Medical Students' Motivation for Internal Medicine

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Objective: To verify that motivational concepts tested in other educational settings are relevant to understanding medical students' choice of a career in internal medicine. More specifically, to compare the effects of "facilitating students' interest" versus "controlling students' learning" as educational models during the internal medicine clerkship.

Design: An observational retrospective study of 89 fourth-year medical students. Structural equation modeling compared the two models statistically.

Main outcome measure: Student choice of internal medicine residency.

Results: Instructors who supported students' autonomy engendered in students greater feelings of competence and interest in internal medicine than did controlling instructors. Perceived competence further enhanced students' interest in internal medicine. In turn, interest predicted students' choosing an internal medicine residency. Overall, the facilitating students' interest model better explained students' choice of internal medicine than did the controlling students' learning model.

Conclusions: The results verify that the nature of the learning climate during the internal medicine clerkship is an important predictor of students' subsequent pursuit of internal medicine training. Instructors who teach in an autonomy-supportive manner enhance students' perceived competence and interest in internal medicine, which increases the likelihood they will select an internal medicine residency.

Key words: internal medicine clerkship; career choice; motivation; self-determination; students; instructors.

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WITH THE CONTINUED DECLINE in the number of U.S. medical students entering internal medicine[1] and the country's increasing need for general internists,[2] there is a growing emphasis on understanding the factors that affect medical students' choices of careers in internal medicine.

A recent National Medical Student Career Choice Survey of fourth-year medical students revealed three factors—the intellectual challenge of internal medicine, students' interest in primary care, and a positive learning climate provided by the attending physicians on the internal medicine rotations—that positively influenced students' decisions to pursue internal medicine.[3] Additional factors turned students away from internal medicine—namely, the burdensome nature of taking care of chronically ill patients and the perceptions that internal medicine housestaff and attendings were overworked, unhappy, and underrewarded. A separate analysis[4] of the same students' responses to an open-ended question regarding suggestions to improve the attractiveness of internal medicine found that 50% of the students spontaneously raised concerns about the learning climate (e.g., the prevalent use of humiliation and abuse by the attendings).

The findings of the National Medical Student Career Choice Survey are largely consistent with the tenets of self-determination theory[5]—an empirically based theory of human motivation. The theory assumes that humans are innately motivated toward growth and intellectual challenge, and it predicts that a supportive learning climate will enhance this motivation, whereas a climate that controls and pressures the learners will undermine it. The similarities between the Career Choice survey findings and the predictions of self-determination theory suggest that applying this theory to medical student career choices might allow a better understanding of how clerkship experiences affect career choices.

Self-determination theory[5] proposes that: 1) people need to feel *competent* (which in medical school means mastering the academic knowledge and clinical skills needed to treat patients) and *autonomous* (which means experiencing a sense of choice and self-initiation in studying internal medicine); 2) when the context of an activity (i.e., the interpersonal climate of the internal medicine clerkship) is autonomy-supportive (versus controlling), people will develop greater interest in and competence for the activity. Greater interest in and competence for internal medicine should lead to an increased likelihood of pursuing a career in that field.

Autonomy support is defined as the degree to which instructors acknowledge students' perspectives and encourage their *proactive* participation in learning and patient care, whereas control refers to pressuring students to learn and dictating patients' treatment courses. Autonomy support is thus an active process on the part of instructors that facilitates students' engagement in self-determined learning.

To test these proposed relationships, we used the statistical procedure of LISREL (linear structural relations)[6] to compare two competing models (i.e., two competing sets of possible relationships).

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METHODS

Models

The two motivational models employ the same five concepts—autonomy support, perceived competence, pressure felt by students, interest in internal medicine, and the behavioral outcome (of choosing an internal medicine residency). These are commonly used variables in motivation research,[5] and their measurement is described in the Measures section below.

The model of "Instructor Facilitates Students' Interest," which derives directly from self-determination theory, is supported by past research. It is a student-centered model[7] and suggests that the instructor's role is to support the learners' self-motivation. A contrasting, more authoritarian model, here termed the "Instructor Controls Students' Learning," was constructed to reflect the experiences reported by many medical students that instructors use a high degree of interpersonal control to pressure students toward competence.[1] This represents a teacher-centered model of motivating students.

The Instructor Facilitates model proposes that students who have instructors that are autonomy-supportive are more likely to explore the domain of internal medicine and develop competence and interest in internal medicine, which in turn will lead them to select a career in internal medicine. The role of instructors is thus to "facilitate" the students' being interested in and valuing the practice of internal medicine.

In the Instructor Facilitates model (Fig. 1), hypothesized relationships between variables are represented by lines with arrows at the right-hand end. A relationship was hypothesized only when a previous study using self-determination theory found a significant relationship. An autonomy-supportive learning climate (i.e., acknowledging students' perspective and encouraging students' active participation while minimizing control) has been previously shown to promote competence and interest in educational settings from elementary school to medical school.[8–13] Autonomy support has also been found to decrease students' sense of pressure.[9, 14, 15] Finally, perceived competence has been found to promote interest,[12, 13] which in turn has predicted high-school students' staying in school[16] and medical students' attending an interviewing class.[13] The arrows in Figure 1 represent these hypothesized relationships. Note that no relationship is hypothesized between pressure and choice of internal medicine because past research has failed to consistently support a negative relationship between pressure and self-motivated behavior.[17, 18]

Together, these relationships represent our hypotheses that if instructors are autonomy-supportive, students will feel more competent and interested in internal medicine, which will lead them to pursue internal medicine as a career. In other words, if the learning climate supports the students' autonomy, the students will be more likely to develop the inner psychological resources of competence and interest, which motivate them to pursue internal medicine.

Other factors, such as salary and occupational status, that influence students' choice of internal medicine[1] would be known to the students even before they began their internal medicine clerkships. At that time, these factors would have influenced the students' beliefs as to the likelihood that they would eventually pursue a career in internal medicine. Consequently, we asked them what the likelihood was, before they began their internal medicine clerkships, that they would ultimately select a career in internal medicine. This variable, referred to as "prior likelihood," was, of course, expected to predict students' choice of internal medicine, so, by statistically removing the effects of that variable on career choice we can assess the additional, independent effects of autonomy support versus control (as mediated by perceived competence and interest) on choice of internal medicine.

The Instructor Controls model proposes that students will feel more competent after being pressured to deal with difficult learning and patient-care situations and that these feelings will promote choice of internal medicine. Low autonomy support (i.e., high control)

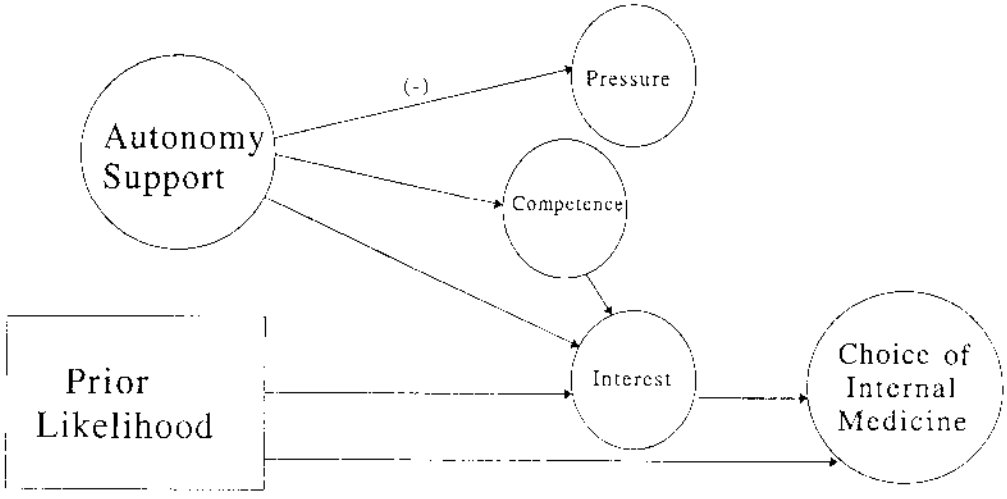

FIGURE 1. The Instructor Facilitates Students' Interest model. Standard linear structural relations (LISREL) notation depicts latent (unobserved) variables by circles and directly measured (observed) variables by rectangles. Solid lines indicate predicted relationships.

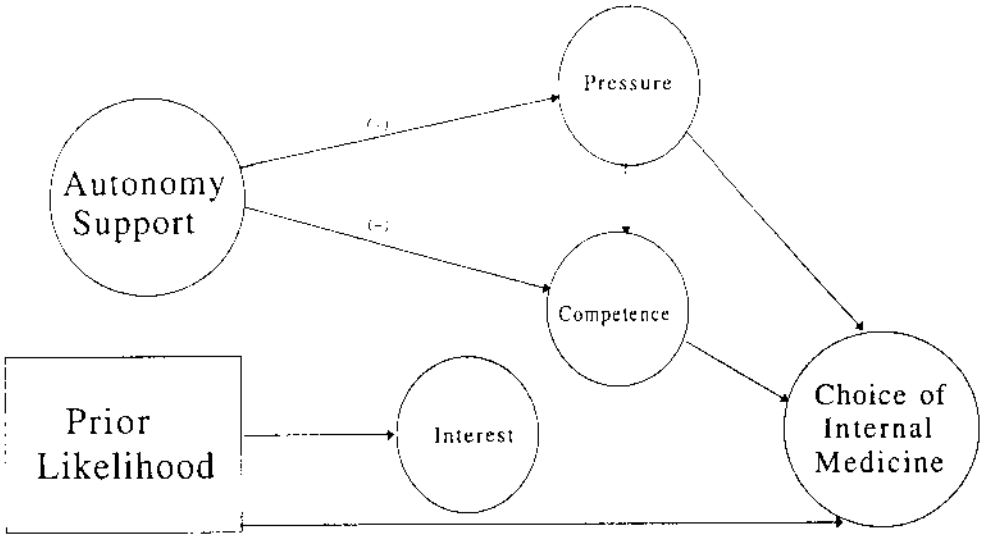

FIGURE 2. The Instructor Controls Students' Learning model.

was predicted to increase students' sense of being pressured.[15] The three remaining relationships specified in the model shown in Figure 2 (low autonomy support to competence, pressure to competence, and pressure to choice of internal medicine) reflect our interpretation of what students have reported in the Career Choice survey and in anecdotal accounts about their instructors. Like the first model, this model hypothesizes that the "prior likelihood" will affect both interest and choice of internal medicine. However, in this model, interest is viewed as being essentially irrelevant to the choice of becoming an internist, so there is no specified relationship between interest and choice.

Subjects

A total of 114 fourth-year medical students were asked to complete a 20-minute questionnaire about their experiences on their third-year internal medicine clerkships. Ninety students (a 79% response rate) completed the survey between November 1991 and February 1992 at a time when the students had decided which type of residency to pursue. Sixty-eight of them (76%) attended the University of Rochester (UR) and were asked to complete the questionnaire at the end of a lecture. The remaining 22 (24%) attended other U.S. medical schools and completed the questionnaire while interviewing for residency positions at one of UR's programs. Participation in this study was voluntary and anonymous. One student was excluded because not all items were completed, leaving 89 subjects for the LISREL analyses.

The students from UR were compared with those from other schools. The two groups of students did not differ in autonomy support, competence, pressure, prior likelihood, or choice of internal medicine, but did differ significantly in interest in internal medicine. The UR students were less interested in internal medicine (mean of 11.1 for UR versus 12.6 for non-UR students, $t = 2.78$, $p < 0.05$); however, because the critical predictor variable, autonomy support, did not vary between the two groups, the groups were combined for further analyses to increase generalizability.

Measures

The Modified Learning Climate Questionnaire (MLCQ) was used to assess students' perceptions of the autonomy supportiveness of their internal medicine instructors. Because there were two halves to each clerkship, with separate instructors, the students answered questions for each, and a total score for autonomy support was created by summing the students' scores from each half. The students rated (on a five-point Likert scale) the residents and attending physicians on items such as "conveyed confidence in my ability to contribute to the care of my patients" and "listened to how I would do things before giving their opinions." The eight items on the MLCQ were taken from the 15 items on the Learning Climate Questionnaire (LCQ), which had been validated in a previous study.[15] Because the 15-item LCQ had very high internal consistency in previous research (coefficient alpha = 0.95), the shorter eight-item version was used, and its internal consistency for this sample was high (coefficient alpha = 0.91).

The Competence in Internal Medicine Scale (CIMS) was adapted from an instrument used in a study of medical students' internalizing biopsychosocial values.[15] The scale's four items concern the level of mastery the students believed they possessed in taking care of hospitalized internal medicine patients. For example, one item is: "I have confidence in my ability to treat hospitalized internal medicine patients." The internal consistency of the CIMS in the current sample was high (coefficient alpha = 0.87).

The Interest in Internal Medicine Scale (IIMS) has three items adapted from a previous interest measure.[17] Items included "How interesting was your rotation in internal medicine?" and "How curious are you about the

TABLE 1

Correlations among the Six Variables in the Models (n = 89)

	Autonomy Support 1	Competence 2	Pressure 3	Interest 4	Choice 5	Prior Likelihood 6
1 Autonomy support		0.30*	−0.26*	0.32*	0.07	−0.14
2 Competence		—	0.10	0.35†	0.22‡	0.01
3 Pressure			—	0.13	0.13	0.17
4 Interest				—	0.44†	0.33†
5 Choice of internal medicine					—	0.47†
6 Prior likelihood						—

*$p < 0.01$.
†$p < 0.001$.
‡$p < 0.05$.

types of medical problems faced by internists?" The internal consistency of the IIMS in this sample was high (coefficient alpha = 0.81).

The Pressure and Tension Scale (PTS) consists of four items asking the students to indicate how pressured or tense they felt during each half of the internal medicine clerkship. Again, a total pressure score was generated by summing the students' scores from each half. Examples are: "I felt tense during this rotation" and "I felt anxious during this rotation." Items were adapted from a scale used in previous research.[19] The internal consistency of the PTS in this sample was high (coefficient alpha = 0.87).

Internal medicine career choice (the students' plans to apply for a residency in internal medicine) was assessed in two ways. First, the students were asked to indicate how likely they were to go into internal medicine by marking on a 10-cm visual analog scale anchored at the two ends with "0%, not at all likely" and "100%, certain you will." Second, the students were asked to indicate whether they were applying for an internal medicine residency. On the basis of results from a confirmatory factor analysis, the dependent variable of career choice was a weighted composite of these two variables.*

Prior likelihood of choosing internal medicine was measured by asking the students to think back to the beginning of their third year, prior to their internal medicine clerkships, and to recall their beliefs at that time about how likely they were to go into internal medicine (marked on a 10-cm visual analog scale).

LISREL Analyses

We tested the two models using LISREL[6] analyses, described in Appendix A. Then, to determine the extent to which the models fit the observed data, we used 1) the chi-square statistic (χ^2), 2) the goodness-of-fit index (GFI), 3) the delta 2 index, and 4) the Tucker-Lewis index (TLI). Among this set of statistical indices, the TLI is the most preferred because it is relatively stable across small sample sizes (as in the current study), while the other indices are overly pessimistic for small sample sizes.[20, 21] A chi-square statistic that is *not* significant and fit-indices (TLI, GFI, delta 2) with values of 0.90 or higher indicate a good fit.[21]

RESULTS

The intercorrelations among the measures of the six variables used in this study appear in Table 1. One can see from the table that the variables in each of the pairs that the Instructor Facilitates model suggests should be related are in fact significantly correlated, and the correlations are in the predicted direction.

Structural equation modeling using the maximum likelihood method of estimation was then done to test the overall goodness-of-fit and the specific hypothesized relations in the two models. The Instructor Facilitates model fit the data well: χ^2 (df = 7, n = 89) = 8.94, NS‡; TLI = 0.90; GFI = 0.97; delta 2 = 0.88. Figure 3 displays the standardized maximum-likelihood parameter estimates generated for the Instructor Facilitates model. Each hypothesized relation was supported by a significant parameter estimate. For example, autonomy support increases students' sense of competence (parameter estimate = 0.31, $p < 0.05$) and decreases feelings of pressure and tension (parameter estimate = −0.25, $p < 0.05$).

The Instructor Controls model was then tested. This model did not fit the data well: χ^2 (df = 7, n = 89) = 34.36, $p < 0.001$; TLI = 0.38; GFI = 0.90; delta 2 = 0.71. The parameter estimates appear in Figure 4, and there one sees a lack of significant relations within critical pairs of variables that the model suggests should be related (e.g., pressure does not increase competence or choice of internal medicine).

*LISREL was used to confirm the adequacy of the proposed measurement model. Each individual item designed to measure autonomy support, competence, pressure, interest, and choice of internal medicine was strongly and uniquely related to the concept it was intended to measure.

‡A chi-square statistic that is not significant indicates that the data do not significantly deviate from the hypothesized "Instructor Facilitates" model.

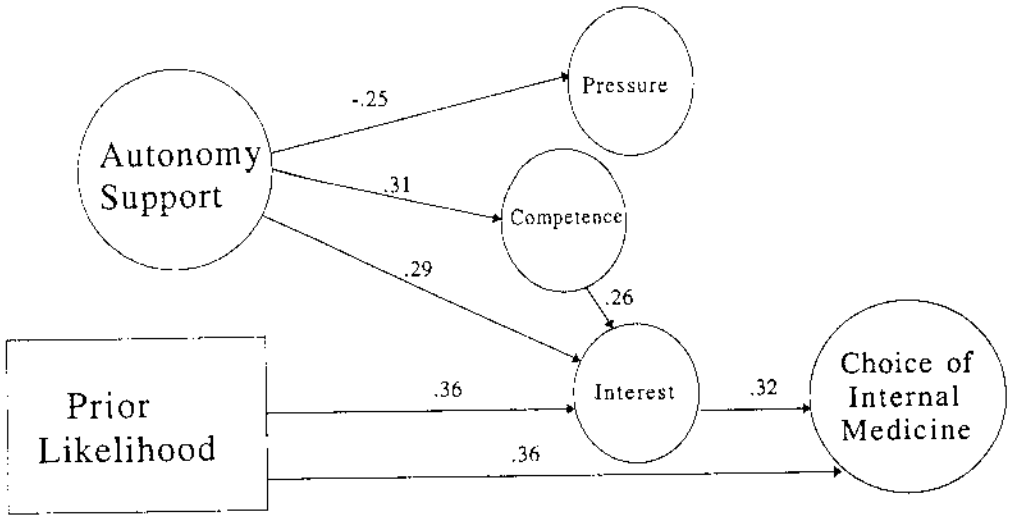

FIGURE 3. The standardized maximum-likelihood parameter estimates generated for the Instructor Facilitates Students' Interest model. χ^2 (df = 7, n = 89) = 8.94, NS; Tucker Lewis index (TLI) = 0.90. Solid lines indicate significant paths ($p < 0.05$).

Comparisons between the fit indices and parameter estimates generated for the two models confirm that the data fit the Instructor Facilitates model better than Instructor Controls model. Specifically, pressure did not facilitate competence (although the Instructor Controls model suggested it would), and interest rather than pressure facilitated choice of internal medicine (as the Instructor Facilitates model suggested it would). Figure 3 also confirmed that both autonomy support and competence enhanced interest, which is the variable responsible for the choice of internal medicine. These factors contributed to interest and career choice even when controlling for the students' prior likelihood of going into internal medicine.

DISCUSSION

In light of the students' reports of a nonsupportive learning climate during the clerkship experience, the first objective of the present project was to test the application of self-determination theory[5] to the setting of medical education and career choice. Support was found for the proposed Instructor Facilitates model in which a learning climate rich in autonomy support (or student-centered learning") nurtured students' interest in the field, an interest that functioned to favorably affect students' career choice for internal medicine.

The second and third objectives of the study were to test two specific hypotheses: 1) that students' internal psychological resources of competence and interest would predict their choice of internal medicine and 2) that students would feel more competent and interested in internal medicine if they experience autonomy support rather than control from their instructors. The results in Figure 3 confirmed the hypothesized interdependence among students' experience of autonomy support, competence, interest, and choice of internal medicine, even after controlling for the students' reported prior likelihood of going into internal medicine.

Results of the present investigation suggest that internal medicine instructors who use an autonomy-supportive teaching style will promote students' sense of competence and that students will thus become more interested in pursuing internal medicine as a career. Previous self-determination research has shown that instructors who have advanced training in learner-cen-

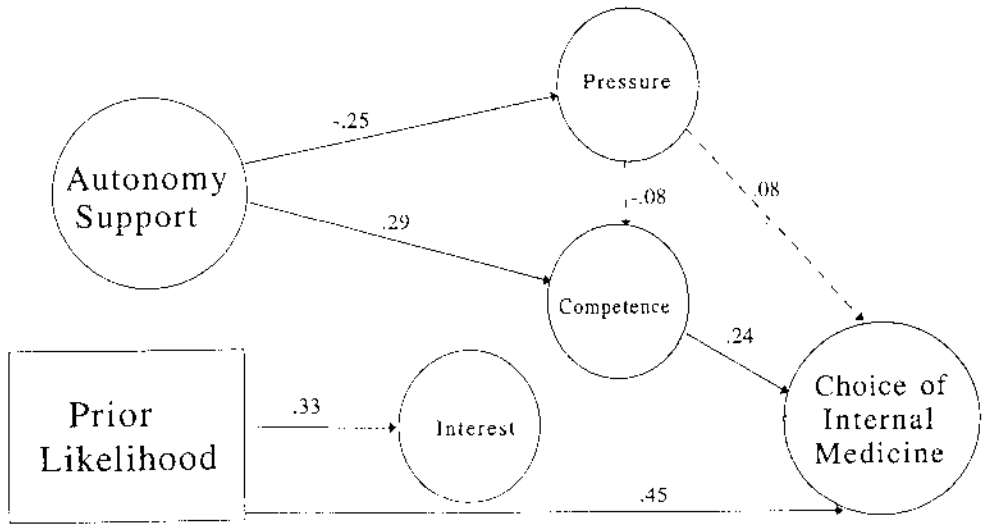

FIGURE 4. The standardized maximum-likelihood parameter estimates generated for the Instructor Controls Students' Learning model. χ^2 (df = 7, n = 89) = 34.36, $p < 0.001$; Tucker-Lewis index (TLI) = −0.38. Solid lines indicate significant paths ($p < 0.05$) and dashed lines indicate insignificant paths.

tered teaching are perceived by their students as being more autonomy-supportive.[18] Specific teaching behaviors that have been shown to constitute autonomy support include acknowledging the learners' perspective and feelings, providing a rationale, promoting choice, and minimizing controls.[19] These findings also indicate that instructors' controlling and pressuring students to learn are *not* effective strategies for encouraging students to choose internal medicine.

It is worth noting that the Instructor Facilitates model would be expected to operate similarly for other fields, such as surgery or pediatrics. Presumably if instructors in those fields were autonomy-supportive, that would be predicted to facilitate students' competence in, interest in, and, in turn, selection of those fields, just as was the case in internal medicine.

There are certainly other factors that influence students' career choices that were not explored in the present study, such as potential income, occupational status, and the influence of one's previous mentors and models. Factors such as income and status are unquestionably salient for the student involved in the decision-making process of an occupational career choice, but because these factors are likely to have been known by the students before their third year of medical school, they would to some extent have been controlled for by the variable of prior likelihood of going into internal medicine. We do not wish to underestimate the importance of these external factors, but the present results do indicate that factors within the clerkship experience are also important contributors to students' choice of internal medicine.

Although the retrospective design of this study limits its conclusions, this research provides evidence that when curriculum directors and instructors create autonomy-supportive learning environments that allow students to further develop an interest in internal medicine, the students are more likely to choose internal medicine as a career. A replication of these results in another sample or setting is needed and would contribute further to the growing body of empirical research that indicates that autonomy support promotes not only increased competence and interest but also other important educational goals, such as conceptual understanding, personal growth, and adjustment.[10, 22]

The current findings suggest that self-determination theory may be useful for clarifying how medical students choose careers and how changes might be made to improve the students' learning experiences by supporting their autonomy and thus promoting their perceived competence and their natural tendency to learn through interest.

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REFERENCES

1. Graettinger JS. Internal medicine in the National Resident Matching Program 1987: the ides of March. Ann Intern Med. 1988; 108:101–5.
2. Federated Council for Internal Medicine. General internal medicine and general internists: recognizing a national need. Ann Intern Med. 1992;117:778–9.
3. Schwartz MD, Linzer M, Babbott D, et al. Medical student interest in internal medicine. Ann Intern Med. 1991;114:6–15.
4. McMurray JE, Schwartz MD, Genero H, Linzer M, and Society of General Internal Medicine Task Force on Career Choice in Internal Medicine. The attractiveness of internal medicine: a qualitative analysis of the experiences of female and male medical students. Ann Intern Med. 1993;119:812–8.
5. Deci EL, Ryan RM. Intrinsic Motivation and Self-Determination in Human Behavior. New York: Plenum, 1985.
6. Joreskog KG, Sorbom D. LISREL VII: a guide to the program and applications. Chicago: SPSS, 1989.
7. Rogers C. The interpersonal relationship in the facilitation of learning. In: Rogers C. Freedom to Learn. Columbus, OH: Merrill, 1969.
8. deCharms R. Enhancing Motivation: Change in the Classroom. New York: Irvington, 1976.
9. Deci EL, Schwartz AJ, Sheinman L, Ryan RM. An instrument to assess adults' orientation toward control versus autonomy with children: reflections on intrinsic motivation and perceived competence. J Educ Psychol. 1981;73:642–50.
10. Grolnick WS, Ryan RM, Deci EL. Inner resources for school achievement: motivational mediators of children's perceptions of their parents. J Educ Psychol. 1991;83:508–17.
11. Ryan RM. Control and information in the intrapersonal sphere: an extension of cognitive evaluation theory. J Pers Soc Psychol. 1982;43:450–61.
12. Vallerand RJ, Reid G. On the causal effects of perceived competence on intrinsic motivation: a test of cognitive evaluation theory. J Sports Psychol. 1984;6:94–102.
13. Williams GC. Internalization of biopsychosocial values by medical students. Dissertation Abstracts International. 1993;54:10B (University Microfilms No. 94-05, 895).
14. Deci EL, Spiegel NH, Ryan RM, Koestner R, Kauffman M. The effects of performance standards on teaching styles: the behavior of controlling teachers. J Educ Psychol. 1982;74:852–9.
15. Ryan RM, Grolnick WS. Origins and pawns in the classroom: self-report and projective assessments of individual differences in children's perceptions. J Pers Soc Psychol. 1986;50:550–8.
16. Connell JP, Wellborn JG. Competence, autonomy and relatedness: a motivational analysis of self-system processes. In: Gunnar MR, Sroufe LA (eds). The Minnesota Symposium on Child Psychology: Vol. 22. Self-Processes in Development. Hillsdale, NJ: Erlbaum, 1990;43–77.
17. Reeve J. The interest-enjoyment distinction in intrinsic motivation. Motivation and Emotion. 1989;13:83–103.
18. Reeve J, Sikenius B. Development and measurement of a brief measure of the three psychological needs underlying intrinsic motivation: the AFS scales. Educ Psychol Measurement. (in press).
19. Deci EL, Eghrari H, Patrick BC, Leone DR. Facilitating internalization: the self-determination theory perspective. J Pers. (in press).
20. Marsh HW, Balla JR, McDonald RP. Goodness-of-fit indexes in confirmatory factor analysis: the effect of sample size. Psychol Bull. 1988;103:391–410.
21. Bollen KA. Structural equations with latent variables. New York: Wiley, 1989.
22. Grolnick WS, Ryan RM. Autonomy in children's learning: an experimental and individual difference investigation. J Pers Soc Psychol. 1987;52:890–8.
23. Goldberger AS. Structural equation models: an overview. In: Goldberger AS, Duncan OD (eds). Structural Equation Models in the Social Sciences. New York: Seminar Press, 1973.

APPENDIX A

LISREL

LINEAR STRUCTURAL RELATIONS (LISREL) analyses offer two primary advantages over conventional analyses such as regression analysis or analysis of variance. First, conventional analyses assume that measures are perfectly reliable (i.e., that scales perfectly measure concepts); so there is always unreliability due to measurement error. LISREL, on the other hand, creates a "latent" (or "unobserved") variable from multiple "indicators" (or "observed variables"). The latent variable is free of measurement error. For example, the four items that relate to the students' sense of competence are indicators of the latent variable "perceived competence." Each individual item contains error, but LISREL combines them to form the error-free latent variable of competence. Any variability in an indicator that is not associated with the latent variable is designated error. It is the relationship of the latent (or error-free) variables that is tested in the LISREL analyses.

Second, unlike conventional analyses, LISREL tests complex theoretical models *in toto*. LISREL allowed us to test the overall goodness-of-fit of each model, as well as the strength and significance of individual relationships between pairs of variables within the hypothesized model (e.g., the relation of autonomy support to perceived competence).

To assess the strength of the relationship between two individual concepts, LISREL generates a standardized parameter estimate based on maximum likelihood estimation. This estimate between a predictor (e.g., autonomy support) and an outcome (e.g., competence) variable is interpreted much as is the standardized regression coefficient (i.e., estimates range from 0 to 1 and are tested for significance individually), with the added complexity that the LISREL parameter refers to the effect of one latent variable on another latent variable. A standardized parameter estimate of 0.31 between autonomy support and competence means that a 1 standard deviation change in autonomy support produces a 0.31 standard deviation change in competence. Maximum likelihood estimators are the most widely used method of obtaining parameter estimates in structural equation modeling, and they are better suited for small sample sizes.[21] (Interested readers are referred to Bollen,[21] Goldberger,[23] or Joreskog and Sorbom[6] for further detail about this analytic procedure.)

■

REFLECTIONS

Caring for Patients

TWO BRIEF ACCOUNTS out of my own experience: First, a young friend of mine in his 20s was dying in one of the premier cancer centers in our country. His seminoma, usually a curable lesion, had resisted every regimen tried by these "world experts."

I visited him a week before his death . . . he was miserable but courageous. He was also angry. He had returned to this hospital regularly for three years—now, for the last time. "They don't know me! They come by in a group each morning, ask me how I feel—what do I need . . . AND NEVER TAKE THEIR HAND OFF THE DOORKNOB!"

When my young friend was desperate, he'd send for the young Fellow attending him (who had once been a nurse on this unit), who would sit on his bed, talk to him and *listen* to him, *touch* him . . . help him. One can only hope the Fellow did not grow to completely emulate her mentors.

Second, Leon had come to me over about 15 years—after his retirement. He had severely progressive coronary disease, a markedly restricted left ventricular ejection fraction, and severe small-vessel disease in the cerebral circulation. He had been hospitalized several times at the brink of death . . . only to survive somehow and carry on. His view of life was optimistic, his ways courtly and courteous. He was beloved.

His last admission was due to a devastating culmination of chronic damages: an acute MI, profound failure, and the renal–cerebral problems commonly accompanying these disasters. Incredibly expert help was provided by cardiology and nephrology consultants and—miraculously—he once again survived and stabilized. His consultants signed off, as stability held. Leon went home six weeks after this last admission.

He was in the office about ten days later and was holding his ground. I had returned to my office to dictate this visit and, as he passed my door, he paused, looked at me intently, and tried to say something but the words just didn't come: his eyes moistened.

I knew what he wanted to say. I stood and simply nodded my head to him, as my eyes moistened also. His smile was beatific, as he understood the message had been conveyed . . . and he nodded, too.

He died in his sleep a week or so later. I will never forget the image of that fine old man, framed in my door, smiling and acknowledging a silent thanks for sharing his journey.

ROBERT LOKEY, MD
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