THE USE AND ABUSE OF A CURRICULAR MODEL: AN EVALUATIVE STUDY OF ONE C.E.G.E.P.'s NURSING PROGRAMME IN QUEBEC

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After developing a curriculum based on the adaptation model of Sister C. Roy, and implementing it for several years, the faculty of a C.E.G.E.P. nursing programme asked for assistance in the ongoing evaluation of its curriculum. This paper is derived from the report submitted to the faculty which requested the evaluation.

THE USE OF MODELS

The theory of "Adaptation" as presented by Roy was originally a physiological theory modified to explain psycho-sociological factors and then adapted specifically to nursing (Roy 1970, 1971 and 1972). Roy is in the process of developing a theoretical framework of nursing which begins with the patient and sees the nurse attempting to initiate intervention to promote the patient's adaptation by changing his response potential, helping the patient to attain, if possible, a higher position on the health-illness continuum (Roy 1970).

While Roy conceived of this model primarily as an approach to patient care which holds great potential for nursing intervention, it may be utilized for multiple purposes. As may be seen below, the "Adaptation" theory can be employed as a teaching tool, that is, as a way to organize the content of a curriculum and the materials the students must master, categorized under headings drawn from the theory. As a learning tool, such headings can be given to the student to organize data concerning human behavior, or to understand her own behavior as a basis for self-growth. Further, it can be employed as a professional tool, that is, as a general approach to patient care. The nurse uses the theory not only as a master system for analyzing and organizing nursing knowledge, but also as a guide to direct nursing intervention and basic care. One or more of these functions may operate at the same time, so long as the persons developing or using the model comprehend the differences and the limits of each.

Assuming for the moment that Roy's model is logically integrated, based on empirical evidence, and subject to revision, there is still the problem that any theory which is not based on nursing and the principles of nursing is not necessarily directed towards situations which daily confront the nurse. However, if the theory were integrated with research on nursing, it could provide both foundation and guidelines for developing a viable "nursing" model (Dumas, 1966; Dumas and Johnson, 1972).

Problems of integration and of coordination appear wherever a model is used in the teaching of nursing. Integration problems may stem from the lack of a clear understanding of the theories of practice and the way in which they are related to theories of human behavior. Coordination difficulties stem from the motives, attitudes and values of the practitioners, for it is necessary for the practitioners to be committed to the view that when the nurse performs the sequence of acts under the circumstances spelled out by the model, she achieves an effect which is beneficial to the client.

Problems also arise if guidelines for the application of the model are vague or ambiguous. For example, if the framework, that is, the circumstances under which the model applies, is not clearly understood, or if there are no sanctions attached to the appropriate use of the model, it may be distorted or discarded.

FRAMEWORK FOR A CURRICULUM EVALUATION

Four criteria are identified by Allen (1972) as values which reflect the development and effectiveness of a nursing programme, and these criteria were used to give perspective to the evaluation.

The criterion *relatedness* poses the question: do the individual parts of a curriculum fit together to achieve a common goal, and are the means of achieving this goal or these goals both appropriate and related?

Relevance is concerned with problems such as: are the purposes of a programme relevant to the particular community or country in which it is operating? Are the goals responsive to the environment which supports the nursing programme? Contrast the curriculum which stresses a solution of predictable, known problems with one which explores variable and less known problems.

The third criterion is *accountability*. Is the programme accountable *to* the nursing profession, to society, to the faculty as nurses and as faculty, to the students, and to the college; *for* the goals, the methods and outcomes of a program? A curriculum could be held to be accountable, if the teaching of nursing prevails as a focal point of the nursing programme. It would fail if it were directed solely towards

the preparation for other roles (*i.e.* physician's assistant) or for specialized nursing (*i.e.* obstetrical nurse) and/or for nursing with selected skills and abilities, without the basic scientific approach and knowledge necessary to continued professional inquiry and growth.

The fourth criterion, *uniqueness,* is concerned with the degree to which the goals, activities and operations of a nursing programme "fit" its particular setting. A programme which operates the same way in any setting, or one in which appropriate methods or approach have been developed but are not used, would not possess a high degree of uniqueness.

METHODS AND RESULTS OF THE EVALUATION

In order to draw some conclusions about a curriculum in terms of criteria, questions such as these must be asked: What is the teaching staff doing? What are the problems that arise as they act, what are the sources of these problems? And in order to achieve a higher degree of relatedness, relevancy, accountability and uniqueness, what could they do? These questions provided the frame of reference for information amassed about the curriculum, which included information from individuals and groups, teachers, co-ordinators, students, former students, former teachers, administrators, and committees. The time spent talking with and listening to the staff provided both a "feeling" for nursing at the C.E.G.E.P. and the base lines upon which to build a more structured approach. Much of the available written material, such as aims, objectives, outlines, philosophies etc., was collected and examined.

While all four criteria are important, the greatest emphasis was placed upon *relatedness,* because the curriculum was based on a theoretical model, and because the faculty judged that an evaluation of teaching methods or student performance would be premature.

Three simple instruments were developed and administered. The first was an open-ended questionnaire in which the faculty were asked to describe a situation involving a student nurse in which "adaptation" occurred, and a situation in which "mal-adaptation" occurred. The second was a comprehension test which attempted to evaluate staff knowledge of the model that is basic to their curriculum. The third was a general questionnaire on the application of this model and on the development and application of their curriculum.

Faculty's description of an adaptive situation

Each member of the faculty was asked to describe two situations in which a student nurse played some part; one which involved adaptation, the other non- or mal-adaptation. (The latter became

TABLE 1

CATEGORIZATION BY BEHAVIOR OF ADAPTATION/MAL-ADAPTATION SITUATIONS DESCRIBED BY THE C.E.G.E.P. NURSING FACULTY

Number and type of descriptions

Teaching Group	No.	Adaptive (Positive)			Mal-adaptive (Negative)		
		Nurse Only	Nurse-Patient	Patient Only	Nurse Only	Nurse-Patient	Patient Only
Pediatric	7	1	6	0	1	4	0
Obstetric	7	3	4	0	5	2	0
Psychiatric	5	2	3	0	2	1	0
Basic	5	3	2	0	5	0	0
Medical-Surgical	11*	6	5	4	2	1	6
TOTAL	35	15	20	4	15	8	6

*The number of descriptions of adaptive situations offered by this group exceeds the number of faculty, because four teachers each offered two examples.

practically problematic, in that some faculty felt that mal-adaptation does not exist). The question or request was stated in vague terms in an attempt to avoid influencing the selection of a "situation". A total of 35 staff members responded, describing 39 positive and 30 negative or mal-adapted situations.

The result? First, in these descriptions the word "adaptation" was used in different ways. More than half of the respondents describe situations in which adaptation occurred by modification. In other words, situations were selected in which adaptation denoted the flexibility of the people involved. Another 25 per cent were situations in which accommodation occurred, in that people yielded to a certain degree. A further 30 per cent were situations in which adjustment occurred, that is, something was brought into correspondence with something else or was fitted together. The content of these descriptions, then, varied across the faculty.

In an attempt to elicit their intuitive responses, the faculty were not asked to describe any specific person adapting. Intuitively and immediately, who are the main "actors" in their view of the theory of adaptation? Table 1 is simply a categorization of their descriptive situations, adaptive and mal-adaptive, under three headings:

—*Nurse Only* indicates simple nurse behavior, i.e., a pure situation in the sense that it describes the nurse herself as she reacts to problems and attempts to discover solutions.

—*Nurse-Patient* describes a nurse interacting with a patient, i.e., a situation in which there was a nurse and a patient and the nurse was interacting with the patient by direct intervention or modification of stimuli.

—*Patient Only* refers to simple patient behavior, i.e., a situation in which the patient as an individual changes, or learns, or modifies his behavior.

None of the examples offered, centered on adaptive interaction between nurses or between other members of the medical staff/team.

In her description of the "Adaptation" theory, Roy essentially talks about the patient in terms of stimulus-response, and defines and describes adaptation in terms of the patient and his response potential, his abilities his final resolution. However, of the 39 positive situations here, 15 describe the nurse herself, being flexible, for example) ; 20 describe nurse-patient interaction or intervention, and only four describe the patient himself. On looking at the negative situations, even more of the responses are in terms of nurses not being adaptive, rather than descriptions of nurse-patient interaction. However, there is a small increase in the percentage of simple patient situations. From looking at the content of these behavioral descriptions, it can be seen that the theory of adaptation was used not only to organize curriculum, or to look at patient behavior, but also to explain nurse behavior and to categorize nursing intervention. The model, then, has multiple functions for this faculty.

On the whole, there is little difference between the responses presented by the different groups of the faculty *(i.e.* medical-surgical nursing, obstetrical nursing, etc.) except that the medical-surgical group has described proportionately more simple patient situations. One might speculate on the reason for this. At the beginning of a program, the students themselves are much more concerned about themselves and about being flexible. By the time the students are seniors and have reached the medical-surgical area of their study, they are, perhaps, better able to be outwardly directed and to concentrate upon patient and nurse-patient situations. The responses by the medical-surgical members of the faculty may, in turn, reflect the attitudes and behaviors of the students whom they teach.

It is interesting to note that few of the faculty actually used terminology proper to either a general theory of adaptation, or to Roy's particular modification of this theory. About 26 per cent of the positive descriptions and 14 per cent of the negative ones made use of terminology (of any sort) ; only ten of the 68 examples obtained employed Roy's terminology. However, the responses were without exception explicit descriptions of adaptive behavior which if collected over a long period of time might give empirical support for this promising theory in nursing.

Faculty's comprehension of the model

The second instrument was a test of faculty comprehension. The faculty were asked first to define the basic terms of the model (such as adaptive response, coping mechanism) and then asked to discuss the relationship among these concepts (such as the relation between illness and response potential, or between adaptive response and coping mechanism.) Again, most of the staff responded in terms of a general adaptation theory rather than in Roy's specific language. Such responses could in no way be considered incorrect, but they did tend to highlight the process of interpretation and interpolation which accompanied the utilization of the model.

Twenty-two faculty members responded to the first part of the questionnaire, and most evidenced comprehension of adaptation concepts in a general way, introducing terms such as stress, needs, or problem-solving. Only one advanced incorrect definitions; on the other hand, only one or two used Roy's specific terminology. The exceptions were for the definition of *coping mechanism,* where six used her terms, and for *modes of adaptation,* where fourteen quoted almost verbatim from her publications. It would seem that there are two explanations for this divergence from pattern. While both coping mechanism and modes of adaptation are emphasized in the theory itself, the former is fairly easily understood by the faculty, and the latter poses the greatest problem to them. In their description of the application of the curriculum, it is the concept of modes of adaptation which the faculty believed should be modified, refined or further developed.

In contrast to the general understanding of concepts of adaptation, in their discussion of the relationships among these concepts, faculty members evidenced confusion and vagueness. As many as six gave no response at all, and two gave incorrect ones. The rest answered only in the most general language.

These results do not necessarily indicate that the faculty misunderstand or mis-apply the model, but may indicate instead that there are problems proper to the model itself, in which many of the links among concepts are not shown explicitly or in detail (including the process of mal-adaptation).

Faculty's use of the model

The third instrument consisted of a series of open-ended questions related to the faculty's development and modification of their curriculum based on the "Adaptation" model. The responses were supplemented by written material (objectives, outlines, etc.) and non-structured interviews of staff singly and in groups. In responding to

the questions, the faculty tended to include a great deal of emotive material rather than giving direct and concise responses to the questions. This instrument afforded insights into the ability to meet the three other criteria of this evaluation, relevance, accountability and uniqueness, as well as that of relatedness.

In abstracting data from responses, some general points became obvious. There was less conflict among staff than the staff itself realized. There was more enthusiasm for the curriculum than they realized. There was more willingness to work toward improving the curriculum than they realized. However, there seemed to be problems in communication among them and problems in interpretation of the model.

It would seem that the problems which the faculty face are of two general types. On the one hand, the faculty as a whole felt that the model itself requires elaboration and refinement and that they must themselves achieve a deeper understanding of it. On the other hand, they point to the need for a better system of communication and greater commitment to the application of the model. These problems of choosing, integrating and coordinating a psycho-social model to nursing have been experienced by other programs and noted by previous investigators (Wooldridge *et al.*, 1963).

The student is seen to have difficulty integrating the model with the content of special areas (i.e., pediatrics, etc.) and with the social sciences. The model, rather than automatically facilitating the understanding of such content, seems to confuse by adding another dimension for the students' consideration. However, while there is little emphasis on the student's use of the model as a self-development tool, some students do use it as such, and some do not (as reported by the students themselves in informal discussions and interviews). Further, as the students encountered different teachers in different subject areas, they encountered different approaches toward the model's interpretation and application. Nevertheless, the faculty, on the whole, feels that the students do use it and are certainly much more comfortable with it than are many of the staff. The students, however, will probably continue to experience difficulties internalizing any theory, so long as the faculty find it lacking in credibility. (Kelman, 1965).

What relationships do the faculty see between different subject areas and "Adaptation", how useful do they find the concept? It would seem that the teachers within specific subject areas are frequently seen, by other faculty members, as "loyal" to their subject area and its immediate goals rather than committed to the program as a whole. Faculty with loyalties to their subject areas emphasize

content primarily, and secondarily, that interpretation or part of the adaptation theory which seems most immediately appropriate, rather than building on and developing the theory as students grow and move towards being professionals. Some of the difficulty seems to lie in the faculty's attempting to fit what they see as a well-developed content area, to the theory that is presented from the outside, rather than developing the two together as sequential steps in a well-developed curriculum.

Of those that answered the question concerning the usefulness of this model, two of the faculty indicated its usefulness without qualification; nine that they needed help; eight that it was somewhat useful, but that they as yet had to overcome their personal discomfort in its use; and a final six that they did not know whether or not they found it useful.

Most complain that it does not provide directly a method of patient intervention, and that the actual theory is very complex to present in total to beginning students. The latter is a problem in coordination and integration, central in the development of a curriculum. The former is a problem in the theory itself, which may be resolved by the understanding that this theory *encourages* rather then prohibits the integration of any problem-solving approach. (Orlando, 1972)

While more than half of the staff feels that "gaps" and/or overlap in both content and experience are extremely problematic, few seemed to realize how complex this problem is. On the one hand, as a faculty they did not grasp the paradox of their desire both to avoid "overlap" and to exercise academic freedom. The former is primarily an organizational or technical question, the latter philosophical, and as such a privilege of many faculties (or as is thought by many, the right of all faculties) to read, to discuss and to hold and express differing opinions, and to make one's own decisions concerning matters academic. These faculty members emphasize that they are, and must be, free to state their opinions and to act independently. At the same time, about half of them complain that other faculty members are at fault (because of omissions) for the gaps or overlaps in content. Only a few of the staff realize that in further developing their curriculum they must decide the relationship between a philosophical privilege (or right) and the organizational necessity in reaching the objective of the curriculum and in ensuring the rights of the students, the public and the nursing profession.

It would seem that the faculty has spent a great deal of time writing objectives. These seem to be well written and many of them are in terms of the model. However, they are written in terms of a theoretical definition of that model. As a faculty they have not

systematically collected information on the student as she learns to nurse. As Allen (1972) has mentioned, when a staff focus on objectives as outcome they tend to overlook those outcomes which the student actually achieves, in concurrence with, or in lieu of, the expected objectives. They fail both to gather information on how the student reaches her objectives, or on her usual pattern of nursing, and to identify the influences which impede or support the process of nursing and the process of patient care (and so the process of patient adaptation). The establishment of objectives should be an evolving process in which the staff must participate. As a student moves from one year to another, not only will content and level of complexity of performance change, but also the level of complexity of internalization and utilization of concepts.

DISCUSSION OF RESULTS

The curriculum in terms of the evaluative criteria

These findings may now be considered in terms of the criteria considered earlier. It is in terms of the first of these, "relatedness", that this faculty has perhaps the greatest difficulty. While they have adapted a model which in principle should serve as the common base from which the various parts of their curriculum develop, problems in interpretation, understanding and emphasis at times serve to divide rather than unite their efforts.

They themselves have identified problems with communication and perhaps with commitment. Their responses indicate that these seem to be emotionally charged subjects and want further examination when they are in a clearer frame of mind. At such a time both the size and the solution to these difficulties will assume more realistic proportions. However, considering this and their concern over "gaps" and "overlap", it would seem difficult to rate them too highly on a scale (if one existed) of "relatedness".

Although relevancy, accountability and uniqueness have been discussed in the original report, these criteria are more difficult to assess conclusively, given the nature of this evaluation method and the data amassed during this study. For this reason, they have been omitted from this paper. The staff have chosen a change model for their curriculum, they have requested and participated in an evaluation process, and finally, they are trying to build a curriculum unique to their setting.

The Model and its application

In looking at a model and its application, one asks, "is it logically integrated, based on empirical evidence, and subject to revision?"

This C.E.G.E.P.'s faculty have found some logical problems in the model, particularly in the relationship between concepts. It would seem, in this regard, that the model requires further development. Is it based on empirical evidence? Intuitively, the faculty have been gathering empirical evidence (consider, for example, their ability to generate behavioral examples). They now need to become systematic in gathering this evidence.

Is it subject to revision? There is no doubt that the staff has been revising its curriculum. But toward what, and based on what evidence? Roy's "Adaptation" model is a change model; it allows for continuity; it locates the source of change. (Chin, 1969). It does not, however, define too well the goals of change or the way in which such goals are decided. Further, the actual action of the nurse as a change agent is uncertain unless another theory (such as that of Orlando,1972) is interpolated into that of the model. Also, a way of analyzing the interrelationship of nurse and client is lacking unless a theory such as Peplau's (1952) is introduced.

The model of nursing intervention is not spelled out in detail, and unless a complimentary theory or approach is introduced, a great deal is left to personal interpretation or interpolation. This would appear to be a major weakness in the adaptation of this model to nursing.

In considering the actual application of the model there are questions which the staff have already asked themselves. Does everyone understand it? Has everyone even tried to understand it? Further, there are problems in attitude, motive and commitment. While most are enthusiastic, not everyone feels that this is the best or even an appropriate approach. A few even prefer to ignore the model completely.

The guidelines for application are not clearly spelled out, and individual interpretation on main points leads to confusion and frustration. No sanctions have been identified and/or exercised against members of the group who chose to ignore or harmfully distort the model. Many of the faculty, however, are coming to realize that, in the preparation of the professional, freedom as such must be balanced with other components such as responsibility, commitment, accountability and the rights and needs of the student enrolled in the program.

Conclusion

While a model serves as a heuristic base in the development of a curriculum, the selection and application of a model is a complex and difficult undertaking. Further, the use of a model may entail much

more than the novice can foresee, and require much closer attention to detail than a laissez-faire attitude would permit.

The criteria of relatedness, relevance, accountability and uniqueness seem most appropriate in an evaluation such as this. They permit the amassing of data of various types and from multiple sources, at the same time as they serve as comprehensive and desirable aims for faculty involved in the evaluation process.

This evaluation, as much as any other type, is effective to the extent that it is internalized and acted upon by those involved in the process of being evaluated.

For a faculty which is ready, as this C.E.G.E.P.'s faculty seems to have been, such an evaluation can serve as a catalyst for personal growth and curriculum development through the steps of workshops, discussions, curriculum reorganization, and attempts to amass standardized data on students and their performance.

References

M. Allen, *Educational Programs in Nursing and Options for Evaluation,* (Nursing Unit, World Health Organization, Aug. 1972).

R. Chin, "The Utility of Systems Models and Development Models for Practitioners", *The Planning of Change,* 2nd ed., pp. 297-312, New York: Holt, Rinehart and Winston, Inc., 1969.

G. R. Dumas, "Utilization of a Concept of Stress as a Basis for Nursing Action", A.N.A. Clin. Sessions: 193 + , 1966.

G. R. Dumas and B. A. Johnson, "Research in Nursing Practice: a Review of Five Clinical Experiments", *Int. Journal of Nursing Studies,* Vol. 9, No. 3 (Aug. 1972), p. 137-198.

H. C. Kelman, "Compliance, Identification and Internalization: Three Processes of Attitude Change", *Basic Studies in Social Psychology,* ed. by H. Preshensky and B. Seidenberg, New York: Holt, Rinehart and Winston, Inc., 1965.

J. F. Murphy, *Theoretical Issues in Professional Nursing,* New York: Appleton-Century Crofts, 1971.

I. J. Orlando, *The Discipline and Teaching of Nursing Processes,* G. P. Putnam and Sons, 1972.

H. E. Peplau, *Interpersonal Relations in Nursing,* New York: G. P. Putman and Sons, 1952.

C. Roy, "Adaptation: A Conceptual Framework for Nursing", *Nursing Outlook* 18:42, Mar. 1970.

C. Roy, "Adaptation: a Basis for Nursing Practice", *Nursing Outlook* 19: 254-7, Apr. 1971.

C. Roy, "Adaptation: Implications for curriculum change," *Nursing Outlook* 21: 163-68, Mar. 1973.

P. J. Wooldridge, J. K. Skipper, R. C. Leonard, *Behavioral Science, Social Practice in the Nursing Profession,* Cleveland: The Press of Case Western University, 1968.