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A Family Day program enhances knowledge about medical school culture and necessary supports

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Abstract

Background: A Family Day program was implemented at Indiana University School of Medicine to educate the families and friends of in-coming medical students about the rigors of medical school and the factors that contribute to stress.

Methods: Surveys that assessed knowledge, beliefs, and attitudes about medical school were administered to participants before and after the program.

Results: After the program, participants showed a significant improvement in their understanding of medical school culture and the importance of support systems for medical students. Post-test scores improved by an average of 29% ($P < 0.001$) in each of the two years this program was administered.

Conclusions: The inclusion of family members and other loved ones in pre-matriculation educational programs may serve to mitigate the stress associated with medical school by enhancing the students' social support systems.

Background

The significant stress experienced by both undergraduate and graduate medical trainees is well documented. In a recent literature review, Shapiro et al. [1] identified over 600 articles that discussed the importance of addressing the stress of medical education. As many as one-third of medical students suffer from psychological morbidity [2,3]. Examples of stressors facing students include the need to demonstrate competence, both academic and clinical; managing financial pressures and transitional issues; coping with depression and feelings of isolation; dealing with issues of life and death; making career specialty decisions; and balancing school pressures with family and social obligations.

Regarding this later aspect, Rappaport et al. [4] studied the effects of a general surgery residency on the spouses and children of graduate trainees. These investigators found that, at least in their residency program, the stress of medical training created significant problems for the families, further exacerbating an already difficult period. This finding underscores the important relationship between the medical trainee and his or her loved ones. Not all medical students will be married, of course, but most will have close relationships with parents, siblings, or other intimates with whom they confide and draw support. Because family members and close friends provide core social support, they are logical targets for pre-matriculation educational programs aimed at reducing stress in medical

students. In a study by Malik [5], nearly half of the medical students surveyed believed that personal problems were adversely affecting their academic performance, yet those who sought help were more likely to seek out a friend than a faculty member. The literature suggests that strong support systems are critical if students are to successfully emerge from medical training with positive coping skills and a healthy emotional status [1]. Students who develop healthy adaptive behaviors in dealing with stress are more likely to avoid maladaptive behaviors (e.g., drug abuse) later in their careers [6].

With these considerations in mind, we developed a Family Day program to: (1) help orient families and significant others to the culture of medical school, (2) foster insight by providing information about the process of medical education, (3) illustrate the demands on medical students, (4) provide suggestions for supporting medical students, and (5) enhance connections between students and members of their support systems.

Methods

The planning committee (administrators, faculty, and students) met and conducted a needs assessment about the kinds of information that would be of value to the families and friends of medical students, with a particular emphasis on those aspects of medical training poorly understood by lay people. The committee developed a half-day program that included slides, videotapes, panel discussions, and question and answer sessions. The program was scheduled on a Saturday to optimize participation.

One month prior to the event, the Dean's Office contacted each of the 140 newly-admitted students and informed them of the upcoming Family Day activities. The students were encouraged to invite their family members and friends. Attendance was entirely discretionary and no attempt was made to determine the reasons for non-participation. Thus, those who chose to attend were self-selected and may have differed in some fundamental way from those who did not attend.

The first program, conducted in fall 2000, included an overview of the School's new competency-based curriculum, a consideration of the stressors facing medical students, a demonstration of a clinical exam using a standardized patient, a description of the National Residency Matching Program, student and physician panel discussions about medical school and career selection, and a presentation on financial aid. Each of these sessions lasted 15–45 min. Fourth-year students provided campus tours.

The second program was conducted in fall 2001. Based on feedback from the previous year, the number of topics was reduced to allow more thorough coverage of the curriculum, the competencies, and the residency match. Financial aid and career specialty information was provided in handout format. The survey instrument was modified accordingly.

Pre- and post-program surveys that assessed knowledge, beliefs, and attitudes about medical school were administered to the participants of the 2000 and 2001 programs (Additional file: 1). Question topics included the nature and structure of medical school, the psychosocial stressors most often experienced by medical students, residency procurement and length of graduate training, indebtedness and earnings potential, and other relevant information. Pre- and post-program responses were compared with the unpaired t-test. Differences were considered statistically significant if $p < 0.05$.

Results

Sixty-two people attended the 2000 program and 65 attended the 2001 program. Pre- and post-program surveys were completed by 49 of the participants in 2000 and by 45 of the participants in 2001. To what extent these responders may have differed from the non-responders is not known. Participants in both 2000 (n = 49) and 2001 (n = 45) included medical students, their parents, spouses, fiancés/fiancées, relatives, and friends. In 2000, 52% of the participants were female and 48% male; participants in 2001 were 60% female and 40% male. In both years, 22% of the participants were in-coming medical students and 78% were family members and close friends. The occupations of these non-student participants included banking, sales, nursing, law, higher education, trucking, social work, and urban planning, among others.

After the program, participants demonstrated a significant increase in their knowledge of medical school culture and the demands placed on medical students (Table 1). Although the baseline pretest score in 2001 was somewhat higher than the pretest score in 2000, presumably because of changes in the survey questions, the percent improvement in post-test scores was essentially the same in both years. Survey scores increased by an average of 29.6% in 2000 ($p < 0.001$) and by 29.2% in 2001 ($p < 0.001$).

Discussion

These results suggest that we succeeded in educating participants about some of the stressors facing students and that we equipped participants with strategies for providing support. Written comments from the participants (both families and students) suggest that an unmet need had been fulfilled. Comments included: "Absolutely

Table 1: Improvement in knowledge scores of Family Day participants at Indiana University School of Medicine, 2000–2001. Data are means ± 95% confidence limits.

Family Day	Pretest	Post-Test	n	p Value*
2000	57.1 ± 5.2	74.0 ± 4.4	49	<.001
2001	68.5 ± 4.6	88.5 ± 3.6	45	<.001

*two-tailed, unpaired t-test

great! Very informative and certainly worth the time. I would recommend it to every student and his/her family to attend"; "I enjoyed this very much, especially the validation of feeling somewhat isolated from your spouse (the student) and now understanding why"; "Very enlightening!"; "Very informative!"; "Learned a lot"; and "Should continue this program."

However, it is not known whether the improvements we noted in the survey scores presage improvements in long-term outcomes. A comparison with a matched cohort of students and support system members who did not participate in the program would be helpful. Following such cohorts over time could help determine if there were lasting differences between the groups. Of course, any such analysis would be subject to the bias of participant self-selection. That is, students and support system members who elect to participate in the program may already be sensitized to the need for effective stress management. Nevertheless, outcome measures that might be followed include attrition rates, leaves of absence, academic performance, and overall satisfaction with medical school.

Conclusions

Stress during medical school is common. Accordingly, efforts to develop multiple stress-management techniques should continue. We have shown that a pre-matriculation educational program aimed at the families and friends of in-coming medical students can improve their understanding of medical school, which may help to mitigate the stress experienced by medical students by reinforcing the students' social support.

Competing interests

None declared

Authors' contributions

MB participated in the design and implementation of the educational program, and drafted the manuscript. PS and JB performed the statistical analysis and edited the manuscript. HC participated in the design of the program and edited the manuscript. All authors read and approved the final manuscript.

Additional material

Additional file 1

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[http://www.biomedcentral.com/content/supplementary/1472-6920-4-3-S1.doc]

References

1. Shapiro SL, Shapiro DE, Schwartz GE: **Stress management in medical education: a review of the literature.** *Academic Medicine* 2000, **75:**748-759.
2. Firth J: **Levels and sources of stress in medical students.** *British Medical Journal* 1986, **292:**1177-1180.
3. Guthrie EA, Black D, Shaw CM, Hamilton J, Creed FH, Tomenson B: **Embarking upon a medical career: psychological morbidity in first year medical students.** *Medical Education* 1995, **29:**337-341.
4. Rappaport WD, Putnam CW, Witzke D, Amil B: **Helping residents' families cope.** *Academic Medicine* 1992, **67:**761.
5. Malik S: **Students, tutors and relationships: the ingredients of a successful student support scheme.** *Medical Education* 2000, **34:**635-641.
6. Rathbun J: **Helping medical students develop lifelong strategies to cope with stress.** *Academic Medicine* 1995, **70:**955-956.

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