Psychosocial abilities of first-year medical students participating in a clinical communication course

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ABSTRACT

Background. Responding to psychosocial needs of patients is an important element of medical practice and is dependent on the psychosocial abilities of the physician. One of the aims of teaching doctor–patient communication in medical schools is to strengthen these qualities. We assessed changes in the psychosocial abilities of first-year medical students participating in a year-long clinical communication course.

Methods. Sixty-eight first-year medical students and 49 students from the Medical Laboratories School (control group) participated in the study. The students completed, once each at the beginning (October) and at the end (July) of the course, a structured questionnaire that included a psychosocial abilities measure and sociodemographic details.

Results. No significant differences were found between the two groups of students regarding their sociodemographic characteristics. Furthermore, the medical students and the control group did not differ significantly in their psychosocial abilities mean scores at the beginning of the communication course (baseline). At the end of the course, a significant improvement in mean scores was found among medical students compared with an insignificant decline among the control group.

Conclusion. Participation in an extensive clinical doctor–patient communication course guided by multidisciplinary teams may strengthen psychosocial abilities of medical students. The study needs to be replicated with a larger sample size.


INTRODUCTION

In 1977, George Engel argued that the well-known, leading biomedical model was outdated and actually limits physicians’ comprehensive understanding of illness and its experience.1 He proposed an alternative bio-psychosocial model for understanding and treating diseases, which combines body, mind and social factors.

The challenge posed by the bio-psychosocial model to traditional medical education spearheaded rapid changes in the curricula of medical schools in western countries. Although this evolution in medicine has not yet succeeded in replacing the biomedical model, most medical schools now teach and practice the bio-psychosocial model. For example, more than 80% of American medical schools teach the conceptualization and/or measurement of psychosocial factors (e.g. stress and social support).2

As early as the 1970s, a mandatory annual clinical course for first-year medical students on doctor–patient communication was introduced in the curriculum at the Ben-Gurion University medical school, to ensure that its graduates are taught all human dimensions of care,1 in addition to expanding their excellent cognitive traits. This course, which embodies ‘The spirit of Beer-Sheva’, is still taught with minor modifications introduced over the years, and is the only clinical course in the first-year curriculum.

The students learn techniques and skills of medical interviewing, based on the bio-psychosocial approach.4 The aim is to teach two functions of medical interviewing: information gathering and relationship building—‘not in theory, but primarily in practice. The practical implementation of this knowledge includes interviewing patients at the university medical centre and community clinics, within a relationship-centred context. In order to enable a supportive atmosphere, the class is divided into four groups of approximately 18 students each. Over the academic year, the groups rotate between four ‘rounds’ that represent major phases of the life cycle: birth, childhood, adulthood and old age. Each ‘round’ lasts for 4–5 weeks, which the students spend in various ‘stations’. For instance, the adulthood round is composed of the emergency room, internal ward, mental health ward and a community clinic. At each station, the group is further divided into 2–3 smaller groups (5–6 students), each accompanied by two tutors—a physician and a social sciences professional (psychologist, social worker or sociologist). At all stations, the students interview patients in the presence of their peers and tutors. At the end of the interview, the student reflects upon the strengths and weaknesses of his/her performance, and determines his/her ability to derive bio-psychosocial information and to communicate with the patient. This is followed by feedback from the peers and a wrap-up by both the tutors. In this manner, students are exposed to feedback from different professionals, and the bio-psychosocial model is fully implemented.

Because responding to psychosocial needs of patients is an integral part of medical practice—which was found to be positively associated with quality of healthcare—‘it is important to assess the impact of the course on psychosocial abilities of students. These abilities are defined here as levels of interest, confidence and sensitivity in addressing the psychosocial aspects of patient care.6,7 To the best of our knowledge, the course has not been assessed with regard to its impact on psychosocial abilities of students.

We aimed to assess changes in the psychosocial abilities of first-year medical students participating in the aforementioned clinical communication course. This group of medical students was compared with a control group consisting of first-year students from the Medical Laboratories School in the same faculty who did not participate in the described course or any other course that contained psychosocial components.
METHODS

Participants and procedure
Sixty-eight first-year students in the Ben-Gurion University medical school (the entire class) responded to a structured questionnaire twice, at the beginning (October), and at the end (July) of the communication course. The control group included 49 first-year students from the Medical Laboratories School in the same faculty. The two student groups shared a similar learning environment and used the same educational facilities within the Faculty of Health Sciences. All students were informed that the questionnaire was part of a routine evaluation study, that the data would be used only for research purposes, and that participation was voluntary. The Ethics Committee of the Soroka University Medical Center approved the study.

Measures
Data regarding age, gender, and marital status were gathered. Psychosocial abilities were measured using the student version of the Psychological Medical Inventory (PMI-S). The inventory has clinical psychological abilities (5 items) and psychological sensitivity (3 items). Responses are provided on a 7-point Likert-type scale ranging from not at all (1) to a great extent (7). The total score is the average of responses to all items. A high score represents high levels of psychological abilities and sensitivity. The scale was translated into Hebrew and has previously been administered to medical students undergoing various courses and training activities. These studies, the first administered to the current sample and the second to a larger sample of 213 medical students, reported a factorial structure identical to that of the English format scale, as well as high internal consistency coefficients (α>0.80). The internal consistency coefficients of the current study were high (α>0.82 at the beginning of the course, and α>0.81 at the end of the course).

Statistical analysis
Differences between the student groups were assessed using χ² or t-test according to scale structure. Significance level was set at p<0.05. The data were analyzed with SPSS statistical software, PC version 17.0.

RESULTS

At baseline
There were no differences between the medical students and controls with regard to age (mean [SD] 22.22 [3.17] v. 21.63 [1.87], p>0.05), gender (p>0.05) and marital status (p>0.05). They also did not differ significantly in their psychosocial abilities scores at the beginning of the academic year (mean [SD] medical students 5.09 [0.83] v. controls 5.02 [0.85], p>0.05).

Effects of participation in the clinical communication course
A significant main effect was found for the student group factor (medical/control); the mean score of the medical students group (mean [SD] 5.17 [0.75]) was higher than that of the control group (mean [SD] 5.05 [0.84]). No main effect was found for the time factor. Additionally, a significant interaction effect was found between the student group and the time factor. By the end of the academic year, significant improvements in the psychosocial abilities were found among medical students (mean [SD] score before 5.09 [0.83] v. after 5.35 [0.71], p<0.01) compared with an insignificant decline in the control group (mean [SD] before 5.02 [0.85] v. after 4.93 [0.74]; t(48)=0.59; p<0.05 Fig. 1).

DISCUSSION
We assessed the changes in psychosocial abilities of first-year medical students that occurred between the beginning of an intensive clinical doctor–patient communication course and its end. The control group, i.e. medical laboratory students, did not participate during that time in any academic course that involved psychosocial components.

No significant differences in the psychosocial abilities scores were found between the two student groups at the beginning of the course (baseline). Nor were significant differences found between the groups in the sociodemographic characteristics. Moreover, excluding their differing curriculums, the two student groups shared a similar learning environment and used the same educational facilities within the Faculty of Health Sciences.

A main effect was found for the student group, namely, the medical student group had higher mean scores over the entire period compared to those of the control group. A significant interaction effect between the group and time factors also emerged from the analyses. At the end of the communication course, a significant improvement in the psychosocial abilities scores was found among the medical students compared with an insignificant decline among the control group. This finding suggests that only medical students who participated in the course improved their abilities, while the control group students did not.

Despite the encouraging findings, our study had several limitations. It is possible that unknown experiences encountered as a group by the medical students during the first-year could, at least in part, explain the improvement in their psychosocial abilities scores. Furthermore, although two entire classes of first-year medical school and medical laboratories students participated in the study, the sample sizes of both groups were relatively small. An ideal control group would have been first-year medical students who did not participate in the communication course (this option does not exist in our medical school). Finally, self-ratings are not necessarily the best method of assessing psychosocial abilities. Given these limitations, we suggest that the study should be replicated with larger samples and objective measures of psychosocial abilities.

In conclusion, our study suggests that psychosocial abilities of medical students may be strengthened by participation in an extensive doctor–patient communication course which involves intensive clinical doctor–patient communication course and its end. The control group, i.e. medical laboratory students, did not participate during that time in any academic course that involved psychosocial components.
a combination of learning in small groups, regular exposure to patients in the hospital and community clinics, and multi-
disciplinary (physicians/social sciences professionals) tutoring
teams that guide the learning process.

REFERENCES

Erratum
In the article ‘Awareness of HIV/AIDS among teenage students in a high prevalence district in India’ published in the ‘Correspondence’ section of The National Medical Journal of India 2011;24:314–15, the name of the author should read G.B. Patrudu instead of G.B. Patrudu Lanka.

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