglect or disregard by their teaching physicians had an extremely negative effect on students' motivation to study.

DISCUSSION

The purpose of the present study was to explore the extent of Japanese medical students' abusive experience during clinical clerkships. The findings were for the large part compatible with those reported in Western countries. First, similar to Western countries, two thirds of Japanese medical students had experienced abuse at least once (range, 46.4% to 96.5%).^{4,5,10,12,13} Second, the experience of abuse was much more frequent among female than male students, and more than half of the female students had experienced sexual harassment at least once during clinical clerkships. Third, the main source of abuse was physicians. This is not unexpected as physicians work closely with students during most teaching sessions and are in superior positions as they evaluate medical students during clinical clerkships. Fourth, the findings of highest frequency of abuse during surgical rotations are consistent with those of the previous studies.^{3-6,10,12,13} In our study,

some students mentioned that they felt they experienced verbal abuse in the operating room when they heard surgeons cursing or making maligning remarks, which made the medical students extremely uncomfortable. One student remarked that surgeons should pay attention to what they say in a closed room, such as the operating room. These 4 common findings suggest that medical student abuse during clerkships is a common phenomenon.

Although two thirds of the students in the present study experienced abuse during clinical clerkships, very few reported it to someone in authority. In the United States, however, the reporting rate was higher. For example, Elnicki et al.¹⁴ reported that 31% of abused students reported the episodes to residents (34%), clerkship directors (21%), faculty members (21%), or the dean's office (5%). One of the reasons for the difference between our findings and those of previous studies may be that Japanese medical students are unfamiliar with and have a low awareness of the concept of "medical student abuse" because there have been no reports to date of the problem of abuse in Japan or other Asian countries. About 30% of our respondents stated that the abuse experience was not recognized as abuse when it happened. Until now in Japan, only the concepts of "sexual harassment" and "gender discrimination" are familiar. Even though these terms came into use 30 years ago in the West, they emerged only in the late 1980s in Japan, and a policy for the prevention of sexual harassment was formulated for the first time by the Ministry of Education, Culture, Sports, and Technology in 1999.¹⁵

Medical student abuse has been shown to have negative effects on student health and function.^{3-6,11,12} Our results also indicated negative effects of abuse. During clinical clerkships, a number of students described that they frequently encountered neglect and disregard from teaching physicians, as well as an unhelpful attitude in response to students' questions. They also stated that such attitudes discouraged eagerness, motivation, and commitment in the student's approach to medical learning. While commitment to teaching is not the opposite of mistreatment or abuse of students, "ethical" or "professional" treatment of medical students is an important factor in high-quality clinical clerkships.

For most students, teaching physicians serve as models for their career in medicine. Cynical attitudes of teaching physicians toward students, staff at the hospital, their patients, and possibly toward medicine in general may instill negative attitudes toward their profession in the minds of their students. Kluft,¹⁶ for example, showed the possibility that medical student abuse was contributory to later patient abuse. Silver and Glicker³ suggested the similarity between medical student abuse and child abuse. It is possible that physicians who previously suffered medical student abuse could become abusers of medical students in the future, thereby perpetuating a "transgenerational legacy."¹⁰ To break this potential chain, we must prevent abuse, protect students' human rights, and change discouraging learning environments into encouraging ones.

We recognize several limitations of the present study. First, medical student abuse as defined in our questionnaire is a subjective experience in which individuals will judge and categorize what constitutes an abusive experience, and thus judgment may differ among respondents. Because the categories of verbal and academic abuse may overlap in part, there is a possibility of overreporting and/or underreporting. There

are, to date, no objective criteria for medical student abuse, nor could the reported abusive experiences be verified. Second, this survey was a retrospective cross-sectional study, and as such responses were open to recall bias, and we cannot exclude the possibility that our survey missed the most extreme instances of abuse that led to medical students dropping out of school. Third, as completion of the survey was voluntary and anonymous, the respondents reports may not be representative of Japanese students overall. It is possible that abused students were more likely to respond to the survey than non-abused students. In fact, female students represented only 28% of all students surveyed, but were 62.8% of the respondents, and reported a higher prevalence of abuse than male students. Fourth, the current results may have overestimated the prevalence of the abusive events. During clinical clerkships, students experience one of the most stressful periods in medical school, and are more nervous and sensitive than usual. Students may transfer their psychologic stress to teaching staff, tend to easily blame them, and to over report. Fifth, some of the students reported that they were forced to drain a glass of alcohol at a social meeting. That experience might be categorized as physical abuse, but as we did not illustrate this experience as an example in our questionnaire, the possibility of underestimation of the prevalence of physical abuse exists. Finally, our response rate is not high (49.4%). In 2004, a total of 47,014 medical students (31,416 male and 15,598 female), with approximately 7,800 students in each grade, were attending 79 Japanese medical schools (42 national schools, 8 prefecture or municipal schools, and 29 private schools).¹⁷ We realize that our results cannot therefore be generalized to all Japanese medical students, but we speculate that our results will be useful as a starting point to tackle the problem of medical student abuse in Japan. Hereafter, the concept should become more familiar to Japanese, and thus allow for better collection of demographic data, the characteristics of students who frequently had an abusive experience and the reasons for differences in prevalence among students in each department.

In conclusion, we showed that medical student abuse during clinical clerkships in Japan and is a common phenomenon. Until now, the concept of "medical student abuse" and its importance have been unfamiliar to physicians and students alike in Japan. To our knowledge, this is the first report of medical student abuse in an Asian country. Medical educators should pay due attention to this serious issue. To improve current learning environments by preventing medical student abuse, future research should focus on identifying the cause of abuse and instituting effective measures against it.

Ethical approval: The Kyoto University Ethical Committee approved this study's protocol. We are grateful to Dr. Tsukasa Nakamura for advising data managing and to Mrs. Makiko Ohtorii for data entry.

REFERENCES

1. Silver HK. Medical students and medical school. JAMA. 1982;247:309-10.
2. Komaromy M, Bindman AB, Haber RJ, Sande MA. Sexual harassment in medical training. N Engl J Med. 1993;328:322-6.
3. Silver HK, Glicker AD. Medical student abuse. Incidence, severity, and significance. JAMA. 1990;263:527-32.

4. **Richman JA, Flaherty JA, Rospenda KM, Christensen ML.** Mental health consequences and correlates of reported medical student abuse. *JAMA*. 1992;267:692-4.
5. **Sheehan KH, Sheehan DV, White K, Leibowitz A, Baldwin DC Jr.** A pilot study of medical student 'abuse.' Student perceptions of mistreatment and misconduct in medical school. *JAMA*. 1990;263:533-7.
6. **Rosenberg DA, Silver HK.** Medical student abuse. An unnecessary and preventable cause of stress. *JAMA*. 1984;251:739-42.
7. **Maida AM, Vasquez A, Herskovic V, et al.** A report on student abuse during medical training. *Med Teacher*. 2003;25:497-501.
8. **Katz LA, Sarnacki RE, Schimpfhauser F.** The role of negative factors in changes in career selection by medical students. *J Med Educ*. 1984;59:285-90.
9. **Paiva RE, Kienzler LM, Anderson MB.** Preparation for the teaching role in residencies: an elective for medical students. *J Med Educ*. 1982;57:792-4.
10. **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*. 1991;155:140-5.
11. **Uhari M, Kokkonen J, Nuutinen M, et al.** Medical student abuse: an international phenomenon. *JAMA*. 1994;271:1049-51.
12. **Lubitz RM, Nguyen DD.** Medical student abuse during third-year clerkships. *JAMA*. 1996;275:414-6.
13. **Henry P.** Relationship between academic achievement and measured career interest: examination of Holland's theory. *Psychol Rep*. 1989;64:35-40.
14. **Elnicki DM, Curry RH, Fagan M, et al.** Medical students' perspectives on and responses to abuse during the internal medicine clerkship. *Teaching Learn Med*. 2002;14:92-7.
15. **Ministry of Education, Culture, Sports, and Technology.** 1999, a guideline for preventing sexual harassment. Available at: http://www.mext.go.jp/b_menu/houdou/11/03/990305.htm#top. Accessed May 15, 2005 (in Japanese).
16. **Kluft RP.** The physician as perpetrator of abuse. *Prim Care*. 1993;20:459-80.
17. **Ministry of Education, Culture, Sports, and Technology.** Statistical abstract. Available at: http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo4/gijiroku/009/04111201/005/001.htm. Accessed May 15, 2005 (in Japanese).