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Foreign students in Germany: a comparative report of satisfaction with medical behavioral sciences education

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Summary

Since it is a challenge to study in a foreign country, educators might wonder how foreign students feel about their studies. Through our quantitative student evaluation of classes on Medical Psychology & Research Methodology and on Doctor/Patient Communication, I found that foreign students had a significantly higher level of satisfaction with their studies than their German peers. Reflections are offered as to why our foreign students were so much more satisfied with these courses than their German peers, and the implications of these findings are discussed. This paper thus aims to stimulate further research on how international students view their medical education.

Key words: foreign students; international students; undergraduate medical education; Germany; student satisfaction

Introduction

It is common that young people study abroad, at least for a semester or a year, sometimes even for an entire degree program. Since studying abroad entails the challenges of living in a different culture and in most cases also using a non-native language, educators might wonder how foreign students feel about their education abroad.

Although there are many reports about the academic/professional performance or mental health needs of foreign students, there appear to be only very few papers that explore how foreign students themselves view their medical education. In an informative focus-group study with 23 Australian and 10 mostly male international students, Treloar and colleagues provided an interesting sample of international students' viewpoints on many aspects of their medical education in Australia [1]. Although the authors do not discuss it, a pattern I see in their results is that the small-group format of a problem-based-learning (PBL) curriculum is experienced by foreign students as comparatively disadvantageous to them, probably due to the fact that PBL relies more heavily on precisely those skills that are weakest for foreign students: language and socializing. Treloar et al. present a useful set of strategies which would facilitate the success of international students in the novel PBL format.

Aside from that paper, there are a few others that mention foreign students' views on their health care education. Schnepp presents the transcript of a focus group with four nursing students from Poland, Holland, Turkey, and Yugoslavia discussing their career experiences including education as foreigners [2]. In a mixed quantitative and qualitative survey of 19 male adult nursing students in the United States immigrating from the Caribbean and a range of other foreign countries, Villafuerte found a very good level of student satisfaction and concluded from this that the program was successful in promoting diversity in the nursing workforce [3]. Benčević and Babić very briefly mention what Croatian students gain from short-term clerkships abroad [4]. In a qualitative mail survey of 82 foreign nursing students in the United States from Asia and all other continents, it seems that Abu-Saad and Kayser-Jones found that these students were quite satisfied, especially if they had known what to expect before starting the program [5]. Beyond this handful of studies, it does not appear that much is scientifically known about how foreign students view their medical education experience.

At the Institute of Medical Psychology and Medical Sociology of the University Hospital of Aachen, Germany, we delivered courses on Medical Psychology, Research Methodology, and Doctor/Patient Communication. We taught these courses to medical students in the third (or sometimes fourth) university semester. A portion of the students who attended these courses were non-

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Germans, seemingly mainly from Turkey, French-speaking African countries, the Middle East, and perhaps formerly communist countries of Europe and Western Asia.

This paper compares German vs. foreign students' evaluations of these courses. By providing reflections on the differences of these students' evaluations, this paper aims to initiate further research and thinking about the perceptions, experiences, and contributions of undergraduate foreign medical students.

Methodology

We conducted student evaluations of these courses for two years. In addition to their usefulness in guiding quality improvement initiatives and documenting accountability toward users, student satisfaction data is important as a mediating variable for academic performance and program completion [6]. We used a questionnaire, which consisted of a few basic sociodemographic questions, 20 questions designed to quantitatively evaluate various aspects of the courses on a 5-point categorial scale (1: "I agree"; 2: "I predominantly agree"; 3: "I am neutral"; 4: "I predominantly disagree"; 5: "I disagree"; and a sixth box for "cannot judge"), an overall numerical grade for the course, and a small area for students to write in open-ended qualitative feedback. Completion of the questionnaire was voluntary and anonymous.

The quantitative data was analyzed using SPSS 13. The means of the quantitative evaluations were compared for German and foreign students using an analysis of covariance adjusted for age and sex (ANCOVA). The sparse qualitative data was reviewed but did not appear useful for further analysis in this report.

Results

Over the past two years, from a nominal total of 540 students, 471 (87.2%) students evaluated our course on Medical Psychology and Research Methodology (a combined evaluation), and 423 (78.5%) students evaluated our course on Doctor/Patient Communication. Of these responders, 36 (7.6%) students had completed their secondary school diplomas in a non-German-speaking country for the former courses, and 31 (7.3%) students had completed their secondary school diplomas in a foreign country for the latter course. For questionnaire items 1–20, the level of missing data never exceeded 5%, neither for the total study population, nor for the subset of foreign students. For the item evaluating the courses overall, the total missing data did not exceed 10%, but the missing data for the foreign student subset reached 17% (Medical Psychology & Research Methodology) and 26% (Doctor/Patient Communication) for this overall rating; this was probably due to the location of the item on the questionnaire. Demographically, the German and foreign students were quite similar. The age and sex composition are presented in Table 1. It should be noted that this is virtually the same overall pool of students who took and evaluated each of the two courses. This sample thus covers, as completely as possible, all second year students attending our medical school over a two year period.

The questionnaire was not designed to specify the students' background any further, but I personally taught almost all of these students and feel confident in making the following generalizations. The foreign students came predominantly from Middle Eastern countries (e.g. Egypt, Syria, Lebanon), French-speaking sub-Saharan African countries (e.g. Cameroon, Senegal), Turkey, and possibly Eastern European countries, seemingly in roughly equal proportions. Among the foreign students there did not seem to be anyone from other Western European, English-speaking, East Asian, or Latin American countries. Among the students who completed their secondary school education in Germany, it seemed that the vast majority were native-born Germans. Most of those who were not born in Germany but had graduated from a German secondary school seemed to come from either Turkey or the formerly communist countries of Eastern Europe, though here I am less confident of my characterization, because of the much larger numbers of students.

Students who had completed their secondary

Table 1.
Sex and age of respondents.

		Sex (% Female)	25th % age	Median age	75th % age
Course 1: Medical Psychology and Research Methodology	German students (n = 435)	69.2	20	21	22
	Foreign students (n = 36)	61.1	20	21	23
Course 2: Doctor/Patient Communication	German students, course 2 (n = 423)	68.1	21	21	22
	Foreign students, course 2 (n = 31)	53.3	20	21	22

Table 2.

Differences, between students from German-language secondary schools and students from foreign-language secondary schools, in the quantitative student evaluation of the Medical Psychology and Research Methodology courses. The means have been adjusted for age and sex. The last column presents the difference between these means and the 95% confidence interval within which the true difference could lie.

	Statements scored on an ordinal scale (1 = "agree" to 5 = "disagree")	German mean	Foreign mean	Difference (95% CI)
T	**Overall Numerical Grade**	2.8	2.7	0.0 (–0.3, 0.4)
1	The teacher appropriately takes into account my previous knowledge.	2.2	2.0	0.2 (–0.2, 0.7)
2	He/she makes the course lively and engaging.	2.4	2.0	0.4 (–0.0, 0.7)
3	The teacher presents facts comprehensibly.	1.9	2.1	–0.1 (–0.4, 0.2)
4	A constructive atmosphere reigns in the course.	2.6	2.2	0.4 (0.0, 0.8)
5	I feel motivated to participation.	2.9	2.5	0.3 (–0.1, 0.8)
6	I learn a lot in the course.	2.8	2.0	0.8 (0.4, 1.2)
7	The lecturer concretized the teaching content.	2.3	1.9	0.4 (0.0, 0.7)
8	The course is a good foundation for my own study.	2.6	2.2	0.5 (0.0, 0.9)
9	The course is clearly structured.	2.6	2.0	0.6 (0.2, 1.1)
10	The lecturer/tutor promoted discussion in the course.	2.4	2.1	0.3 (–0.1, 0.7)
11	I am very satisfied with the exam organization.	3.4	3.1	0.3 (–0.2, 0.8)
12	The lecturer/tutor has clearly formulated the learning goal.	2.7	2.0	0.7 (0.3, 1.1)
13	The course has contributed to a better understanding of the material.	2.3	2.0	0.3 (–0.1, 0.7)
14	The contents of the course are useful for my later work.	2.2	1.9	0.3 (–0.1, 0.7)
15	The course has always taken place on time.	1.6	1.9	–0.3 (–0.7, 0.1)
16	I am very satisfied with the study organization.	3.2	3.1	0.1 (–0.3, 0.6)
17	I am up to now very satisfied with my performance.	2.6	2.3	0.3 (–0.2, 0.7)
18	I enjoyed the experiment.	2.5	2.5	0.1 (–0.4, 0.5)
19	I understood a lot through the experiment.	3.0	2.6	0.5 (0.0, 0.9)
20	The course was a good preparation for the examination.	3.1	2.4	0.7 (0.1, 1.2)

Table 3.

Differences, between students from German-language secondary schools and students from foreign-language secondary schools, in the quantitative student evaluation of the Doctor/Patient Communication course. The means have been adjusted for age and sex. The last column presents the difference between these means and the 95% confidence interval within which the true difference could lie.

	Statements scored on an ordinal scale (1 = "agree" to 5 = "disagree")	German mean	Foreign mean	Difference (95% CI)
T	**Overall Numerical Grade**	2.5	1.8	0.7 (0.3, 1.0)
1	The teacher appropriately takes into account my previous knowledge.	1.8	1.8	0.0 (–0.4, 0.4)
2	He/she makes the course lively and engaging.	1.9	1.6	0.3 (–0.1, 0.7)
3	The teacher presents facts comprehensibly.	1.7	1.8	–0.1 (–0.4, 0.3)
4	A constructive atmosphere reigns in the course.	2.2	2.0	0.2 (–0.2, 0.7)
5	I feel motivated to participation.	2.4	2.1	0.3 (–0.1, 0.7)
6	I learn a lot in the course.	2.8	2.1	0.7 (0.2, 1.1)
7	The lecturer concretized the teaching content.	2.2	2.0	0.2 (–0.2, 0.6)
8	The course is a good foundation for my own study.	3.0	2.0	1.0 (0.6, 1.5)
9	The course is clearly structured.	2.3	2.1	0.2 (–0.2, 0.6)
10	The lecturer/tutor promoted discussion in the course.	1.8	1.5	0.3 (–0.1, 0.6)
11	I am very satisfied with the exam organization.	3.0	2.2	0.8 (0.3, 1.3)
12	The lecturer/tutor has clearly formulated the learning goal.	2.4	1.7	0.7 (0.2, 1.1)
13	The course has contributed to a better understanding of the material.	2.5	1.5	1.0 (0.5, 1.4)
14	The contents of the course are useful for my later work.	2.0	1.6	0.4 (–0.1, 0.8)
15	The course has always taken place on time.	1.3	1.4	–0.1 (–0.4, 0.1)
16	I am very satisfied with the study organization.	2.9	2.3	0.7 (0.2, 1.1)
17	I am up to now very satisfied with my performance.	2.1	2.1	0.1 (–0.3, 0.4)
18	I enjoyed the [role-plays/simulations].	2.6	2.1	0.5 (0.0, 1.1)
19	I understood a lot through the [role-plays/simulations].	2.7	1.8	0.8 (0.4, 1.3)
20	The feedback after the [role-plays/simulations] was helpful.	2.2	1.8	0.4 (–0.0, 0.8)

school diploma in a non-German-speaking school, were far more satisfied with our courses and their sense of how much they were learning than were students from German-speaking secondary schools. The results are presented in Table 2 for the course on Medical Psychology and Research Methodology and in Table 3 for the course on Doctor/Patient Communication.

Discussion

The intention of the sociodemographic question on the language of instruction at the student's secondary school was simply to verify who could be assumed to master the German language in which our courses were delivered. Although it does serve this function, it obviously also reveals the cultural and educational background of our students. Since these are medical students, it is quite unlikely that they were exchange students in Aachen only on a short-term basis (i.e. a semester or two); instead, they are indeed foreign students pursing an entire degree education in Germany, perhaps even with thoughts or plans of settling in Germany.

As can be seen in the tables, students from a foreign background rated our courses much higher on many factors, including the overall rating for the Doctor/Patient Communication course. Comparison of the two tables shows that a few aspects were consistently rated better by foreign students to a significant level: "I learn a lot in the course" (#6), "The course is a good foundation for my own study" (#8), "The lecturer/tutor has clearly formulated the learning goal" (#12), and understanding a lot through the practical activity of the experiments or role-plays/simulations (#19). Several other factors were rated significantly better by foreign students: items 4, 7, 9, 20 in Table 2 and items T, 11, 13, 16, 18 in Table 3. Moreover, a strong pattern emerges in the overall results: except for items 3 and 15, the foreign students rated all the items better than the German students.

The extent and degree of these rating differences creates an undeniable overall picture. One would not have expected to find any significant differences among sociodemographic groups in this evaluation. Similar analyses for gender and age had only revealed a few differences, which barely reached significance and did not warrant further reflection. Also, on a five point scale, differences of a half to a whole point would represent a qualitative difference in the subjective experiencing of the course by the students, not merely a quantitative variation of degree. Altogether, this data says something that calls for broader consideration.

There are at least three possible reasons why our foreign students were so much more satisfied with their medical behavioral sciences courses than their German peers. 1) Cox has cataloged many general factors that may lead students to study abroad under the terms "push and pull factors" [7]. These same factors, which may have originally induced our foreign students to come to Germany, may also have disposed them to rate their medical education more favorably than their German peers. 2) In a well-conducted quantitative study of 70 American female occupational therapy and physical therapy students, Barris and colleagues found that their satisfaction was related to their values and learning styles [8]. The difference between foreign and German students in the present report may similarly reflect an underlying difference in personal values or preferred learning style between the two groups, whereby the foreign students' values and learning style were better addressed by the teaching of our medical behavioral sciences courses. 3) In a qualitative mail survey of 82 foreign nursing students in the United States from Asia and all other continents, Abu-Saad and Kayser-Jones anecdotally indicate that high satisfaction for foreign students was due to feeling privileged and enriched by an educational opportunity perceived as high-quality [5]. A similar feeling may in part explain the higher satisfaction ratings of our foreign students. Further research will be required to determine which factors lead to high satisfaction among foreign medical students.

This finding of higher satisfaction among our foreign students carries at least a few important implications. First, since the foreign students had high levels of satisfaction with their medical behavioral sciences courses, they are more likely to persevere to successful completion of this component of their education, even in the face of possible difficulties in their objective performance or broader life situation as foreign students (such as financial difficulties or homesickness). Second, the high satisfaction of our foreign students serves as an indicator that our course offerings were creating a positive experience for them and thus serving to support inclusiveness and diversity in the medical student body and later in the medical profession. Third, in so far as our foreign students were quite satisfied with their educational experiences, they probably had more personal availability to constructively share their unique international perspectives with their German peers and thus to enrich the campus life for everyone.

Conclusions

The nationality of students comes into consideration in a number of social and administrative matters and discussions. Moreover, educators are aware that they have foreign students and may consciously or unconsciously modify their teaching or programs accordingly. For these reasons it would be valuable to know more about foreign students and their relationship to their studies in their host countries, particularly if meaningful patterns of significant differences can be empirically found, as in this report.

The present report leads to at least a few suggestions for fruitful avenues of further research. First, by comparing the ratings and perceptions of

foreign students from industrialized countries with those from non-industrialized countries, it might be possible to determine whether higher satisfaction is due to something general such as the enjoyment of being in a foreign culture or something specific such as receiving opportunities that might not be available to them in their home countries. Second, although it might be ethically complicated, it would be interesting to compare students' subjective ratings of their educational experience with their objective performance ratings on examinations or other measures. Third, qualitative studies would better enable us to understand what students find enjoyable and enriching about studying abroad, and this knowledge might enable educators to better promote the value of studying abroad to their students who have not yet done so.

Finally, it should be noted that the experiences of foreign medical students have a deeper significance which makes them an important topic for further research. Assuming that most foreign medical students are from materially less developed countries and studying in materially more developed countries, they serve as an important vehicle for the international exchange of medical knowledge. Though many foreign medical students may remain in their host countries, many will return to practice medicine in their native countries, perhaps even in leading positions. Conversely, for young medical students of the host country, collegial contact and friendship with their foreign peers may be one of the main sources for learning about the medical, social, and health issues of other lands beyond their daily horizons, and this may even lead them to consider doing some career work there. Foreign medical students may thus be an unacknowledged but crucial link in addressing public health issues in an increasingly global world.

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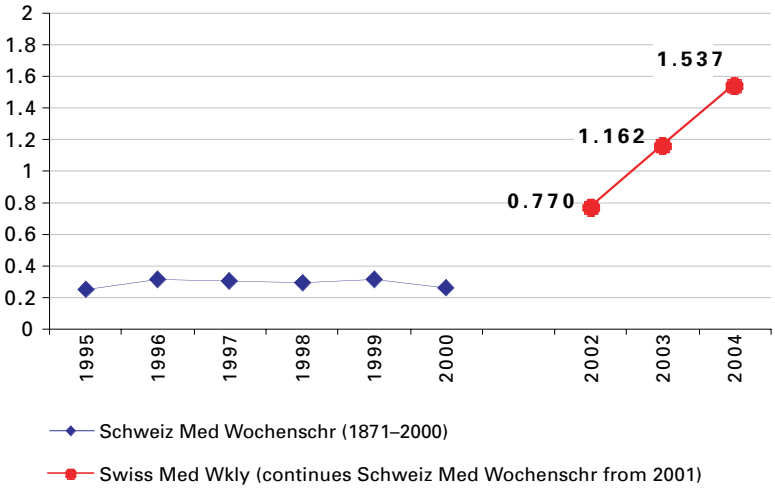

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