

# Learning to Empower Patients

## Results of Professional Education Program for Diabetes Educators

Robert M. Anderson, EdD  
 Martha M. Funnell, MS, RN, CDE  
 Patricia A. Barr, BS  
 Robert F. Dedrick, PhD  
 Wayne K. Davis, PhD

**The patient empowerment approach to diabetes education is intended to enable patients to make informed decisions about their own diabetes care and to be fully responsible members of the health-care team. Facilitating patient empowerment requires a specific set of skills and attitudes on the part of diabetes educators. A professional education program designed to facilitate the acquisition and enhancement of the requisite skills and attitudes was designed, implemented, and evaluated. The program involved adhering to a simulated diabetes care regimen for 3 days followed by a 3-day intensive skills-based workshop. The 23 educators who participated in the first two offerings of this program made significant gains in their counseling skills and demonstrated a positive change in attitude. *Diabetes Care* 14:584-90, 1991**

There appears to be at least two schools of thought regarding the primary purpose of diabetes patient education. We have labeled the first the compliance-based approach to diabetes patient education (1-5) and the second the empowerment approach to diabetes patient education (6-14). The compliance-based approach aims to improve patient adherence to the treatment recommendations of health-care professionals. Several assumptions underlie the compliance-

based approach. First, the advocates of this approach assume that the benefits of patient compliance outweigh the costs (e.g., negative impact on the patient's quality of life) that might occur as a result of the substantial effort needed to achieve compliance. Second, it is assumed that health-care professionals, because of their diabetes expertise, should be the primary decision makers regarding a patient's diabetes self-care regimen. Finally, it is assumed that patients should obey (i.e., have an obligation to follow) the treatment recommendations of health-care professionals.

The appropriateness of compliance-oriented diabetes patient education is being increasingly questioned (12-14). The education committee of the University of Michigan Diabetes Research and Training Center (MDRTC), which is responsible for the patient and professional education programs of the MDRTC, has adopted the second approach to diabetes patient education, referred to as "patient empowerment." This approach posits that the patient should be the primary decision maker in diabetes care (15). The concept of patient empowerment takes its theoretical underpinnings from the work of educators (16) and community psychologists (17) who have worked primarily with socially disadvantaged populations. The empowerment philosophy is based on the assumption that to be healthy, people must be able to bring about changes not only in their personal behavior but also in their social situations and the institutions that influence their lives. Health, in the context of the empowerment philosophy, is defined in a much broader sense than has been usual in diabetes care (18). For example, Maslow (19) defines health as the realization of one's human potential. Another model developed by Dubos (20,21) and refined by Bruhn et al. (22) and Cardus and Thrall (23) views health as the capacity to participate effectively in one's

From the University of Michigan Medical School, Michigan Diabetes Research and Training Center, Department of Postgraduate Medicine/Health Professions Education, Ann Arbor, Michigan.

Address correspondence and reprint requests to Robert M. Anderson, EdD, Michigan Diabetes Research and Training Center, Towsley Center for Continuing Medical Education, Room G-1201, Box 0201, Ann Arbor, MI 48109-0201.

Received for publication 9 July 1990 and accepted in revised form 10 January 1991.

social and physical environment. The empowerment view requires that the costs and benefits of diabetes self-care be viewed in the broader, personal, and social context of patients' lives.

The empowerment approach to diabetes patient education rests on several additional assumptions. First, this approach assumes that most patients with diabetes are responsible for making important and often complex decisions while carrying out the daily treatment of their diabetes, i.e., they are de facto their own primary health-care providers. Second, the empowerment philosophy assumes that because patients are the ones who experience the consequences of both having and treating diabetes, they have the right to be the primary decision makers regarding their own diabetes care. Health-care professionals may know what is best for a patient's diabetes, but that is not the same as knowing what is best for the patient. Because diabetes care often involves significant personal costs and may produce uncertain benefits, making the final determination of what is best for the patient is both the right and responsibility of the individual patient. Therefore, in the empowerment view, the primary purpose of diabetes patient education is to prepare patients to make informed decisions about their own diabetes care.

The knowledge necessary to make informed decisions about diabetes self-care falls into two global domains. The first domain is knowledge about diabetes and its treatment, i.e., the information necessary to make cost-benefit judgments about adopting (or not adopting) various diabetes self-care options. The second domain is self-awareness about the patient's own values, needs, goals, and aspirations regarding diabetes care. In education directed at this latter domain, patients are helped to examine and clarify the emotional, social, intellectual, and spiritual components of their lives as they relate to the decisions they must make about their diabetes care. Diabetes care is fitted to the patient's life rather than the reverse.

The patient empowerment approach differs from traditional patient education in that it is not aimed at improving compliance with the recommendations of health-care professionals. The patient empowerment approach to diabetes patient education seeks to maximize the self-care knowledge, skills, self-awareness, and sense of personal autonomy of patients to enable them to take charge of their own diabetes care. Empowered patients are those that have learned enough about diabetes and themselves, so that, in consultation with health-care professionals, they can select and achieve their own goals for diabetes care. The evaluation of a patient education program based on the empowerment approach should focus on patient achievement of self-selected diabetes care goals. We believe that most patients, once they have been adequately educated about diabetes, will include appropriate health-related outcomes such as improved glucose control and weight loss as part of their diabetes care goals.

Diabetes education designed to empower patients re-

quires appropriate attitudes, knowledge, and skills on the part of diabetes educators. This is especially true when diabetes patient education seeks to help patients increase their self-awareness of their own values, needs, and goals regarding diabetes care. This type of psychological and social learning requires the kind of counseling skills that are not often included in the training of most health-care professionals. The MDRTC education committee decided to develop, implement, and evaluate a professional education program designed to facilitate the development of these attitudes and skills. The program described in this article was created to allow diabetes educators to maximize their patient empowerment skills. This article describes the program, its evaluation, and the implications of this program and its philosophy for diabetes education.

## RESEARCH DESIGN AND METHODS

Based on a needs assessment (24) and the patient empowerment philosophy of the MDRTC education committee, a professional education program for experienced diabetes educators entitled "Empowering Your Patients: A Hands-On Approach To Teaching, Counseling, and Behavior Change" was developed, pilot tested, and offered to diabetes educators in Michigan. A four-step patient empowerment counseling model was developed that provides the basic framework for the counseling skills taught in the workshop. This counseling model has been adapted from work conducted in the field of counseling psychology (25-29). The first step of the counseling model involves helping patients explore issues related to their diabetes care (e.g., What part of your diabetes care is a problem for you?). The second step of the model involves personalizing the problem (i.e., helping patients focus on their emotions and the meaning of their concerns).

The third step of the model involves helping patients to clarify their health-related values and establish goals. These goals are related to their diabetes care and other aspects of their physical, intellectual, emotional, social, and spiritual well-being. The fourth step in the model focuses on helping patients develop and commit to a specific plan to achieve their goals. The role of the counselor is to facilitate this process while not trying to direct or control it. It is important that patients "own" the results of their problem-solving experiences. However, the facilitator's role requires insight and sensitivity. Educators must be able to infer from the tone of voice, posture, facial expressions, and their own experience which elements of the patient's presentation will be the most productive to explore and resolve.

The core of the program is an intensive 3-day skills-based workshop for experienced diabetes educators. Due to the hands-on nature of the program and the desired high faculty-participant ratio, the course was limited to 12 participants. Before attending the workshop, participants are required to follow a simulated diabetes

care regimen for 3 days. The regimen involves taking two daily injections of two different types of mock (saline solution) insulin, self-monitoring of blood glucose 4 times/day, following a 1200-cal diet, daily foot care, daily aerobic exercise, and extensive record keeping. The simulated care regimen serves two educational purposes: 1) it provides the participants with a brief introduction to some of the challenges of caring for diabetes on a daily basis and 2) it provides experiences that participants discuss when they play the role of patient during the counseling/behavior change skills training portion of the workshop.

The 3-day workshop uses a four-phase learning sequence. In the first phase, information about the educational and counseling skills involved in the patient empowerment approach and its underlying philosophy are presented and discussed. Approximately 10% of the total workshop is dedicated to lecture. The remainder of the course information is provided in handouts and reprints. The second phase involves a demonstration of the counseling skills. One of the program instructors, with an MDRTC staff volunteer client, demonstrates the counseling skills to program participants by conducting an actual counseling session in front of the class. The counseling skills demonstrations are not rehearsed, and the instructor does not know ahead of time what the volunteer client will say. The volunteer clients used during the demonstration are asked to discuss real concerns. Real issues are used because experience has demonstrated that the use of "made up" problems during demonstrations and practice sessions diminishes spontaneity and significantly decreases the usefulness of the learning for the participants.

In the third phase of the educational sequence, participants practice the counseling model in small groups (4 participants, 1 faculty person). Participants play two roles during the small group practice sessions. First, they act as clients and discuss issues related to following the simulated diabetes care regimen or some other real concern in their life. Second, each participant acts as a counselor and practices employing patient empowerment counseling skills. These sessions are videotaped so that they can be reviewed in the fourth phase of the learning sequence.

In the fourth phase, videotapes are reviewed in small group sessions, and participants are assisted by other group members in evaluating their own tapes. Each participant in the course is taught interpersonal process recall (30), a nondirective noncritical method of assisting peers to review videotapes of their performance. Program participants review videotapes of themselves made during phase 3 when they were acting as counselors. They are assisted in this review by one of their colleagues acting as an "inquirer." The role of the inquirer is to facilitate the review and exploration of a peer's videotaped performance. Inquirers are expected to remain nonjudgmental during the review (31,32).

The four-phase learning sequence is repeated on each

of the 3 days of the workshop. In addition to the core learning sequence, there are also sessions in the program devoted to values clarification, exploring the impact of participant's communication style on their approach to diabetes education, and a session on effective and ineffective teaching. The purpose of the value clarification session is to teach educators to help patient groups explore, express, and clarify their health-related values, especially those relevant to diabetes (step 3 of the counseling model). Program participants completed a communication-style inventory and then considered the impact of their particular communication style on the educational tasks involved in diabetes patient education and their level of comfort with the patient empowerment counseling model.

Although the stated philosophy of many participants is consistent with the program's philosophy, they experience two common difficulties in implementing this educational approach. First, many participants find it difficult to respond to the emotional content of patients' problems. Diabetes educators are often uncomfortable encouraging patients to explore and express negative emotions. There is a general societal inhibition against the direct expression of negative emotions. Many people experience discomfort when others verbalize feelings of anger, guilt, resentment, and fear. Also, educators are often uncomfortable with these emotions in themselves. Furthermore, emotions are avoided because diabetes educators are trained to be problem solvers, and emotions are not problems to be solved. Emotions need to be explored, expressed, experienced, and accepted by the patient. The role of the educator in this process is to be a thoughtful, compassionate, and empathic listener. We believe it is inappropriate for the diabetes educator to view the patient's expression of emotion as something that needs to be solved, dissipated, or gotten through as quickly as possible. Once the educators in the program understand that they do not have to solve the patient's emotions, they are better able to encourage patients to explore and express their feelings.

The second and more difficult change for the educators to make is to allow patients to solve their own problems. Although the educators who participated in this program usually understood and often agreed with the concept of empowerment, many of them found it difficult to refrain from giving advice about the "right" self-care goals or the "best" way to accomplish a particular goal. The most challenging issues in diabetes education involve helping patients make long-term difficult life-style changes. Regarding life-style changes, we feel it is not appropriate for diabetes educators to tell patients what to do or how to do it, unless a patient has specifically asked. It is more useful to help patients explore concerns and consider such issues as their feelings, needs, and values related to having and treating diabetes; the diabetes self-care options available to them; the consequences of implementing (or not implementing) each of these self-care options; and what self-

care behaviors they are willing to adopt. The educator should facilitate and not dominate the process of helping patients come to a decision about pursuing their own diabetes care goals.

One of the most important implied lessons taught by diabetes educators comes from the nature of their relationship with the patient. In the compliance-based approach to diabetes care, patients learn that the educator and/or the doctor is the problem solver, the expert, the authority, i.e., the powerful and responsible one. Patients are conditioned to be passive and dependent; however, this role is not consistent with the demands of modern diabetes care. The contextual message in the patient empowerment approach to diabetes education is that patients are responsible for setting their own diabetes care goals and implementing the behavioral changes necessary to reach those goals. The purpose of diabetes patient education is to equip them to do just that. In some instances, patients may choose to turn that responsibility (or major portions of it) over to a physician, family member, or diabetes educator, but they are still responsible for having chosen to give up their autonomy. The empowerment approach to diabetes education requires that educators develop new sources of personal and professional satisfaction, i.e., learn to value what they do as educational facilitators as much if not more than what they do as problem solvers.

The major goals of this professional education program are to enable diabetes educators to learn to use the teaching and counseling skills that are part of the patient empowerment model and to encourage them to develop attitudes that are consistent with the patient empowerment approach to diabetes education. To evaluate the effectiveness of the program in achieving these goals, data from the 23 diabetes educators who participated in the program were collected. The educators, with the exception of one, were all from Michigan and had signed up for the program after receiving a flyer in the mail. The group consisted of 20 nurses, 2 dietitians, and 1 "other." The first two offerings of the program have been evaluated with three pre-post measures. The three measures were a counseling skills assessment with a videotaped simulation, a counseling skills assessment with an audiotape of a real patient encounter, and a diabetes attitude scale (DAS).

The counseling skills assessment simulation measure consisted of two videotapes, each containing six short vignettes of things that patients might say (e.g., "I really hate having diabetes"). Participants were shown a videotape of six vignettes before the program and a parallel set of six vignettes at the end of the program and were asked to write a one-sentence response to each patient's statement. To score the responses, participants' written responses were typed (to ensure that the raters were blind to the participant's identity), arranged in random order (i.e., pretest and posttest responses were mixed), and rated independently on a 5-point scale (-2 to +2) by two of the instructors.

The two instructors compared their ratings of the participants' responses; six responses (13%) were rated differently (all differences were 1 scale point) and required discussion. The discussion resolved all discrepancies and improved a preliminary 87% level of agreement between the two raters to 100%. This method was used to maximize the precision with which each response was rated. Overall pretest and posttest scores were computed by averaging the individual scores from the six pretest and six posttest vignettes. The internal consistency (reliabilities) of the pretest and posttest scores, as measured by Cronbach's  $\alpha$ , were 0.73 and 0.80, respectively.

Participants were asked to make one precourse and one postcourse audiotape (~20 min each) of a real counseling session between themselves and a patient. The participants were given a stimulus question to use so that all the counseling sessions began with the same type of interaction. Because the instructors knew the participants and could identify their voices from the audiotapes, a different method of rating the audiotapes was used. Five members of the MDRTC education committee who were not involved in the actual conduct of the program were trained to rate the audiotapes based on the same 5-point scale (-2 to +2) used with the videotapes. At the completion of the training session, interrater agreement was assessed with 10 short simulated audiotapes. Interrater agreement, as measured by the intraclass correlation coefficient, was 0.99.

After the training session, each tape was rated independently by two raters who were blind to the identity of the participant and the time of the tape (pretest vs. posttest). Overall pretest and posttest scores were computed by averaging the scores assigned to the diabetes educator responses. The reliabilities (interrater agreement) of the pretest and posttest ratings, as measured by the intraclass correlation coefficient, were 0.66 and 0.63, respectively.

The DAS is a 50-item survey that measures the attitudes of health-care professionals on various issues related to diabetes (33). Each item on the DAS is scored from 1 (strongly disagree) to 5 (strongly agree). Of the eight issues (factors) represented in the DAS, the patient autonomy and the need for special training factors were relevant to the patient empowerment program. Patient autonomy measures the extent to which health-care professionals believe that patients should make the major decisions in diabetes care. The special training factor measures the extent to which health-care professionals perceive the need for special training to provide diabetes care.

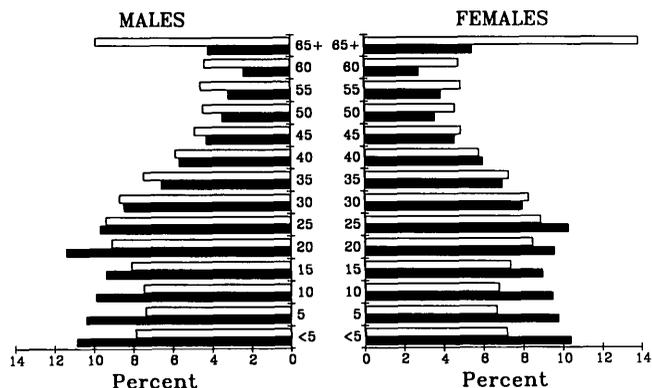
The DAS was administered to participants on registration for the program but before the 3-day diabetes self-care simulation, after the 3-day simulation but before the workshop, and at the end of the workshop. Factor scores for each participant were calculated and compared for each of the three administrations.

**RESULTS**

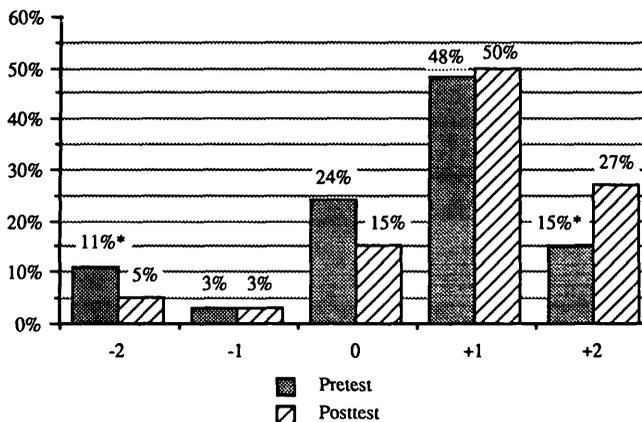
For the simulated counseling session, the participants ( $n = 23$ ) showed significant improvement in their counseling skills ( $t = 8.74$ ,  $df = 22$ ,  $P < 0.001$ ). The mean pretest score changed from 0.07 (range  $-1.50$ – $1.67$ ) to 1.49 at the end of the program (range  $0.17$ – $2.00$ ). Significant improvement in counseling skills was also observed in the actual counseling sessions ( $t = 3.92$ ,  $df = 18$ ,  $P < 0.001$ ). The scores of the 19 participants who returned both pretest and posttest tapes changed from a mean of 0.53 (range  $0.39$ – $1.20$ ) to a mean of 0.92 (range  $0.40$ – $1.64$ .) Because the trainers were most interested in decreasing the number of  $-2$  (least effective responses) scores and increasing the number of  $+2$  (most effective responses) scores, the proportion of total pretest responses that were  $-2$ ,  $-1$ ,  $0$ ,  $+1$ , and  $+2$  was compared to the proportion of those responses at posttest for both simulation and actual counseling session assessments. These proportions are shown in Figs. 1 and 2. The proportion of least effective responses decreased significantly and the proportion of most effective responses increased significantly for both assessments.

The attitudes of participants toward patient autonomy changed significantly from the beginning (2nd administration) to the end of the program ( $P < 0.05$ ). In general, the participants were more supportive of patient autonomy in diabetes management at the end of the program (mean 4.43) than at the beginning of the program (mean 4.01). It should be noted, however, that even at the beginning of the program the participants were generally supportive of the patients being the primary decision makers in diabetes care.

Participants' attitudes toward the need for special training did not change significantly over time. The mean of this factor score was 4.37 before the program and 4.51 at the end of the program ( $P > 0.05$ ). Because several items contained in this factor were not relevant to counseling and educational skills training (e.g., 1 item dealt with the need for training programs to cover diabetes and the elderly), the two items in the factor that were most closely related to the theme of the training



**FIG. 1. Simulated counseling skills assessment. \* $P < 0.01$ .**



**FIG. 2. Actual counseling skills assessment. \* $P < 0.05$ .**

program were analyzed separately. The results with the two items showed that participants believed more strongly at the end of the program that it is important for diabetes educators to learn counseling skills (means at pretest and posttest were 4.65 and 4.90, respectively,  $P < 0.01$ ) and that to be effective, educators must master a substantial body of knowledge on teaching and learning (means at pretest and posttest were 3.70 and 4.13, respectively,  $P < 0.05$ ).

**CONCLUSIONS**

This training program for diabetes educators resulted in significant improvements in counseling skills, as measured by both counseling skills assessment measures (simulated and actual patient encounters). However, the gain in scores was greatest on the simulation measure. The discrepancy between the scores on the two assessment methods has at least two probable causes. The audiotapes were actual counseling sessions conducted with real patients. Under these conditions, it was more difficult for the educators to apply the counseling model with the precision that they were able to under laboratory (i.e., writing responses to the videotaped vignettes) conditions. Second, the verbal responses on the audiotapes were more difficult to rate precisely than the one-sentence written responses to the videotapes. The audiotaped counseling responses were often long and involved many sentences, which made it more difficult to match them precisely to an evaluation template. The differences between the two assessment methods are also reflected in the proportion of changes from least effective responses to most effective responses (Figs. 1 and 2). Again, the greatest gains were seen on the counseling skills simulation assessment. These discrepancies are to be expected in a real world application and measurement of educational and counseling skills.

The changes in attitudes, as measured by the DAS, were those that were both expected and desired. There was a significant increase in the valuing of patient au-

onomy, although these participants agreed with the need for patient autonomy at the beginning of the workshop. On the factors that were not related to the training program, no significant changes in attitudes were observed. These data indicate that it is possible to bring about simultaneous changes in both attitudes and skills with a professional education program designed specifically to have an impact in these areas. One question that will need further examination is "What is the long-term impact of the program on participants' skills and attitudes?" Are participants able to maintain their skills/attitudes over time, or do these skills/attitudes gradually deteriorate?

Many of the workshop participants reported that the 3-day simulated regimen had a significant impact on their perception of what it must be like to care for diabetes on a daily basis. Although this simulation in no way duplicates the actual experience of having diabetes, it is nonetheless an important learning experience. The educators realized that they were caring for diabetes for only 3 days and yet felt they had a taste of how difficult it must be to do so on an ongoing basis. The simulated diabetes care regimen is an important and useful learning experience and is important preparation for this particular workshop.

To maximize the dissemination of the skills acquired in the program, the MDRTC has developed a set of continuing education materials that are made available to program graduates. At least eight of the diabetes educators who completed the first two program offerings have presented counseling skills in-service programs to their colleagues.

The implementation and evaluation of this program have demonstrated the efficacy of skills-based continuing education programs for experienced diabetes educators that was guided by a coherent patient-centered educational philosophy. The workshop is seen as a successful educational intervention because it was valued by the educators who participated in it, resulted in a measurable improvement in their counseling skills, and has been adapted and used for local professional continuing education. The behavior changes that were the most difficult for the educators to make were responding to emotional issues and avoiding problem solving. This finding suggests that diabetes educators may not necessarily be able to implement a patient empowerment approach to counseling just because they understand it and agree with its philosophy. Many of the educators in this program struggled to change deeply ingrained behaviors and concepts to use the patient empowerment counseling skills successfully. In so doing, they acquired some important insights about themselves and gained useful skills. For this kind of learning to occur, education must be conducted in an atmosphere that is psychologically safe and conducive to risk taking. When such an atmosphere was provided and a framework for experiential self-directed learning was offered, diabetes educators were able to make significant changes in both their attitudes and educational skills.

## ACKNOWLEDGMENTS

This study was supported in part by a grant from the National Institutes of Health, National Institute of Diabetes, Digestive and Kidney Diseases Grant 3-P60-AM20572.

We thank Marilyn S. Arnold, MD, RD; Mary T. Burkhardt, BSN, MA; and Cathie J. Stepien, RN, MPH, for help in evaluating this program.

Parts of this study were presented in abstract form at the 50th annual meeting of the American Diabetes Association, Atlanta, Georgia, 16–19 June 1991.

## REFERENCES

1. Raymond MW: Teaching toward compliance. *Diabetes Educ* 10:42–44, 1984
2. Resler MM: Teaching strategies that promote adherence. *Nurs Clin North Am* 18:799–811, 1983
3. Speers MA, Turk DC: Diabetes self-care: knowledge, beliefs, motivation and action. *Patient Counseling Health Educ* 3:144–49, 1982
4. Korhonen T, Huttunen JK, Aro A, Hentinen M, Ihalainen O, Majander H, Siitonen O, Uusitupa M, Pyorala K: A controlled trial on the effects of patient education in the treatment of insulin-dependent diabetes. *Diabetes Care* 6:256–61, 1983
5. Korhonen T, Huttunen JK, Aro A: Evaluation of patient education: a reply. *Diabetes Care* 6:620, 1983
6. Valentine V: Empowering patients for change. *Pract Diabetol* 9:13, 1990
7. Stimson GV: Obeying doctors orders: a view from the other side. *Soc Sci Med* 8:97–104, 1974
8. Greenberg JR: Health education as freeing. *Health Educ* 9:20–21, 1978
9. Anderson RM: Defining and evaluating diabetes patient education. *Diabetes Care* 6:619, 1983
10. Anderson RM: The personal meaning of diabetes: implications for behavior and education, or kicking the bucket theory. *Diabetic Med* 3:85–89, 1986
11. Anderson RM, Genthner RW, Alogna M: Diabetes patient education: from philosophy to delivery. *Diabetes Educ* 8:33–36, 1982
12. Anderson RM: Is the problem of compliance all in our heads? *Diabetes Educ* 11:31–34, 1985
13. Strowig S: Patient education: a model for autonomous decision-making and deliberate action in diabetes self-management. *Med Clin North Am* 66:1293–307, 1982
14. Bush MA: Compliance, education, and diabetes control. *Mt Sinai J Med* 54:221–27, 1987
15. Funnell MM, Anderson RM, Arnold MS, Barr PA, Donnelly MB, Johnson PD, Taylor-Moon BA, White NH: Empowerment: an idea whose time has come in diabetes education. *Diabetes Educ* 17:37–41, 1991
16. Wallerstein N, Bernstein E: Empowerment education: Freire's ideas adapted to health education. *Health Educ Q* 15:379–94, 1988
17. Rappaport J: Terms of empowerment/examples of prevention: toward a theory for community psychology. *Am J Counseling Psychol* 15:121–49, 1987
18. Smith JA: The idea of health: a philosophical inquiry. *Adv Nurs Sci* 3:43–50, 1981

19. Maslow A: *Toward A Psychology Of Being*. New York, Van Nostrand, 1968
20. Dubos R: Health and creative adaptation. *Hum Nature* 1:74–82, 1978
21. Dubos R: *Man Adapting*. New Haven, CT, Yale Univ. Press, 1965
22. Bruhn JG, Cardova FD, Williams JA, Fuentes RG Jr: The wellness process. *J Commun Health* 2:209–21, 1977
23. Cardus D, Thrall RM: Overview: health and the planning of health care systems. *Prev Med* 6:134–42, 1977
24. Funnell MM, Davis WK, Hess GH, Barr PA: A needs assessment of advanced training for diabetes educators (Abstract). *Diabetes* 38:150A, 1989
25. Rogers C: *Client-Centered Therapy*. Boston, MA, Houghton Mifflin, 1965
26. Rogers C: *Freedom To Learn For The 80's*. Columbus, OH, Merrill, 1983
27. Combs A, Avila D, Purkey W: *Helping Relationships*. Boston, MA, Allyn & Bacon, 1978
28. Combs A: *A Personal Approach To Teaching: Beliefs That Make A Difference*. Boston, MA, Allyn & Bacon, 1982
29. Carkhuff R: *The Art Of Helping*. Amherst, MA, Human Resource Dev. Press, 1975
30. Kagan N: Influencing human interaction—eighteen years with IPR. In *Psychotherapy Supervision: Theory, Research and Practice*. New York, Wiley, 1980
31. Kingdon MA: A cost/benefit analysis of the interpersonal process recall technique. *J Counseling Psychol* 22:353–57, 1975
32. Werner A, Schneider JM: Teaching medical students interactional skills. *N Engl J Med* 190:1232–37, 1974
33. Anderson RM, Donnelly MB, Gressard C, Dedrick RF: The development of a diabetes attitude scale for health care professionals. *Diabetes Care* 12:120–27, 1989