The importance of psychological factors in surgery and anesthesia are well known. However, the literature appears to offer little direction as to the best method of implementing a training program for nurse anesthetists in this area. This article presents issues in developing a psychological curriculum for a school of nurse anesthesia, a model curriculum, and a conceptualization of the role of the medical psychologist in a School of Anesthesia. Though of particular concern to educators, practitioners should find this article to be of interest as well.

The relationship of psychology to medicine was succinctly summarized by the noted pathologist Virchow in his curiously psychophysiological metaphor that “Medicine is a social science in its very bone marrow.”1 This recognition of the impact of psychological factors on patients has certainly not gone unnoticed by medical professionals in the specialty of anesthesia and anesthesiology.

Anxiety in the surgical patient has been documented as have been the important psychological considerations at each juncture of treatment from diagnosis, to recovery, to resumption of normal living.2 The effects that psychological factors may have on induction of anesthesia and surgical outcome, response, and management have also been reported.3,4

Further, recognition is now extending to the importance of psychological characteristics of medical staff members related to interprofessional concerns including morale, influence on patients, as well as changing professional responsibilities and interdependencies.5

Finally, the critical role for the anesthetist and anesthesiologist in facilitating or inhibiting psychological stress in patients is being more clearly defined. Preoperative and postoperative patient visits (requiring an understanding of patient psychology and ability in communication skills) have been seen as crucial in providing both psychological and physiological benefits.3,6,7,8,9,10

It is not surprising that training in psychology has been suggested as a required component of the curriculum in a school of anesthesia for nurses.11 What is surprising is that apparently nowhere in the anesthesia literature is there a description of the implementation of such training. Articles are becoming more frequent on the psychological aspects of surgical patients,12,13 and there has even been a curriculum suggested for an undergraduate major in anesthesia;14 but no model curriculum and objectives for psychological training appear to exist.

A portion of this article will present issues in developing a psychological curriculum for a school of anesthesia,
model curriculum objectives, and a conceptualization of the role of a medical psychologist in the school of anesthesia.

**Issues in implementing the psychology curriculum**

There are a variety of concerns related to the implementation of a psychological curriculum, two of which require specific discussion in addition to that of content. These issues are the insurance of relevancy of the curriculum and the related issue of who should present it.

The key to the variable of relevance is practicality and usefulness. The content must be related to the real-world concerns of anesthetists and must provide information that is usable. It has been suggested elsewhere\(^5\) that friction in implementing behavioral science curricula in other medical training programs, such as family medicine residencies, has resulted because the needs of consumers were subordinated to the interests of the providers.

Two irrelevant extremes for psychology in a school of anesthesia are: (1) a focus on theories of personality, abnormal behavior, and psychiatric diagnostic classifications which may be interesting but are too remote for the actual needs of the anesthetist, and (2) a focus on psychophysiological minutia, which may have high relevance to the physiological responses of rodents under anesthesia, for example, but provides little practical information for patient management.

The second related issue is that of who should teach such a course. Professional bias here would favor the psychologist, although psychiatrists certainly have specific, valuable information (particularly in the area of psychopharmacology) to contribute to such a curriculum. However, the crucial consideration is not psychologists or psychiatrists, but the selection of an individual who has experience working in medical settings with physicians, nurses, and other medical personnel (psychiatrists do not necessarily have this orientation simply because of their MD degree).

The most regrettable error is to invite a psychologist or psychiatrist without training and experience in a medical setting into the medical setting. Frictions and interpersonal relationships, because of the lack of common understanding of education, work milieu, and so on, are sure to develop, as is the certainty of an irrelevant curriculum. This will lead to the dissatisfaction of both parties and the erroneous conclusion that psychology is irrelevant to anesthetists in their training and work.

How, then, can these requirements be met? Fortunately, there is a relatively simple answer available. This is to base the curriculum on a medical psychology focus and choose an individual who is trained in such a manner. Medical psychology as a structured endeavor is a fairly recent development. The field and its contemporary expansion have been more fully described elsewhere.\(^16\)

Of present importance, is that medical psychology is the study of all psychological aspects of physical illness and its treatment at the individual, group, and systems level. The structure of the field (as presented in Figure 1) is comprised of psychosomatics, somatopsychology, health care studies, behavioral medicine and rehabilitation psychology.

The critical implication of this field is that the psychology of the medical or surgical patient is different from that of the psychiatric patient. To paraphrase another source,\(^17\) medical psychology is a study of normal reactions to abnormal situations (ill health) as opposed to abnormal reactions to normal situations (that is, traditional psychiatry and psychology). Thus, it is a serious mistake to attempt to simply transfer a traditional psychological or psychiatric model onto the surgical patient.
As a natural following, the psychologist who works from this framework will have an understanding of medical milieu and, therefore, can provide relevant information. Perhaps the idea can best be summarized by stating that the individual who teaches psychology in a school of anesthesia must recognize that he or she is training anesthetists and not psychologists. The medical psychologist should be most sensitive and aware of this mandate.

Model curriculum objectives

As a practical example, let us examine the model medical psychology curriculum objectives at the School of Anesthesia of the Harrisburg Hospital in Harrisburg, Pennsylvania. It is based on the belief that medical psychology provides the most relevant orientation. It is further based on the educational philosophy and realities gleaned from experience in working in other medical training programs.

It is also believed that this orientation allows for, not only relevance, but also a required flexibility to provide for humanistic and heuristic psychological sensitivities as well. Finally, it has been refined from evaluations of a pilot course administered to a combined class of anesthesia students. The results of the pilot course have provided valuable direction and serve to indicate that the previously described philosophy and the curriculum to be presented, appear to be valid.

The curriculum focuses on the three major variables in the medical experience. These variables are the patient and the patient's family, the medical staff and the hospital environment. For each of these variables, objectives are provided under the following categories: concepts, skills, and attitudes. Concepts refer to the knowledge to be learned; skills, to the behavior to be engaged in; and attitudes, to the frame of reference from which to work. (See table 1)

Information is generally conveyed in a lecture-discussion format with discussion being emphasized. Experiential approaches are also attempted with the use of self-evaluative exercises. The assessment mechanism used for the course is an attempt to apply the principles learned. Therefore, this involves selecting a psychological friction point within the operating room, or with surgical patients, or interprofessionally, and so on, along with analyzing it from a psychological perspective and suggesting solutions through a written journal-type article.

Additionally, due to responses from the evaluations of the pilot course, an additional section on death and dying
Table 1
School of Anesthesia
Medical Psychology Curriculum Objectives

I. Concepts
A. The Individual and Family
1. Knowledge of approaches to the definition of normal behavior
2. Knowledge of the psychological effects of physical illness and surgery on the patient and family
3. Knowledge of the effects of psychological factors on response to surgery, recovery and anesthesia
4. Knowledge of psychological factors facilitating rapport
5. Knowledge of psychological factors facilitating the interview process
B. Medical Staff
1. Knowledge of the psychological effects of behavior of anesthetists, nurses, physicians and other staff on the patient and family
2. Knowledge of the effect of patient and familial behavior on anesthetists, nurses, physicians and other medical staff
3. Knowledge of factors in the psychological make-up of anesthetists, nurses, physicians, and other medical staff
4. Knowledge of psychological factors in medical interprofessional relationships
C. Hospital Environment
1. Knowledge of the psychological effects of the physical hospital environment on the patient and family
2. Knowledge of the effects of the social hospital environment on the patient and family
3. Knowledge of the effects of hospitalization and medical procedures on the patient and family

II. Skills
A. The Individual and Family
1. Ability to recognize psychological stress in the surgical patient and family
2. Ability to appropriately interact with the surgical patient and family to minimize or prevent psychological stress
3. Ability to establish appropriate rapport with surgical patient and family
4. Ability to conduct a facilitative interview
5. Ability to intervene or request intervention for psychological stress in the surgical patient and family
B. Medical Staff
1. Ability to interact with other medical professionals and hospital staff in a facilitative manner
2. Ability to recognize and intervene appropriately at sources of friction in the interprofessional relationships
3. Ability to recognize and intervene at sources of friction between staff and patient and family
4. Ability to recognize and deal with one's own feelings in the medical experience
C. Hospital
1. Ability to recognize facilitative and debilitative aspects of the physical hospital environment for the patient and family
2. Ability to recognize facilitative and debilitative aspects of the social hospital environment for the patient and family
3. Ability to recognize and intervene with facilitative and debilitative aspects of hospitalization and medical procedures for the patient and family

III. Attitudes
A. The Individual and Family
1. An appreciation of physical illness and surgery as a psychological experience for the patient and family
2. An appreciation of the etiology of untoward psychological reactions in medical and surgical patients
3. An appreciation and willingness to appropriately assess and intervene with psychological reactions in patients

(continued on next page)
Table 1 (continued from page 428)
School of Anesthesia
Medical Psychology Curriculum Objectives

B. Medical Staff
   1. An appreciation of the psychological effects of behavior of all levels of medical staff on the patient and family
   2. An appreciation and tolerance for psychological factors involved in interprofessional relationships
   3. An appreciation of the effects of the medical experience on all levels of medical staff
   4. An appreciation and willingness to look at and be responsive to psychological factors in oneself and potential avenues of change
C. Hospital
   1. An appreciation of the view of the hospital, both physically and socially, and of hospitalization and medical procedures from that of the patient and family

has been added. The goals and objectives for this portion of the course are provided in Table 2.

As a further attempt to increase the experiential aspect of the psychological nature of the medical experience, two other activities are contemplated. One is a student group which is a bi-weekly meeting of the school’s students. Attendance is voluntary but strongly encouraged. The purpose is to provide a mechanism for interaction, discussion, and sharing among one’s peers. The meetings allow for a fuller discussion of material presented in lectures, supplemented by experiences of the students from their work.

In addition, the meetings provide for the sharing of common concerns during training and approaches to handling problems as they occur in the clinic or interprofessional setting. Goals, values, and ethics in medical care may also be discussed. Such groups have had great success in other settings such as family practice residencies and in critical care units as both a growth experience and an intervention for personal and interpersonal problems or concerns. However, groups must be run by a professional skilled in group processes or negative consequences may result.

The second activity contemplated is that of clinical psychosocial supervision. This is essentially an observation of the interactions of students with patients, followed by a discussion of strengths and weaknesses in their psychological approach. Videotape is seen

Table 2
School of Anesthesia
Death and Dying Curriculum Objectives

I. Concepts
   1. Knowledge of different conceptualizations of death
   2. Knowledge of reasons for fear of death
   3. Knowledge of psychological stages of death and dying
   4. Knowledge of responses of medical personnel to death
   5. Knowledge of one’s own personal responses to death and dying

II. Skills
   1. Ability to recognize need for intervention with the dying patient and family
   2. Ability to acquire appropriate intervention
   3. Ability to recognize and deal with one’s own personal responses to death and dying and their impact on working with such patients

III. Attitudes
   1. An appreciation of the importance of the psychological management of the dying patient and family
   2. An appreciation of the importance of the non-avoidance of the death issue by medical personnel

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as an important ingredient in such interactions and is used to increase self-awareness.

Finally, the opportunity is provided to observe family physicians working with patients, not only to highlight psychological aspects of care, but also to allow the feeling of continuity of the patient's experience from an initial diagnosis, to surgery, to re-entry to the community.

**Medical psychologist's role**

The role of the medical psychologist in the school of anesthesia is manifold. The primary responsibility is education and the structure and production of the medical psychology curriculum and course. Clinical didactics occur via videotape and by supervision of students. The clinical role is fulfilled through the group experience for students and also through a consultative relationship.

There is also research function which cannot be fully discussed here. However, research may be basic or applied and ideally involves directing anesthesia students in projects of their own. Finally, research may be neither basic nor applied in the traditional sense, but evaluative in the sense of a quality control of educational programs and techniques. By these methods and through this curriculum, it is believed that Satterfield's statement that, "Each anesthetic we give is the application of our knowledge of pharmacology, physiology, anatomy, chemistry, physics and psychology" can most effectively be seen as truly valid.

**REFERENCES**


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