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Surprise: Gender makes a Difference – An Exploratory Study on Female and Male Students' Feedback to their Public Health Teachers in Medical School

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Abstract

Purpose: Due to the sex ratio of medical students in Graz, more female than male students take this course in their last year of medical school. Three lecturers of the Institute of Social Medicine and Epidemiology, Karl-Franzens-University Graz, one female and two males, started evaluating their courses in 1998. Our topic of interest is the evaluation confounding by interaction between gender of teachers and students. **Method:** We used a standardized questionnaire including five sections with ratings on 5 point scales developed by an expert committee of this university. The students answered the questionnaire at the end of the course. Therefore, the response rate was nearly 100%. The performance of the three teachers in the time period from 1998 to 2000 was analysed by correlations and stepwise regression analysis. **Results:** From 1998 to 2000 altogether 215 questionnaires (25% of the student population) were randomly selected for the present data analysis. Approximately 60% of the students were female (n = 128) and 40% were male (n = 87). Generally, the students appreciated the course. We found striking differences in responses according to gender. **Conclusion:** The results touch upon the more general question whether a variable, at this point gender of the teacher, has an impact on female and male students' evaluation or whether the quality of performance of differently gendered teachers itself is at question. In any case, gender has a major impact on the way courses are being evaluated. Evaluators therefore have to take into account the sex ratio of the courses' population as well as teachers' gender when evaluating feedback to the courses.

Key words

Gender specificity · pilot study · evaluation · teachers · public health

Introduction

As a consequence of reorganization, Austrian universities have been required by law to evaluate the teaching competence of their faculty since 1999. In the future, research and educational evaluations will provide the ground for establishing financial merits and career development needs of a faculty [1]. The Institute of Social Medicine and Epidemiology, Karl-Franzens-University Graz, voluntarily started to evaluate their courses in 1998 using one of the most commonly-used methods to assess the quality of lectures [2]: questionnaires filled out by students eval-

uating the teaching performance of the lecturers. Our topic of interest of this study is the evaluation confounding by interaction between gender of teachers and students.

Graz is the second largest of three medical schools in Austria. Public health is a core course within the medical school curriculum; approximately 360 students participate in the public health courses yearly. Students usually take this one-week course in the last year of their academic training. Recently, the number of female medical students has increased in Austria, a ratio we now also encounter in our public health courses.

The format of the course is small group teaching. Around twenty to twenty-five students work on selected topics of public health relevant to primary health care, e.g. medical sociology, evidence based medicine, medicine and the internet/scientific literature search, domestic violence, health care for marginalized population groups. The courses thus cover a wide range of topics related to every day medical practice. Lectures are interspersed with case examples and are complemented with excursions to particular health care providers. The format provides for lectures, time for individual study, and group discussions about psychosocial and social ramifications and consequences related to the topics [3].

Method

For evaluation we used a standardized questionnaire developed by an expert committee of the Karl-Franzens-University Graz with ratings on a 5 point scale. At the end of each one-week course, all students were requested to complete the evaluation questionnaire. The students filled out the questionnaire in the final minutes before the course ends. Due to required attendance, the response rate was nearly 100%. The evaluation was anonymous as all completed sheets were collected by students and returned in bulk.

In the time period from 1998 to 2000, the performance of one female and two male teachers was analyzed. We shaped four groups: Group I (FS-FT): Female student and female teacher; Group II (FS-MT): Female student and male teacher; Group III (MS-FT): Male student and female teacher; Group IV (MS-MT): Male student and male teacher. The correlation of all single items with the overall grading was assessed with Spearman correlation coefficient within each group separately. Stepwise regression analysis was performed to determine which features would predict the overall lecture quality grading of the female and male students for the one female and two male lecturers.

Results

From 1998 to 2000 altogether 215 questionnaires (25% of the student population) were randomly selected for the present data analysis. Approximately 60% of the students were female (n = 128) and 40% were male (n = 87). In Group I (FS-FT): Female student and female teacher 50 questionnaires were completed, in Group II (FS-MT): Female student and male teacher 78, in

Group III (MS-FT): Male student and female teacher 38, in Group IV (MS-MT): Male student and male teacher 49.

The sociodemographic data in regard of Students' Age in Years and Students' Mean Number of Semesters were the following, Group I (FS-FT): 25.8 (\pm 3.3) and 13.11 (\pm 2.46); Group II (FS-MT): 25.1 (\pm 1.4) and 12.94 (\pm 2.08); Group III (MS-FT): 25.9 (\pm 2.5) and 13.38 (\pm 2.51); Group IV (MS-MT): 27.3 (\pm 5.0) and 13.17 (\pm 2.46). Standard deviations are given in brackets.

Table 1 lists the mean ratings of all variables of the four groups. The most positive mean gradings are printed in bold.

Table 2 shows the p-values of the significant correlations of all single items with the overall lecture quality grading.

The significant variables of the stepwise regression analysis predicting the overall grading in Group I (FS-FT), II (FS-MT), III (MS-FT), and IV (MS-MT) are the following: the p-value for the variable „Number of Semesters“ in Group III was 0.007 demonstrating an inverse relationship with the overall grading. All the other predictors indicated positive interrelations. The p-value for the variable „The course was interesting“ for Group I, II, IV was 0.000, the p-value for the variable „I gained personal knowledge from the course“ for Group III was 0.029, and for the variable „The lecturer explained the subject matter clearly“ the p-value in Group I was 0.002 and in Group III 0.014.

Conclusion

Generally, the students appreciated the course. However, we recognize that the culture of a traditional clinical environment with clinical teachers rather than students asking questions and providing answers may be strongly counterinfluencing the perception of a course requiring a relatively small time period spent in small working groups [4]. The setting of our courses as well as the range of topics we cover and public health approach we take has no precedence nor support in the students' previous medical curriculum. In the classroom discussions we encounter more outspoken critique as well as a lack of familiarity with this approach than the results of the evaluation suggest. We therefore plan to modify the questionnaire. In general, an evaluation at the end of a course may be influenced by the immediate experience, interfering with an evaluation focussing possible long-term effects.

Since the paper is descriptive and hypothesis generating, its findings need to be tested using a larger sample. In our study, we found striking differences in responses according to gender. Generally, female students evaluated their teachers more positively than male students. However, they gave better gradings to the male teachers: 11 best rankings for the male lecturers and 5 best rankings for the female lecturer. The male students rank the male teachers best in three variables and the female teacher only in one.

For female students the variable „The course was interesting“ was significant in the regression analysis on the overall lecture quality grading with regard to the teachers' gender. This did not

Table 1 Mean Gradings (SD ±) for Group I (FS-FT), II (FS-MT), III (MS-FT), and IV (MS-MT)

	Group I (FS-FT) (50)	Group II (FS-MT) (78)	Group III (MS-FT) (38)	Group IV (MS-MT) (49)
<i>General impression of the course</i>				
	5 point scale: excellent – fail			
My overall grade for the course	2.28 (1.05)	2.09 (.82)*	2.51 (0.78)	2.40 (0.99)
	5 point scale: appropriate – not appropriate			
The course was interesting	1.96 (0.86)	1.90 (0.75)	2.22 (0.82)	2.10 (0.95)
I gained personal knowledge from the course	1.86 (0.76)	1.94 (1.01)	2.24 (0.83)	2.06 (1.09)
I think that the course is useful for my education	2.12 (1.02)	2.32 (1.22)	2.50 (1.18)	2.48 (1.34)
My learning investment for the course was appropriate	1.98 (1.12)	1.41 (0.64)	1.94 (0.94)	1.73 (0.93)
The course level was adequate	1.63 (0.87)	1.50 (0.74)	1.94 (0.98)	1.93 (1.21)
<i>Details on the course</i>				
	5 point scale: appropriate – not appropriate			
The objective of the course was made clear	1.60 (.88)	1.79 (1.09)	1.92 (1.10)	1.80 (0.98)
The objective of the course was pursued coherently	1.88 (1.01)	1.70 (0.92)	2.14 (0.92)	2.0 (1.0)
I think that an interdisciplinary approach is useful for course objectives	1.98 (1.05)	2.06 (1.22)	2.32 (1.36)	1.74 (1.0)
An interdisciplinary course was realized	2.76 (1.14)	2.66 (1.35)	3.18 (1.16)	2.38 (1.31)
<i>Organization of the course</i>				
The locality of the lecture was...	1.76 (0.85)	1.42 (0.66)	1.74 (0.92)	1.57 (0.84)
The technical equipment for the lecture was...	1.82 (0.87)	1.62 (0.81)	1.66 (0.91)	1.88 (0.99)
<i>Lecturer</i>				
	5 point scale: appropriate – not appropriate			
Took good care of the course	1.88 (0.96)	1.45 (0.66)	2.03 (1.03)	1.60 (0.89)
Explained the subject matter clearly	2.08 (1.10)	1.49 (0.70)	2.29 (0.98)	1.66 (0.94)
Encouraged questions, critique and discussion	1.48 (1.09)	1.60 (0.82)	1.42 (0.89)	1.79 (0.94)
Clarified the subject matter with useful examples	2.06 (1.07)	1.71 (0.93)	2.43 (1.04)	1.79 (0.88)
<i>Presentation</i>				
	5 point scale: appropriate – not appropriate			
The oral presentation was very good	1.83 (0.89)	2.14 (0.98)	1.95 (0.80)	2.25 (0.93)
The structure and the organization of the content was clear	2.15 (0.99)	1.96 (0.99)	2.77 (1.03)	2.21 (0.93)
Use of educational aids was optimal	2.19 (0.98)	1.83 (0.86)	2.94 (1.14)	2.08 (0.95)
Study devices (script, text book, working sheets) were optimal	1.85 (1.01)	1.87 (0.95)	2.73 (1.18)	2.09 (0.97)

* The most positive mean gradings are printed in bold. Standard Deviations (SD) are given in brackets

Table 2 Lecture Quality Grading Correlations in Group I (FS-FT), II (FS-MT), III (MS-FT), and IV (MS-MT)

Significant Variables	p-value			
	Group I (FS-FT)	Group II (MS-FT)	Group III (MS-FT)	Group IV (MS-MT)
The course was interesting	0.000	0.000	0.000	0.000
I gained personal knowledge from the course	0.000	0.000	0.000	0.000
I think that the course is useful for my education	0.000	0.000	0.000	0.000
My learning investment for the course was appropriate	0.005			
The course level was adequate		0.007		
The objective of the course was made clear	0.005	0.000		
The objective of the course was pursued coherently	0.000	0.006	0.041	0.000
I think that an interdisciplinary approach is useful for course objectives			0.048	
An interdisciplinary course was realized				0.035
The lecturer took good care of the course	0.000	0.000	0.000	0.000
The lecturer explained the subject matter clearly	0.000	0.000	0.000	0.000
The lecturer encouraged questions, critique and discussion	0.001	0.000	0.003	0.025
The lecturer facilitated the subject matter with useful examples	0.000	0.001		0.001
The oral presentation was very good	0.000	0.000	0.009	0.000
The structure and organization of the content was clear	0.001	0.002	0.007	0.001
The study devices (script, text book, working sheets) were optimal				0.014

apply when male students evaluated the female teacher. The item „Gaining personal knowledge from the course“ was significant for male students evaluating the female teacher. „The lecturer explained the subject matter clearly“ was important for female students evaluating the female and the male teachers but not significant for male students. The fewer number of semesters the male students had attended the more negative was the overall lecture quality grading they gave to the female lecturer.

The results touch upon the more general question whether a variable, at this point gender of the teacher, has an impact on female and male students' evaluation or whether the quality of performance of differently gendered teachers itself is at question [5].

A literature search in MEDLINE on gender of student and/or teachers and course evaluation yielded no results [6]. We were very surprised to learn that gender has not been considered a significant variable in the paramount literature on medical education. Therefore, our results cannot be compared nor contrasted with similar studies. Further research on this subject seems vital since our results, though not generalizable, suggest – not surprisingly [7] – that gender significantly influences the perception of

the courses' quality and their evaluation. Gender thus has a major impact on the way courses are being evaluated. Evaluators therefore have to take into account the sex ratio of the courses' population as well as teachers' gender when evaluating feedback of the courses.

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Training der Arzt-Patient-Kommunikation als Element interdisziplinärer POL-Kurse

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Zusammenfassung

Eine zentrale Forderung an eine Studienreform ist es, die Fähigkeit zur Kommunikation mit Patienten zu verbessern. Dies wird weder durch interdisziplinäre Blockkurse noch durch Tutorien mit Fallgeschichten alleine erreicht. An unserer Fakultät werden deshalb Praktika zur Arzt-Patient-Kommunikation in die Kurse integriert. Das Konzept und die Evaluation von zwei dieser Praktika werden hier dargestellt. Im Blockkurs „Grundlagen der Pharmakotherapie“ wird die Fähigkeit vermittelt, Patienten über Wirkungsweise, Nebenwirkungen und Bedeutung von Medikamenten aufzuklären und Grundlagen für eine gute Compliance zu schaffen. Als Übungspartner stellten sich Teilnehmer einer Selbsthilfegruppe zur Verfügung. Ihre Aufgabe war es auch, den Studierenden Rückmeldung über ihr Gesprächsverhalten zu geben. Im Blockkurs „Onkologie“ wurde geübt, Patienten über die Diagnose einer bösartigen Erkrankung aufzuklären und unterschiedliche Therapieoptionen zu besprechen. Beide Praktika wurden von den Studierenden gut angenommen, in der Evaluation wurde häufig noch mehr Zeit für praktische Übungen gewünscht.

Schlüsselwörter

Arzt-/Patient-Kommunikation · Kommunikationstraining · POL-Curriculum · Onkologie · Pharmakologie

Training of Doctor/Patient-Communication in Interdisciplinary PBL-Courses

Interdisciplinary problem based (PBL) courses with discussion of paper-cases in tutorials do not necessarily lead to an improvement of doctor/patient-communication skills. Therefore we added special communication-training sessions to our curriculum. Two of them are described in this paper. In the PBL-Course „Principles of Pharmacotherapy“ students had the opportunity to practice teaching patients about importance, effects and side effects of a drug and how to encourage compliance. Members of a Dresden self-help group took the part of the patients. They also gave feedback to the students about their communication style. Another lesson was performed in the oncology course to train communication concerning the diagnosis of cancer and different therapeutical options. Both courses were accepted very well by the students, in evaluation data students requested more time for practical exercise.