

Allocation of Time and Perceived Coping Behavior Of First-Year Medical Students

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Several investigators have studied the effect of students' allocation of time on their medical education (1-3). The present study was undertaken to assess the interrelationships of first-year medical students' allocation of time to learning, leisure, and necessary personal activities with their self-reported coping behavior.

Fisher and Cotsonas (1) reported that students' medical school grade-point average was not significantly related to the amount of time devoted to learning, neither formally in class nor in unscheduled study. This was attributed to the fact that the weaker students reported trying even harder (that is, allocated more time) than the brighter ones. Jesse and Simon (2) found that there was no decrease in the allocation of time to learning with a pass/fail grading system, which shifted students away from an external and toward an internal motivational frame of reference in which they assumed more responsibility for their own learning.

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The rigor and time required in obtaining a medical education results in a great deal of pressure on students to perform effectively. Students' perceptions of their behavior in coping adequately with the demands of the curriculum was thought to be all the more important in this study because these demands may be exacerbated by an accelerated six-year combined B.S./M.D. program in which the majority of students at Northeastern Ohio Universities College of Medicine participate. It might be expected that students allocating more time to learning would report coping more favorably with these pressures and demands. On the other hand, those experiencing more pressure may cope with the problem by studying more. The purpose of this study was to explore the nature of this time-coping relationship.

Method

The sample consisted of 47 of 49 first-year medical students at the College of Medicine, which emphasizes family practice. Two students failed to complete the questionnaire and were eliminated from the study. Approximately 71.7 percent of the students were in a combined six-year B.S./M.D. program. Each student was randomly assigned one of seven days of the studied week (that is, the 10th week of the 15-week 1978-1979 fall term) to complete a time/coping questionnaire.

The questionnaire requested students to indicate which of 27 activities they were involved in during the course of a typical day. The students specified the activities by 10-minute intervals during the day, resulting in a total of 144 responses per student. These 27 activities were then classified into one of the following four categories to facilitate analysis and interpretation of the findings: structured medical school activities (lectures, laboratory, faculty conferences, and rounds); unstructured medical school activities (individual or group study, independent research, optional films, professional reading, and computer-assisted instruction); leisure activities (professional socializing, reading for pleasure, shopping, athletics, exercise, coffee breaks, attending parties or group activities, watching TV or movies, hobbies, and spending time with family); and necessary personal activities (employment, sleep, eating, toilet/dressing/grooming, housework or errands, and transportation).

In addition, five questions with four ordinally ranked response options were designed to measure students' self-perceived coping with the demands and pressures of medical school. These questions related to the students' perceived internal and external adjustment. For example, questions 1 and 2, which required that they estimate their current class rank and functioning in relation to their peers, are measures of coping based on external frames of references, whereas questions 3 to 5, which dealt with feelings of belonging, commitment to the program, and stress in relation to other periods in their lives, all relate to the students' internal adjustment to medical school.

Results and Discussion

Students clearly spent the major portion of their weekdays on activities devoted to learning about medicine. They allocated approximately 52.8 percent of their waking time during the week and 23.2 percent during the weekend to learning. The weekday average of 8.91 hours devoted to learning appears to be consistent with that found in previous investigations (1-3). There was no difference in time allocation between B.S./M.D. and traditional students.

Approximately 72.7 percent of the students responded they were experiencing more stress

than previously in their lives. However, only two students (4.5 percent) expressed not belonging or functioning well in the program. Similarly, only two indicated they were not "completely" or "much" committed to completing the program and becoming a physician. The majority of the responses to these questions and the amount of time allocated to learning (another measure of commitment according to Fisher and Cotsonas) indicated that first-year students had already made a serious commitment to the medical profession. All three of these coping behaviors (belonging, stress perception, and commitment) relate to inner-directed feelings concerning medical school. In general, the responses suggest that the vast majority were coping adequately even given the increased stress and pressure they reported.

In comparing themselves with their peers (external frame of reference), the responses seemed to indicate a fairly realistic, perhaps even modest, assessment of their class rank and functioning. Most (79.6 percent) believed that they ranked in the middle 50 percent of their class and were doing either about the same (43.2 percent) or somewhat better than their peers (36.4 percent). Only three students (6.8 percent) believed they were functioning better than the others, while six (13.6 percent) believed they were doing less well.

Relations between entry status (combined B.S./M.D. versus direct entry students) and the time and coping measures were assessed through the use of point-biserial correlations. Pearson correlations were used to determine the magnitude of the relations between time and coping behavior.

Direct-entry students tended to be more strongly committed to completing the program and becoming an M.D. than B.S./M.D. students ($r = .43; p < .01$). However, it was pointed out earlier that all but two students were more than "somewhat" committed. An item analysis indicated that virtually all 13 direct-entry students expressed being "completely" committed, while 16 B.S./M.D. said that they were "completely" committed; 13, "much"; and 2, "somewhat." The fact that these direct-entry students generally are older, have more experience, and may be surer of their future occupational goals may account for this difference.

Overall, students expressing less stress, in contrast to those expressing more, tended to believe that they ranked higher in their class ($r = -.37$; $p < .05$) and functioned better than their peers ($r = -.40$; $p < .01$). Stress was the only internal coping behavior to relate significantly (negatively) to these two externally referenced coping beliefs. Students ranking themselves higher in the class also tended to believe they were functioning better in relation to their peers ($r = .46$; $p < .001$).

Students who allocated more time to learning during the class week tended to rank themselves significantly higher in their class ($r = .37$; $p < .05$) and believe they belonged more and functioned better in the program ($r = .38$; $p < .05$) than students who allocated less time to learning. There were no significant relationships between weekday leisure time or necessary personal time and any of the five coping behaviors.

The findings support the interpretation that students allocating more time during the week to both structured and unstructured medically related activities tend to cope more adequately with the rigor and pressure of a medical education. There were no significant differences between younger B.S./M.D. and traditional

students on the time measures. The only significant difference in coping was the tendency for traditional students to be more committed to completing their program and becoming a physician. However, this difference was in magnitude and not in direction, as both groups generally reported strong commitment. Left unexamined is an analysis of the qualitative utilization of time, including efficiency and productivity. Certainly, the quality of time spent in learning is an important factor in contributing to medical school success and merits exploration. Also left for future consideration is the possibility that the interrelationships of time and coping may vary somewhat from those reported here during the course of the four-year curriculum or even later during the same academic year.

References

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