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ATTITUDES TOWARD INTERDISCIPLINARY HEALTH CARE TEAMS

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Attitudes Toward Interdisciplinary Health Care Teams

In our previous studies of interdisciplinary geriatric health care teams, we observed that, across teams and across disciplines, health professionals vary as to how they perceive and evaluate teams (Feiger and Schmitt, 1979; Farrell, Heinemann, and Schmitt, 1986; Farrell, Schmitt, and Heinemann, 1988). However, there is no scale with known validity and reliability that enables us to measure cross-discipline variation in attitudes toward teams. A scale would be useful in comparing disciplines, in testing theories about how attitudes toward teams influence the quality of team functioning, and in assessing the effectiveness of education for participation on teams. In this paper we present a progress report on the development of a new instrument of measuring attitudes toward teams.

Rationale for Development of the Instrument

Because attitudes are often determinants of behavior, attitudes toward health care teams may have an important influence on the quality of the participation on teams, the quality of team functioning, and ultimately, the quality of patient care. The attitudes of physicians are likely to be particularly important in determining the quality of team functioning (Feiger and Schmitt, 1979). Physicians often act as gatekeepers and managers of teams. They determine entry and discharge of patients, and they have a strong influence over the organization of teams. Some physicians see teams in a positive light; they see the team structure as a means to enhance their effectiveness or to acquire a more complete picture of the patient as a person. They may also value the chance to act as managers in coordinating information-gathering, decision-making, and the delivery of care. Other physicians see teams in a more negative light; they view teams as structures that distance them from patients, and they see team meetings as a waste of time. Some physicians value the more open, democratic approach to decision-making in teams; others feel teams are a threat to the traditional status of physicians in the health care system.

The attitudes of other health professionals also influence their behavior on teams. Most see teams as vehicles for enhancing their effectiveness in delivering care. They vary in the degree to which they see teams as arenas where they: 1) gain status and influence in the health care system; 2) receive support in dealing with stress; 3) have other disciplines infringe on their professional territory; 4) become overloaded by demands; 5) are pressured to take on responsibilities outside of their professional roles by other team members.

After reviewing the literature, we found no existing scale that can be used to compare attitudes of health professionals from different disciplines toward teams and their roles on teams. For example, although Weiss and Davis (1985) developed an excellent self-report measure of attitudes toward collaborative practice, they created separate scales for physicians and nurses. Furthermore, their scales were designed to measure behavior in team situations rather than general attitudes toward team structure and process. Other scales measure the quality of functioning of teams; however, none measures members' general bias in favor or against team structures. There is a need for a more general attitude scale that will enable researchers to compare disciplines and types of teams and to test hypotheses about the interrelationships between attitudes and team functioning.

Theoretical Background for the Scale

We find it useful to view teams as differentiated feedback systems that attempt to maximize each patient's functioning. To fulfill this goal for each patient, the team goes through repeated cycles of gathering data, making decisions, taking action and obtaining feedback about the effects of actions. Each cycle begins with members gathering specialized information about a new patient. This information is then used to identify the patient's needs or problems as defined by each professional discipline. The information and diagnosis are then shared with other team members in a team meeting. This diagnosis may be modified based on new information or deliberation in the meeting. A coordinated care plan is developed, and team members then act to implement the plan and maximize the patient's health. Readings are taken on the effects of their actions, and diagnosis or care plan strategies may be modified on the basis of these feedback readings.

Viewing teams as differentiated feedback systems, we set out to measure members' attitudes toward several aspects of team structure and process during typical work cycles. We constructed items tapping members' beliefs about the effectiveness of the team approach. Compared to other ways of organizing the delivery of care, how effective are teams in improving the quality of care and discharge planning? How effective are they in reducing costs and mortality? We also constructed items to measure attitudes about the information gathering and sharing processes. We constructed items that measure attitudes toward the collaborative interdependence and deliberation processes required in teams. We also created items that tap attitudes toward physicians' centrality on teams. Finally, we added items measuring attitudes toward the costs and benefits to the team member while participating on teams.

Methods

In constructing the scale, we first created a pool of Likert scale items that have face validity as indicators or attitudes toward team functioning. Some items were modeled from existing scales. Others were drawn from transcripts of discussions in focus groups where team members expressed attitudes in their own terms. A pilot instrument of fifty items was shortened to thirty-one based on criticisms of experts who work with teams.

The final instrument was given to convenient samples of health professionals in two hospital settings and mailed to a convenient sample of past participants in the Annual Interdisciplinary Health Care Team Conferences. In one setting, questionnaires were given to 97 students in a graduate nursing program; forty-three nurses (44%) returned questionnaires. In a second health care setting, questionnaires were given to 14 team members in a

large metropolitan hospital; eleven (78%) returned questionnaires. Finally, 196 questionnaires were sent to participants of the three most recent Interdisciplinary Health Care Team Conferences. Eighteen were returned because the letter did not reach the respondent. Of the remaining 178, ninety-five (53.4%) returned completed questionnaires by the time analysis was undertaken. Overall the response rate was 51.5 percent. For this analysis, the sample consisted of 147 persons.

Factor analysis and Crongach's alpha were used to establish the dimensionality and reliability of the scales (see Carmines and Zeller, 1981). After establishing the reliability of the scales, we compared scores of six types of professionals: physicians, social workers, clinical nurse specialists, nurse practitioners, registered nurses, and other professionals.

Results

Principle components factor analysis of the thirty-one general attitude items resulted in eight factors with eigenvalues greater than one. The eight factors were rotated using varimax rotation. Inspections of factors five through eight showed that each of these factors consisted of only one or two items that were unrelated to the items loading on the first four main factors. Five items had unique loadings on one or the other of these last four factors These items were dropped from the scale. The remaining four factors are presented in Table 1.

Factor one accounts for 20.6 percent of the variance in the items. It includes eight items that tap members' beliefs about the degree to which teams improve patient care. Those who score low on the scale agree that teams shorten the stay of patients in the hospital, reduce mortality, provide better discharge planning, and reduce costs. We have called this the "Patient Outcome" factor. Cronbach's alpha for factor one is .818.

Factor two, which accounts for 8.1 percent of the variance, consists of 9 items that measure the respondents' feelings about the costs and gains for themselves as a result of participation on teams. High scorers see teams as fostering communication and learning, increasing enthusiasm, and resulting in better decisions because of the give and take among team members. This factor we call the "Member Gain/Loss." Cronbach's alpha for this factor is .756.

Factor three accounts for 5.8 percent of the variance. It consists of five items that measure the members' attitudes toward physician dominance of the team and control over information about the patient. We refer to this factor as "Physician Centered." Cronbach's alpha for this factor is .642

Finally, factor four consists of 5 items that measure the respondents' feelings about working interdependently with others. Items deal with attitudes toward interdisciplinary decision-making, interdisciplinary contacts with patients, speaking out in meetings, and having ego clashes over turf issues (reversed item). This factor is called "Interdependence." Cronbach's alpha is unacceptably low (.334).

Differences Among Disciplines

We are currently in the process of assessing the validity of the scales. As a first step toward that goal, it would seem useful to compare disciplines with regard to their scores on each factor. The differences among disciplines on factor 4, "Interdependence," are not significant. All disciplines seem to feel equally positive about the interdependence required by participation on teams.

Factor 3, "Physician Centered," measures the degree to which respondents think physicians should dominate teams with other members assisting the physicians and allowing them to have final say in decisions. In comparing disciplines, we find differences among disciplines significant ($F=4.49$; $p<.001$). Not surprisingly, the physicians are most in favor of physician control; while other disciplines lean toward opposing a physician centered team structure. Bearing in mind that this sample of physicians includes only those who are already positively disposed toward teams, it is likely that a more representative sample would show even more dramatic preference for physician control. It is interesting to note that the social workers are very close to the physicians in preferring a more centralized structure.

Factor 2, "Member Gains/Losses," measures the degree to which members feel teams have positive effects on team members. Comparing mean responses to this scale to mean responses to other scales, it is interesting to the that scores for this scale are the most consistently positive. However, there are not significant differences between members.

Factor 1, "Patient Outcomes," assesses the degree to which members feel teams have positive effects on patient care and patient outcomes. The disciplines differ on this factor ($F-1.92$; $p<.05$), with nurse practitioners and clinical nurse specialists being the most positive and social workers being the least positive.

Conclusions

After reviewing research on health care teams, we found no existing scales for comparing disciplines on their attitudes toward the structure, process, and outcomes of the team approach. A new scale was constructed consisting of four subscales: Patient Outcomes, Member Gains/Losses, Physician Centered, and Interdependence." Preliminary tests of the reliability of the subscales indicate that three of the four subscales are reliable indicators of important constructs relevant to team practice. Further testing needs to be done to examine the test-retest reliability of the scales. In addition, we need to examine the validity of the scales as indicators of the degree to which a person is positively disposed toward the team approach.

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Table 1

Factors I and II Loadings: Varimax Rotation

Factor I: Patient Outcomes		Factor II: Member Gains/Losses	
Patients who receive team care have shorter hospital stays than other patients	.751	Team meetings foster communication among team members from different disciplines	.637
Team care can reduce the patient's length of hospital stay.	.740	Working on a team keeps health professionals enthusiastic and interested in their jobs.	.596
In the long run, teams reduce the cost of patient care.	.683	Most of the time, working on teams unnecessarily complicates things.	.589
Patients who receive team care are better prepared for discharge than are other patients	.625	The give and take among team members helps everyone make better decisions.	.526
The team approach can reduce patient mortality rates	.569	Being a part of a team weakens relationships with one's own patients.	-.504
Teams make the delivery of care more complex and less efficient.	-.525	Health professionals who work on teams learn a lot from one another	.499
Team care prevents premature nursing home placement.	.511	Team care improves the quality of care to patients.	.486
Teams make the delivery of care more efficient.	.509	Being part of a team weakens relationships with one's own colleagues.	-.482
		The time required for team meetings could be better spent other ways.	-.467
Eigenvalue: 6.39		Eigenvalue: 2.50	
Percent variance: 20.6		Percent variance: 8.1	
Cronbach's alpha .818		Cronbach's alpha .776	

Table 2

Factor III and IV Loadings: Varimax Rotation

Factor III: Physician Centered		Factor IV: Interdependence	
Team members from various disciplines serve primarily to assist the physician in acieving patient care goals.	.756	Team members should express their views if they disagree with care plan decisions.	.598
The physician should have the final word in decisions made by health care teams.	.614	When talking to patients and their families, it is important to reinforce the value of other team member's contributions to care planning and implementation.	.495
In order for teams to function well, there needs to be one clearly defined leader.	.550	Developing an interdisciplinary care plan is cumbersome and time consuming.	-.443
Teams cannot provide care as good as a physician who knows his/her patients well.	.513	Team meetings provide a forum for some members' "ego trips".	-.428
Some information about patients should be kept confidentially within one's own discipline and not shared with other team members.	.451	To provide good patient care, it is essential to take the time to build consensus about patient care decisions.	.425
Eigenvalue:	1.81	Eigenvalue:	1.78
Percent variance:	5.80	Percent Variance:	5.70
Cronbach's alpha:	.642	Cronbach's alpha:	.334

Table 3

Manova: The Effects of Profession on Factor Scores

Profession	I. Patient Outcome	II. Member Gain/Loss	III. Physician Centered	IV. Inter Dependence
Physician	2.1	1.8	2.3	2.1
Social Work	2.3	1.6	2.2	1.9
Clinical Nurse Specialist	1.9	1.6	1.7	2.1
Nurse Practitioner	1.9	1.5	1.6	2.1
Registered Nurse	2.0	1.7	1.8	2.0
Others	2.1	1.7	1.9	2.0
Total	2.0	1.7	1.9	1.9

Univariate: Factor I: $F=2.19$; $p<.05$ Multivariate $F=2.18$; $p<.005$

Factor II: $F=1.06$; ns Averaged $F=2.58$; $p<.001$

Factor III: $F=4.49$; $p<.001$

Factor IV: $F-1.17$; ns

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