Frequency and perceived severity of negative experiences during medical education in Germany – Results of an online-survery of medical students

Abstract

Aims: Negative experiences during the course of medical education have been reported in many countries, but little is known about the perceived severity of these experiences. We studied for the first time how often students at a medical university in Germany have had negative experiences, and how severe they perceive these to be.
Method: We asked medical students in an online survey whether they felt adequately appreciated, had experienced peer rivalry, verbal abuse by their mentors, physical abuse or mistreatment, sexual harassment, racial or ethnic discrimination, or any other kind of mistreatment.
Results: Of 391 students, 56% stated that they felt insufficiently appreciated, 51% had experienced rivalry, and 34% had suffered verbal abuse. Fifty-nine percent of the students felt highly aggrieved because of verbal abuse, while 46% were aggrieved by the ongoing rivalry and 32% by the lack of appreciation. Significantly fewer students felt upset because they were passed over or ignored (21%). Generally, female students felt more often aggrieved by these negative experiences than their male colleagues.
Conclusion: Of the possible negative experiences, the less prominent ones such as lack of appreciation or verbal abuse are not only frequent, they are also perceived as very upsetting. Medical teachers should reflect this more in their day-to-day dealings with students and aim to improve on their contact with the students accordingly.

Keywords: medical education, medical schools, interpersonal relations, attitudes, stress, prejudice, sexual harassment, prevalence

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Introduction

Negative experiences made during the course of studies can have long-lasting effects on the professional career and the mental health of a student [1], [2]. Following the pioneering study of Baldwin on the abuse of medical students [3], similar surveys have been conducted in many countries [4], [5], [6], [7]. The results show that medical staff is the main perpetrators of these misconducts, and that this mostly happens during the clinical training.

These surveys document the frequency of certain mistreatments of students, such as verbal or physical abuse or even sexual harassment, but little is known about the perceived severity of these experiences, or to which degree the respondents felt aggrieved by these experiences. However, it is essential for evaluating these negative experiences during medical study to be aware of the distress they cause.
There are no data collected in Germany pertaining to negative experiences during medical education therefore we questioned students about these experiences, including the severe forms of abuse such as physical abuse and sexual harassment. We used an adaptive online

questionnaire that allowed us to specifically ask about the various forms of experiences according to their frequency and the resulting stress [8]. In addition to an exemplary description of the prevalence of these experiences at a university medical school, we also aimed to analyze the reason for, and the perpetrators of these experiences to be able to point out where a change is needed.

Method

We conducted a survey of medical students at the University of Göttingen, asking them about their negative experiences during the course of study. Ethical approval was obtained from the University Review Board (no. 1/6/08).

Setting

The Medical Faculty at the University of Göttingen is intermediate in size. There were approximately 3,700 medical students at the beginning of the academic year 2008/09, of which 57% were women. Medical studies in Göttingen follow the canonical structure and consist of three parts: basic science (two years), clinical science (three years), and the final clinical year.

Participants

We invited a randomly sampled group of 1222 students via e-mail to participate in our online survey. The students were given an individually assigned code that allowed them to access the questionnaire. At the same time this provided the informed consent to the survey. The codes were cross-checked with a list of participants to exclude anyone from completing the questionnaire twice. Anonymity was guaranteed by storing the data in two separate databases that could not be linked.

Questionnaire

Our online questionnaire was conceived mainly following the survey of Baldwin et al. (1991) and covered subjects such as verbal and physical abuse, humiliation, racial or ethnic discrimination, sexual harassment, etc. We adapted the questionnaire culturally and amended it with subjects of other surveys such as obstructing someone's work routine and being ignored [5], [9]. Additional subjects that emerged as important during the preliminary phase were lack of appreciation and personal rivalry, which were also included.

The final version of the questionnaire comprised six subject areas (see table 1) and were programmed as adaptive questioning. The subjects and the way the questionnaire works may be viewed at http://www.allgemeinmedizin.med.uni-goettingen.de/de/content/forschung/104.html.

The students were only asked to describe their experiences with medical faculty or administrative personnel and with their fellow students, not with patients. Within one subject area, up to five experiences could be related by the students, which they were asked to rate on a five-step scale (from „not aggrieved at all" to „highly aggrieved") according to the degree of aggravation generated by this experience. We defined every term we used in the questionnaire or illustrated what we meant by a brief example. For the subject „sexual harassment", for instance, we defined the term as follows: „We define sexual harassment as gender-specific behaviour that manifests itself verbally, non-verbally, or physically and violates the personal dignity." Following that we asked about sexual harassment: „Did you experience sexual harassment during your course of medical studies (suggestive comments, unwelcome advances, obvious sexual actions)?" If this question was answered in the affirmative, additional questions about the context of this experience followed (which group of persons, situation, time, frequency): „Please describe in more detail by whom, where, when, and how often you were sexually harassed (use the dropdown-list)."

Other questions dealt with positive experiences during the course of study, and additionally, we provided a blank space for detailed accounts of positive or negative experiences. We plan to evaluate these detailed answers in the near future.

The questionnaire was pre-tested on a group of non-participating students and a team of interdisciplinary faculty. The phrasing of questions and definitions of certain experiences were discussed and improved or specified.

Statistics

The data were analysed with the program SAS, version 9.2. We were able to switch from „people" to „events" as analysis units thanks to the so-called array procedure. This allowed us to compute the absolute and relative frequency of all experiences simultaneously with the number of persons who had had these experiences. A chi-square test provided the significance of the difference between male and female participants. We dichotomised the variables for the degree of aggravation, i.e., students who described themselves as „aggrieved" or „highly aggrieved" were considerd „aggrieved", all others as „not aggrieved".

Results

Participants

About a third of the students who were approached (391/1222) participated in the survey; 60% (233/391) of these were women. Twenty-five percent of the students were in the basic science part of their training, 39% currently attended the clinical science phase, and 36% studied in their final year.

Table 1: Frequency and perceived severity of negative experiences

	Incidences*		Victims**			Perceived Severity***		
			All	Women	Men	All	Women	Men
	N	(%)	%	%	%	%	%	%
Lack of appreciation	440	(27)	56	55	58	46	48	42
Rivalry	294	(18)	51	52	51	32	37	24
Being ignored	281	(17)	45	49	39	21	19	23
Obstructing someone's work routine	219	(13)	32	31	32	24	29	17
Verbal abuse	195	(12)	34	34	35	59	**68**	**45**
Humiliation	111	(7)	23	25	20	43	50	29
Sexual harassment	34	(2)	8	**12**	**1**	37	**39**	**0**
Discrimination on other grounds	33	(2)	8	6	10	50	64	38
Physical abuse	23	(1)	6	5	7	41	46	36
Ethnic and racial discrimination	10	(1)	2	2	3	33	50	20
All	1,640	(100)						

* Number of experiences, reported from n=391 students (max. 5 events/category)
** Proportion of students who reported at least one incident; boldface numbers indicate a significant difference (p<0,05) between the genders.
*** Proportion of students who felt aggrieved by the experiences they described. The reference (100%) is the total number of students reporting this incident; boldface numbers indicate a significant difference (p<0,05) between the genders.

Frequency and perpetrators of negative experiences

The 391 students reported a total of 1630 negative experiences (see Table 1), of which the most frequent were lack of appreciation (440) and rivalry (294). Eighty-eight percent of the participants (343/391) recalled 1 to 28 negative experiences (median=4), 44% (170/391) reported up to 3, and a minority of 48 students (12%) had no negative experiences. Lack of appreciation shown by medical faculty was reported by 56% of the participants, followed by rivalry (51%). Sexual harassment had been experienced by 8% of the students, more women than men (12% vs. 1%, p<0.0001).

Rivalry was mainly a peer-problem among the students (86%). Students felt discriminated on an ethnic or social basis mainly by university professors (30%) or senior residents (40%); the reports for humiliations follow a similar trend (33% by university professors, 18% by senior residents). A feeling of being in the way or obstructing other people's work routine was conveyed most often by residents (34%) and nurses (37%).

Experiences during the course of study

The figure 1 shows at which times during the course of medical education negative experiences were made most frequently. These data were only collected from the students attending their final year, for obvious reasons. According to their recollections, the students had negative experiences mostly in their final year and the last semesters of the clinical science phase (semesters 7 to 9), but most frequently in their 11th semester (first half of the final year). Fewer negative experiences were reported in the 12th semester. This strong decline cannot be explained by the fact that students in their penultimate semester were of course unable as yet to report any negative experiences of their final semester.

Perceived severity of negative experiences

As earlier described, 220 of 391 students experienced a lack of appreciation. Of these, 46% (100/220) reported that they felt aggrieved by this (see Table 1). On the whole, fewer students felt verbally abused (134), but it distressed 59% of them. In contrast, while 45%

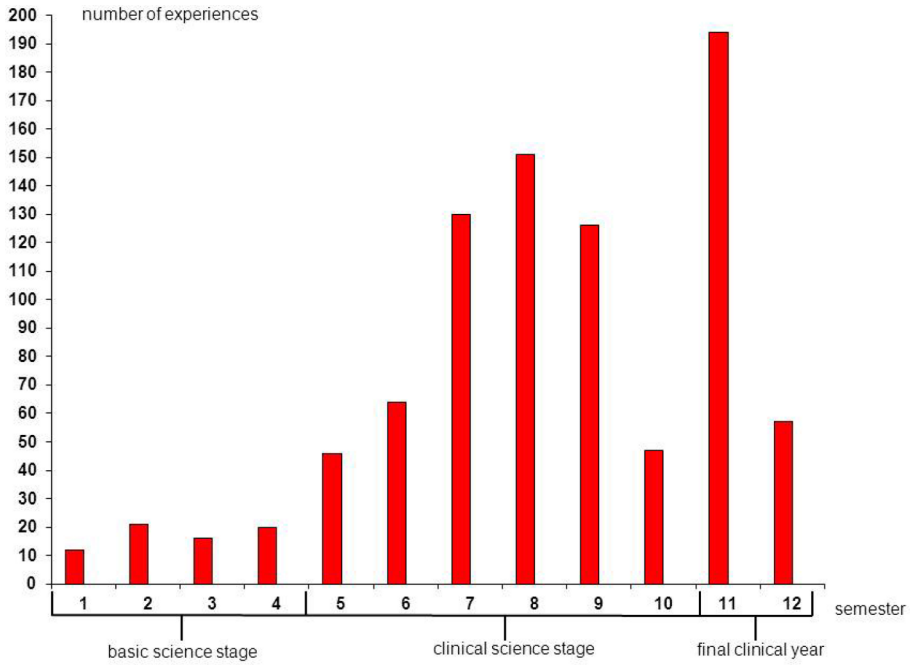

Figure 1: Negative experiences over the course of medical education

(176/391) students felt ignored, 21% (37 /176) of them were upset about this. Female students were on the whole more often aggrieved because of their negative experiences than their male colleagues: verbal abuse upset 68% of the women, but only 45% of the men (p=0,008). Interestingly, in contrast to 39% of women who felt aggrieved by sexual harassment, none of the men did so.

Discussion

Main results

The most frequently reported negative experience was lack of appreciation, followed by peer-rivalry. However, verbal abuse was considered the most aggravating experience.

Strengths and limitations of our survey

This survey questioned students for the first time in Germany not only about the frequency of their negative experiences during the course of their study, but also concerning the perceived severity of these experiences.

The return rate of 32% is low, but this was an online survey that was not mandatory and had an entirely web-based contact to the students. They were exclusively informed and invited to participate by e-mail. It is highly likely that the lack of personal contact was the reason for the meager participation. This is a widely known problem of voluntary online surveys [10] and entails the risk of distorted results, particularly concerning an overestimation of the problem's prevalence. On the other hand, quite a considerable number of the students reported no (12%) or at most three negative experiences (44%) out of the wide range of possible choices they were offered.

More students in the final year responded to the questionnaire compared to those in earlier phases, which might also be considered a possible cause of distortion in the sense of a higher number of negative experiences. However, these older students reported a similar number of experiences as the other students. Moreover, the frequency of negative experiences during the course of study (see Figure 1) was surveyed only for students in their last year, which means that for this result it was irrelevant that the questions were asked of students with a different amount of training.

Surveys in other countries have shown that patients are frequently the cause of negative experiences [3], [6], [11], [12], [13]. Because we aimed to identify causes for distress that might be improved on, we deliberately left out patients as potential causes of negative experiences. We expect that this decision has reduced the number of reported incidences, particularly regarding sexual harassment.

Distribution of negative experiences

Most of the negative experiences were made at the beginning of the students' final year. They scarcely attend lectures anymore at that time, but are assigned exclusively to medical treatment in the clinic, which is a decisive difference to the previous phases of training. Clearly, an increase in negative experiences in this phase, which is meant to teach medical competence and decision-making, will affect the subsequent career choices and place of work [1], [14]. Particularly in view of an increasing shortage of young professionals, this may even have undesirable consequences for the medical training institution.

Comparison with previous studies and significance of results

International surveys have reported a prevalence between 38% and 70% [3], [12] for verbal and non-verbal abuse and other forms of mistreatments of students. We found this to be less frequent in our survey, whereas „lack of appreciation“ was foremost on the list of students' concerns. Remarkably, verbal abuse was rated as most distressing, although it is a less spectacular experience compared to, e.g., sexual harassment.

Peer-rivalry during the course of medical studies (55% of the participants experienced this) has not been studied in great detail so far, even in international literature. Possible causes for this might be found in the educational environment and in the atmosphere the studies are conducted in [15]. Although learning and teaching should be performed in an ambitious and sometimes competitive way, our results show that the educational environment is frequently considered to create a negative competition – which in turn may have a detrimental influence on student satisfaction and possibly even on their personal development. However, such conjunctures go beyond our study, and additional dedicated studies are necessary to conclude on these questions.

The frequency of sexual harassment experienced by women in the USA, as described by Nora et al. [16], is much higher than our results (69% vs. 12%). A reason for this may be that we specifically did not include patients as potential perpetrators of sexual harassment. Socio-cultural differences have been reported in international comparisons for studies on sexual harassment [17], [18]. It also needs to be taken into account when comparing surveys conducted in different countries [5], [6], [13] that different upbringing and general attitudes in the countries will have a decisive influence on the reactions of students to the experiences. This is also supported by the results of a survey conducted in the Netherlands [6], which reported a similar frequency of sexual harassments as was shown in our results. Variations of this degree are only found for sexual harassment in the international literature, however. While we found only very few cases of sexual harassment, they are nevertheless to be taken very seriously. The medical faculty of the University of Göttingen provides a sheltered space at the Psychotherapy Ambulance where the victims are provided close-in-time counseling.

Women complain particularly often about distress caused by verbal abuse or discrimination (68% and 64%, respectively). While women and men experienced lack of appreciation, verbal abuse, or rivalry in about the same frequency, more women than men felt upset by these experiences. Similar gender ratios were previously reported by Moscarello et al. (1994) [19]; they appear still to be relevant today.

Conclusion

Less prominent forms of negative experiences during the course of medical study such as lack of appreciation and verbal abuse are not only frequent, but are considered highly aggrieving by the students themselves. Medical faculty might wish to reflect on this when teaching. Teachers could be supported in their efforts by feedback training, which would help them to be more aware of situations where lack of appreciation, verbal abuse, or sheer ignoring of the students cumulates in a negative experience for those in training. A heightened awareness is particularly appropriate for the final year in the training, where most of the negative experiences were reported as happening. These final-year students are a valuable source of young professionals for university clinics and medical teaching institutions, and it is highly desirable to sustain this source and provide positive role-models for the students.

Competing interests

The authors declare that they have no competing interests.

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