DEVELOPMENTS

Development, Implementation, and Evaluation of a Movie-Based Curriculum to Teach Psychopathology

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Background: Because medical students’ attitudes toward psychiatry are often fostered by media, we provided an elective movie-based seminar to teach psychopathology. Description: We assessed attitudes toward psychiatry by using the Attitudes towards Psychiatry (ATP 35) scale in a pre–post design. Furthermore we evaluated the knowledge of diagnostic criteria in a pre–post design within one sample. Evaluation: Of the 75 students who attended the seminar during 3 consecutive semesters, 54 (60.8% female) participated in the pre–post assessment. We observed a significant positive change in attitudes toward psychiatry and a significant gain of knowledge. Conclusions: Using movies is a feasible and effective method to teach psychiatry.

Keywords medical students, psychiatry, movies

BACKGROUND

Mental illnesses are among the three leading contributors to the global burden of disease worldwide,1 and accordingly, medical doctors are likely to be confronted with medical illness regardless in which field of medicine they work. Therefore, it is important to create a positive attitude toward psychiatry in medical students. Psychiatry is rarely represented positively in films and movies often portray stereotypes about mental illness, but films are also a useful tool to improve the understanding of psychopathology and seem highly suitable to foster a positive attitude toward psychiatry.2,3 It has been stated that experiential learning (such as, e.g., witnessing a drama performance and reflecting about it afterward) is valuable for the promotion of attitude change.4 This study was aimed at teaching psychopathology to medical students using movies, lectures, and group discussion in an elective seminar. Despite several studies, which were done with regards to teaching psychiatry using movies,5–7 changes to attitudes toward psychiatry after watching movies dealing with mental health issues in an elective seminar have never been assessed. The aim of our study was to assess the effect of a film seminar on students’ attitudes toward psychiatry and to measure the effectiveness of knowledge transfer. We expected to observe a gain in knowledge on psychopathological features and a change to a more positive attitude toward psychiatry.

METHOD

Each semester, 25 medical students were admitted to our elective seminar by online registration on a “first come first serve” basis. An introductory lesson focused on the view of psychiatry in the movies and the role of the International Classification of Diseases of the World Health Organisation (ICD-10) system for psychiatric diagnoses. This was followed by nine weekly lessons (each lasting for 90 minutes) focused on each subchapter of the psychiatric diagnostic entities (Chapter “F”) of the ICD-10. Several snippets from movies prototypical to the respective topic (see Table 1 for details) were shown and discussed with the group of students with regard to diagnostic criteria and stereotypical depiction.

At the beginning of a lesson, a short overview about the respective “F” category was provided, followed by an introductory film snippet, after which the students were asked to
identify psychopathological symptoms based on their current knowledge. After a group discussion about the shown symptoms, the lecturer provided an input about psychopathological symptoms as described in ICD-10. The students were then encouraged to identify the described symptoms in further snippets, after which a group discussion about the portrayal in the film and the real-life presentation was encouraged. This part of the lecture was meant to allow for discussion of clinical practice of psychiatry, as all lecturers are clinically working as psychiatrists or neurologists, so that students were given a chance to compare their ideas of psychiatry and the ideas they got from watching the movies with their lecturers experience, hence giving a chance to reflect about their attitudes. The information presented by the lecturers was provided as online learning material; no homework was given. Nevertheless, the students were encouraged to watch the films at home. Two copies of each film were available for lending, and students circulated them within the group throughout the semester. Grades were given at the end of the semester based on the students’ knowledge of ICD-10 criteria in a written test.

**Participants**

During three terms (summer term 2010 to summer term 2011), 75 medical students (64.9% female, \( M = 24.5 \) years) were admitted to the seminar. Only students in clinical semesters (five semesters or more) were allowed to participate in the seminar. Of these, 77% had already passed the general compulsory lecture in psychiatry. Data from the 54 students (60.8% female, \( M = 24 \) years, \( SD = 1.84 \)) who volunteered to take part in the use of the assessment sheets in a study and needed to check a box on the sheets, if they were willing to contribute. Only these questionnaires were included in the analysis (72% of participants).

**Statistical Analysis**

Mean sum scores of the ATP-35 were compared using a chi-square test. According to the analysis of Strebel et al., we conducted an analysis of the mean sum score at the beginning and at the end of the semester. This included rec-coding of several items (Items 4, 9–12, 14, 15, 18, 20, 23, 25, 27–29, 32), to adjust item meaning in one direction, creating a sum score for the whole ATP-35 with higher scores showing a more positive attitude. Statistical analysis was run by using PASW Statistics 18.0 (SPSS Inc. IBM).

**RESULTS**

As expected for an elective seminar, attitudes toward psychiatry were already clearly positive at pretesting (\( M \) sum score =...
2 Working in psychiatry leads to stronger emotional burden 2
19 There is very little that psychiatrists can do for their patients 3
15 Psychiatrists tend to be as stable as the average doctor 3
12 Psychiatric illness deserves at least as much attention as physical illness 4

8 The practice of psychotherapy basically is fraudulent since there is no strong evidence that it is effective 8
31 Psychiatrists administer too much medication and care too little about the patients’ real problems 3
30 Psychiatry is so amorphous that it cannot really be taught effectively 4
29 Psychiatrists talk a lot but do very little 3
28 Psychiatrists get less satisfaction from their work than other specialists 4

6 On the whole, people taking up psychiatric training are running away from participation in real medicine 6

5 In recent years, psychiatric treatment has become quite effective 3
4 Most of the so-called facts in psychiatry are really just vague speculations 4
3 If we listen to them, psychiatric patients are just as human as other people 4
2 Psychiatry is so unscientific that even psychiatrists can’t agree as to what its basic applied sciences are 3

1 Psychiatric hospitals are little more than prisons 4
1 Psychiatrists tend to be as stable as the average doctor 3
1 Psychiatrists talk a lot but do very little 3

We were able to demonstrate that teaching psychopathology through the use of movies can improve attitudes toward psychiatry as supported by overall positive changes in the ATP-35 (see Table 2). Although our sample already showed high mean scores in the ATP-35 in comparison to data presented by Strebel et al. (mean sum score of 132.1 in our sample vs. 120.5 in the sample of Strebel et al.), we were still able to show significant improvement in the sum score of the ATP-35 toward an overall more positive attitude. The overall positive attitude at the beginning might also be explained by the higher proportion of female medical students, as there seems to be a higher willingness in women to enter a career in psychiatry. The combination of input by lecture, film, and group discussion allowed to show an improvement in positive attitudes in an already highly motivated population of medical students. Furthermore, this teaching method seems to be a feasible approach to increase the knowledge of psychiatric diagnostic criteria among medical students. The students’ feedback was overall very positive. Although probably most of the participants will not enter a career in psychiatry, identification of psychiatric symptoms is important for medical doctors of all specialities, so that we hope that our seminar helps to create a better awareness of psychiatric symptoms in future medical professionals. Furthermore our findings from the ATP-35 showed improvement in several items dealing with psychiatrists (Items 2, 6, 15, 31, and 34), which can be interpreted as a sign for a greater acceptance toward psychiatry as a medical speciality. This could ease getting

### Table 2

Pre and posttest score (mean) for the ATP 35 (German version; Strebel et al., 2000). Only items with significant ($p < .05$) pre/posttest differences are shown. The whole table is available upon request from the authors.

<table>
<thead>
<tr>
<th>Item</th>
<th>Pretest Mean (SD)</th>
<th>Posttest Mean (SD)</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Psychiatrists talk a lot but do very little</td>
<td>3.98 (.75)</td>
<td>4.37 (.6)</td>
</tr>
<tr>
<td>3</td>
<td>Psychiatric hospitals are little more than prisons</td>
<td>4.57 (.64)</td>
<td>4.79 (.5)</td>
</tr>
<tr>
<td>4</td>
<td>I would like to be a psychiatrist</td>
<td>3.08 (1.07)</td>
<td>3.37 (1.13)</td>
</tr>
<tr>
<td>6</td>
<td>On the whole, people taking up psychiatric training are running away from participation in real medicine</td>
<td>4.35 (.68)</td>
<td>4.71 (.54)</td>
</tr>
<tr>
<td>8</td>
<td>The practice of psychotherapy basically is fraudulent since there is no strong evidence that it is effective</td>
<td>4.42 (.72)</td>
<td>4.63 (.63)</td>
</tr>
<tr>
<td>11</td>
<td>Psychiatry is a respected branch of medicine</td>
<td>4.12 (.98)</td>
<td>4.29 (.99)</td>
</tr>
<tr>
<td>12</td>
<td>Psychiatric illness deserves at least as much attention as physical illness</td>
<td>4.4 (.84)</td>
<td>4.65 (.65)</td>
</tr>
<tr>
<td>15</td>
<td>Psychiatrists tend to be as stable as the average doctor</td>
<td>3.47 (.97)</td>
<td>3.98 (.9)</td>
</tr>
<tr>
<td>19</td>
<td>There is very little that psychiatrists can do for their patients</td>
<td>3.91 (.79)</td>
<td>4.25 (.62)</td>
</tr>
<tr>
<td>22</td>
<td>Working in psychiatry leads to stronger emotional burden</td>
<td>2.7 (1.05)</td>
<td>3.04 (1.09)</td>
</tr>
<tr>
<td>24</td>
<td>Psychiatry is so unscientific that even psychiatrists can’t agree as to what its basic applied sciences are</td>
<td>3.83 (.73)</td>
<td>4.28 (.72)</td>
</tr>
<tr>
<td>25</td>
<td>In recent years, psychiatric treatment has become quite effective</td>
<td>3.34 (.65)</td>
<td>3.58 (.72)</td>
</tr>
<tr>
<td>26</td>
<td>Most of the so-called facts in psychiatry are really just vague speculations</td>
<td>3.83 (.7)</td>
<td>4.12 (.62)</td>
</tr>
<tr>
<td>27</td>
<td>If we listen to them, psychiatric patients are just as human as other people</td>
<td>4.3 (.7)</td>
<td>4.54 (.64)</td>
</tr>
<tr>
<td>30</td>
<td>Psychiatry is so amorphous that it cannot really be taught effectively</td>
<td>4.21 (.74)</td>
<td>4.62 (.49)</td>
</tr>
<tr>
<td>31</td>
<td>Psychiatrists administer too much medication and care too little about the patients’ real problems</td>
<td>3.83 (.87)</td>
<td>4.31 (.85)</td>
</tr>
<tr>
<td>34</td>
<td>Psychiatrists get less satisfaction from their work than other specialists</td>
<td>4.09 (.82)</td>
<td>4.40 (.75)</td>
</tr>
</tbody>
</table>

132.1; range = 105–159, $Mdn = 132$). However, a further significant improvement ($p = .012$) was observed in the posttest ($M$ sum score $= 136.6$, range $= 110–159$, $Mdn = 137$) in the ATP-35. We found significant improvements on an item-level regarding statements about psychiatrists, treatment, psychiatric patients, and psychiatric teaching in the posttesting (for statements with significant changes, see Table 2). All changes uniformly pointed in the direction of a more positive attitude concerning psychiatry.

In the pretest of student’s knowledge of ICD-10 criteria, students achieved a mean of 22.1 points ($SD = 16.63$ of a maximum of 25 possible points. After the seminar, they achieved a mean score of 22.1 points ($SD = 2.304$), 95% CI [21.48, 22.74], resulting in a significant increase of knowledge ($df = 53, p < .001$).

In the customized feedback forms, positive feedback was given for the atmosphere of the seminar, the enthusiasm of lecturers, and the learning material that was provided online. Criticisms included discussing multiple diagnoses of one F-category within a session and the use of more than one film per topic, which was changed accordingly after the first term.

**DISCUSSION**

We were able to demonstrate that teaching psychopathology through the use of movies can improve attitudes toward psychiatry as supported by overall positive changes in the ATP-35 (see Table 2). Although our sample already showed high mean scores in the ATP-35 in comparison to data presented by Strebel et al. (mean sum score of 132.1 in our sample vs. 120.5 in the sample of Strebel et al.), we were still able to show significant improvement in the sum score of the ATP-35 toward an overall more positive attitude. The overall positive attitude at the beginning might also be explained by the higher proportion of female medical students, as there seems to be a higher willingness in women to enter a career in psychiatry. The combination of input by lecture, film, and group discussion allowed to show an improvement in positive attitudes in an already highly motivated population of medical students. Furthermore, this teaching method seems to be a feasible approach to increase the knowledge of psychiatric diagnostic criteria among medical students. The students’ feedback was overall very positive. Although probably most of the participants will not enter a career in psychiatry, identification of psychiatric symptoms is important for medical doctors of all specialities, so that we hope that our seminar helps to create a better awareness of psychiatric symptoms in future medical professionals. Furthermore our findings from the ATP-35 showed improvement in several items dealing with psychiatrists (Items 2, 6, 15, 31, and 34), which can be interpreted as a sign for a greater acceptance toward psychiatry as a medical speciality. This could ease getting
in contact with psychiatrists in their further career as doctors, regardless of their speciality.

However, a few limitations apply to our methodology. First, due to the elective nature of the seminar, a selection bias toward students with a high motivation to gain knowledge on psychiatry is likely. It is unclear, if our results could be repeated in a less motivated group of students. Indeed, it has to be noted that we found significant improvement in attitudes even though we were teaching a group with an already high motivation for psychiatry. Second, results from the pre/postknowledge tests were not compared to a control group. Therefore, it cannot be stated yet whether the improvement in scores is specific to our intervention and whether our method is superior to others. Furthermore, a practice effect must be taken into consideration and students’ answers might have been influenced by their answers in the pretest, shifting toward a more positive answer scheme. Nevertheless, the improvement certainly can be taken as a marker for increasing knowledge about diagnostic criteria in psychiatry. However, our methodology does not allow control for possible effects of the general lecture of psychiatry on our results. A future goal is a comparison with other teaching methods in an unselected or more representative cohort.

REFERENCES