SOURCES AND EFFECTS OF ANXIETY IN VIDEOTAPE LEARNING EXPERIENCE

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The third year of the generic baccalaureate nursing program at the University of Alberta appears to be a very stressful year for the students. Pre-examination assessments, conducted in September 1980, indicated that many students experienced high levels of anxiety that were associated with writing examinations. Informal data collected from third year students in December 1980 and December 1981, on self reported anxiety levels, showed that these students also experienced high levels of anxiety during their clinical postings. Anxiety is equated in the literature with significant levels of stress (Lazarus, 1976).

Lazarus identifies stress as an internal force which develops within an individual in response to demands which tax or exceed adjustive resources (1976, p.47). Stress is a subjective experience which may have positive or negative effects, and is particular to the specific situation and the individual's capacity to adapt. Although stress is at times essential for growth, it can also be "destructive of effective adjustment" (Lazarus, 1976, p.71). The main deterrents to adjustment, according to Lazarus, are the emotional overtones that characterize stressful situations. Anxiety is the most significant of the stress emotions. In extreme amounts it prevents the individual from coping with problems, prevents learning and emotional growth, and impairs a person's adjustive functioning.

The study reported in this article was intended to identify and categorize the sources of stress reported by third year baccalaureate nursing students, so that educators working with them could evolve methods to lessen the stress experienced or alleviate its consequences.

Literature Review

A major study by Fox and Diamond (1965) identifies four areas of life in which a nursing student may experience stress. They are: personal, social, academic, and clinical. The following summary of research is divided into these four main categories.

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Personal: Stresses experienced by the nursing student in the personal area are those related to the growth, development and maturity level of the student, and involving emotional and physical states. According to Duff (1974, p.165), the nursing student experiences the peak stress period that is associated with late adolescence when she is seeking to define her identity and individuality.

Fox and Diamond (1965, pp.47-48) cite problems of adjustment involving "homesickness, loneliness and general personal pressure which stemmed from the varied aspects of the student's life."

Dye (1974, pp.301-302) also identified as a source of considerable stress the adjustments required of the student to the many demands of the nursing school. Gunther (1969, p.242) notes anxiety, nervousness, depression, and restlessness as symptoms reported by a majority of nursing students, but she questions whether these symptoms are related to the nature of the educational program or the nursing experience. Carter's (1982) study examines the same issue in an attempt to determine whether the distress experienced by nursing students stems from the educational/clinical experience itself, or, whether it issues from the developmental phase to which most nursing students belong.

The relationship between self-actualization scores and the baccalaureate nursing student's response to stress was studied by Sobol (1978) who found that the level of self-actualization is a factor in the student's perception of stressful events. The more self-actualized the student was, the less stress she reported.

The adjustments that a nursing student has to make add to the normal growth and development stresses experienced. This stress is not necessarily detrimental, but some students may exhibit stress signals which call for intervention by faculty members.

Social: Social stresses are those involved in extra-academic and extra-professional activities and in relationships with other nursing students, boyfriends, family members, and friends. Garrett, Manuel, and Vincent (1976, p.12) and Elfert (1976, pp.38-39) discuss the stresses related to residence living. Fox and Diamond (1965, pp.33-34) refer to stressful incidents associated with relationships with other students, which include lack of consideration and problems getting along with roommates.

Boyfriend problems and the management of associated emotional problems are discussed by Duff (1974, p.165) and Garrett et al. (1976, p.12). Fox and Diamond (1965, p.53) report that setting and maintaining standards for dating behaviour is also perceived by students as stressful.

The desire to break away from family ties and to establish individual identity can affect the student's relationships with family members. Fox and Diamond (1965, p.55) report that quarreling and

discord are the most frequently listed stressful incidents in this area. It is not unusual that the nursing student should encounter stress in dealing with social relationships during a time when she is defining her role and learning to fit in socially.

Academic: Encounters with courses, examinations, and workloads will cause high levels of stress if she is unprepared for the academic demands of a school of nursing.

Sobol (1978, p.239) indicates that the prospective nursing student's idea of nursing education is unrealistically shaped by movies, television, and fiction. Fox and Diamond (1965, p.196) state that the student does not anticipate the vast amount of academic work involved in nursing education, and frequently does not perceive the academic component as relevant to caring for patients as a nurse.

Duff (1974), Garrett et al. (1976), Gunther (1969), and Hayes (1966) all indicate that students experience sleeping problems, depression, and restlessness as a reaction to academic work, particularly examinations and evaluations. Elfert (1976, p.39) points out that the student needs to develop confidence in her ability to succeed and that examinations and evaluations are therefore important indicators of her progress towards this goal.

Overall, the literature indicates that the greatest source of stress for the nursing student in the academic area is the evaluation of academic performance. High motivation and fear of failure are understandable; examinations serve not only to test the student's mastery of courses, but also to evaluate her suitability for the profession.

Clinical: Experience directly involved in the delivery of health care to clients is probably the greatest source of stressful experiences for nursing students that is cited in the literature. Williams (1979, pp.4-5) writes that the rising frustration level in students during the clinical program contributes to attrition rates. Adjustments to responsibilities in the clinical area, and the situations and people encountered there, may be frightening to the student who has recently entered young adulthood (Sobol, 1978, p.239).

The nursing student enters the clinical area early in her career. Williams (1979, p.5) states that very few students in any discipline assume such high risk responsibilities so early. Students in Elfert's (1976, p.42) study reported that they experienced stress because of the perceived lack of necessary skills for managing situations in the clinical area. The findings in Sellek's (1982, p.139) study support the notion that the complexity and demands of the clinical environment can be overwhelming. In her research of satisfying and anxiety creating incidents, she found that nursing students reported any new or first encounter with specific clinical situations as being particularly stressful.

Davis and Fricke (1977) write that the many challenges the student receives in the clinical area, such as those involved in difficult patient assignments or complex interpersonal relationships, can precipitate a crisis of anxiety and feelings of helplessness. A major source of stress related to this is experiences with death and dying (Birch, 1979; Dye, 1974, Elfert, 1976, Jones, 1978).

Probably the most stressful experiences that students identify with clinical practice are those related to evaluation of their performance (Davis and Fricke, 1977; Davitz, 1972; Fox and Diamond, 1965; Jones, 1978; Meisenhelder, 1982; Sellek, 1982). In general, the evaluation itself does not cause excessive stress because students want to know how they are performing; but considerable stress develops when they feel unjustly evaluated or criticized.

Other sources of stress in the clinical area involve encounters with discrepancies between what is taught in the classroom and what is practised on the wards (Birch, 1979; Fox, Diamond, Walsh, Knopf, & Hodgin, 1963; Jones, 1978).

Students also report experiencing stress when they have to adjust to new environments, such as that encountered in community work (Coombe, 1976; Elfert, 1976; Fox and Diamond, 1965). The students' lack of experience in contacting clients, arranging appointments, and organizing home visits may lead to avoidance, procrastination and failure to make contacts, and breaking of appointments (Coombe, 1976).

The clinical area presents many stressful experiences for the nursing student. Her ability to cope is dependent on her past experience, her preparation for clinical practice, her personal development, and the type and amount of guidance and support she receives from instructors and from those who work with her in the clinical area.

In summary, the four major sources of stress for nursing students are in the personal, social, academic, and clinical areas of their lives. The common denominator in all of these areas is that the nursing student is usually a young adult, seeking to define her identity at the same time as she is experiencing a vigorous, demanding professional program.

Method

Research problem

The study was designed to identify the main sources of stressful experiences reported by nursing students in the third year of the generic baccalaureate program; to identify the symptoms experienced by these students in response to stress; and to determine whether or not the stressful experiences were perceived

by students as having promoted or hindered learning.

Subjects

The subjects chosen for this study were students enrolled in the third year of the basic baccalaureate program in Nursing at the University of Alberta. Their ages ranged from 20 to 24. All subjects were female because the experience of male students were not considered representative of the majority. The same group of students participated in both the December 1982 and April 1983 data collections. Out of 44 students in the class approached, 33 responded in December, 1982, and 32 in April, 1983.

Data collection and treatment

The instrument used in the study was a critical incident tool based on the ones developed by Davitz (1972); Elfert (1976); Fox and Diamond (1965); Garrett et al. (1975), and MacMaster (1979). The format of directions and the classification system used were based on one suggested by Fox and Diamond (1965).

The participants were asked to identify and write about their most stressful experiences in each of two semesters, September to December, 1982, and January to April, 1983. The anecdotal account was to include the circumstances surrounding the stressful event, the persons involved, and the feelings aroused. At the end of each data sheet the students were asked to indicate whether the stressful experiences promoted, hindered, or had no effect on learning.

None of the raw data were seen by the researchers. A typist transcribed it, deleted specific name references in order to protect anonymity, and destroyed the raw data at completion of the typing.

Findings

Data were analyzed by three independent experts, and by the researchers who judged whether the sources of the stressful events described by the students were academic, clinical, personal, or social. The inter-rater reliability for the first set of data was calculated at 0.78, and the second set of data at 0.72 (see Polit and Hungler, 1978, p.431). The experts and researchers also decided on descriptive subclassifications, the subjects' perceptions of the effect of the experiences on learning, and listed the symptoms described by the subjects. Frequency distributions were tabulated for each group of data.

Analysis of the data showed that students' perceptions of the sources of stressful experiences could be classified in four areas of their lives: Academic, Clinical, Social, and Personal. The Academic and Clinical areas were identified as sources of stress in 78.4% of all incidents reported (Table 1). This finding is in agreement with similar studies.

Subclassifications are described in Table 2. "Workload", a subclassification of the Academic area, is cited as the source of stress in 30 of 88 incidents reported in both semesters, or 34.1% of all stressful experiences described. This finding is in contradiction to other studies which indicate that the Clinical area is the greatest source of stress.

"Clinical Instructor" and "Clinical Evaluation", subclassifications in the Clinical area that were difficult to separate, were perceived as sources of stress in 28.4% of all incidents reported in both semesters. These three sources, "Workload", "Clinical instructor", and "Clinical Evaluation", together account for 62.5% of all reported stressful experiences.

Comparison of the sources of stress for the December and April measurement periods, using the chi-square statistic, applied to the academic, clinical, and combined Social and Personal areas, demonstrated that there was no significant change in the amount of stress reported from these areas (chi-square-1.35, df=2).

Table 1

Distribution of Perceived Sources of Stressful Experiences Among Third Year Baccalaureate Nursing Students at Two Stages in the Academic Year

Sources of Stressful Experiences	December 1982 (n=33) *(ss=48)		April 1983 (n=32) *(ss=40)		Total	
	f	%	f	%	f	%
Academic	17	35.4	19	47.5	36	40.9
Clinical	20	41.7	13	32.5	33	37.5
Social	5	10.4	2	5.0	7	8.0
Personal	6	12.5	6	15.0	12	13.6

*ss = total sources of stress
Some students perceived more than one source of stress as having equal impact

Table 2

Subclassifications of Perceived Sources of Stressful Experiences Among Third Year Baccalaureate Nursing Students in Descending Order of Total Frequency and at Two Stages in the Academic Year

Subclassification	December 1982 (n=33) *(ss=48)	April 1983 (n=32) *(ss=40)	Total f	Total %	Main Classification
Workload	15	15	30	34.1	Academic
Clinical instructor	9	4	13	14.8	Clinical
Clinical Evaluation	6	6	12	13.6	Clinical
Clinical Care	5	1	6	6.8	Clinical
Life Experiences	3	2	5	5.7	Personal
Relationships/friends	4	0	4	4.5	Social
Health/personal	1	2	3	3.4	Personal
Marks	1	2	3	3.4	Academic
Relationships/family	1	1	2	2.3	Social
Future goals	1	1	2	2.3	Personal
Testing values	1	0	1	1.1	Personal
Interaction with professor/class	1	0	1	1.1	Academic
Personal problems	0	1	1	1.1	Personal
Fear of failure	0	1	1	1.1	Academic
Living arrangements	0	1	1	1.1	Social
Interaction with clinical staff	0	1	1	1.1	Clinical
Interaction with patients	0	1	1	1.1	Clinical
Preparation for exams	0	1	1	1.1	Academic

* ss = total sources of stress
(Some students perceived more than one source of stress as having equal impact.)

The December and April data on the subclassifications were combined into six workable groups: 1) Workload, 2) Clinical Instructor and Clinical Evaluation, 3) Clinical Care, Interaction with Patients, and Interaction with Clinical Staff, 4) Life Experiences, Future Goals, Testing Values, Personal Problems, and Health, 5) Relationships with Family, Friends, and Living Arrangements, and 6) Marks, Interactions with Professor/Class, Fear of Failure and, Preparation for Exams. Comparisons indicate that there is no significant change or difference in the results obtained from this class at the two periods of study (chi-square-2.64, df=5).

Although the participants were asked to document the most stressful experiences that they had had in the previous semester, several students documented more than one event and several events contained more than one source of stress. All data were used in this analysis and all sources of stress were tabulated. During the analysis of the data it was also found that six students indicated that they could not pinpoint one most stressful event but experienced a "build-up" of stresses. This is consistent with Lazarus' (1976, p.71) definition of stress and is not an unusual finding in this study.

In 66.2% of the anecdotes recorded, the stress was perceived as hindering learning. Symptoms described by the students as a xresponse to stressful experiences were similar to those identified in the literature. Students used words such as "worry", "pressure" or "anxiety" in their description of their subjective states. Other descriptions included more specific feelings such as anger and frustration; physical complaints such as illness and sleeplessness; and a variety of behaviours indicative of loss of emotional control such as yelling and crying. Tabulations of the frequencies with which various symptoms/feelings were reported are available from the authors and are not included here. It was felt that these frequencies do not add significantly to the discussion.

Discussion and Implications

High levels of stress interfere with the learning process. With increasingly complex technology, high acuity of patients in hospitals, and the knowledge explosion, the student is faced with multiple stressors at a time in her life -- early adulthood -- when the developmental challenges are intense.

The areas identified by the students as being the greatest sources of stress, i.e. Academic and Clinical, are under the control of educators. When one considers that "Workload", "Clinical Instructor", and "Clinical Evaluation" are intended to facilitate learning, it is ironic that in most of the anecdotes related, the students perceived them as having an opposite effect. Consideration should be given to the numbers and timing of assignments, papers, and examinations, to ensure that students are not overloaded. Efforts could be made to stagger deadlines,

combine assignments, and evaluate each assignment for its academic value in relation to the amount of effort required. Consultation among faculty members in different courses is a valuable way to determine what workload is being assigned.

The designation of members of faculty as academic advisors to assist students in planning and evaluating their workloads, and to help them in time management, study, and library research skills is an excellent strategy.

It seems that the relationship between clinical instructor and students is one which has a high potential for stress. Inasmuch as the clinical instructor is a significant and powerful figure in the student's perception, the instructor is also in an excellent position to provide support and encouragement to students.

It is important that the clinical instructor be sensitive to the needs of students. This facilitates learning and the development of sensitivity and compassion towards others, including patients. Clinical instructors should be clinical experts who have the respect of clinical staff and students. The style of clinical supervision should be characterized by ongoing, descriptive feedback, particularly of a positive nature. The need for such clinical supervision was mentioned by some students in this study and is confirmed in a study conducted by Mogan and Knox (1983, p.11), entitled "Students' Perceptions of Clinical teaching". Although negative criticism is frequently necessary, it should be delivered in terms which preserve the student's self-esteem and dignity. In Meisenhelder's (1982) discussion of the problems inherent in clinical evaluation, she emphasizes these points and offers additional strategies that can be utilized by the nursing instructor in her effort to create an optimal learning experience for the students.

Faculty members may also need to consider the institution of specific remedial measures for students who experience unusually stressful events. Such remedial measures may include student counselling, desensitization therapy, or stress management seminars. Strauss and Hutton (1983) propose a framework that can be utilized by clinical instructors to increase their awareness and sensitivity to the stress experienced by students in clinical learning. Their model, called the "Transactional Model" of stress, considers the individual's perceptual and cognitive processes, and the ability to cope, as playing a crucial role in the interpretation of events as being stressful and therefore their responses to such events. This model appears to be the first of its kind to address the issue of how to analyze a clinical situation from the student's perspective. Such a framework, together with information obtained regarding sources of stress in students, provides the clinical instructor with valuable guidelines for intervention.

The information gained from this study will be used to develop a questionnaire to determine sources and level of intensity of stress in nursing students enrolled in all four years of the generic

baccalaureate program. The researchers would then be able to make comparisons between the different years and present such information to the faculty members. Such information would enable the faculty to evaluate teaching strategies and make adjustments in order that the students may benefit from experiences that promote rather than hinder learning.

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RÉSUMÉ

Sources de stresse chez les étudiants de troisième année du baccalauréat en sciences infirmières

La présente étude a permis d'identifier les sources d'expériences stressantes chez des étudiants de troisième année inscrits au programme de baccalauréat en sciences infirmières à l'Université d'Alberta. Les chercheurs ont rencontré les étudiants au mois de décembre et au mois d'avril de l'année universitaire et leur ont demandé de rédiger un petit compte rendu de l'expérience la plus stressante qu'ils avaient vécue au cours du semestre précédent.

Dans 78,4 pour cent des cas, on a pu situer les sources de stress mentionnées par les étudiants dans le contexte universitaire et clinique. La charge de travail, une subdivision du secteur universitaire, comptait pour 34,1 pour cent de toutes les sources de stress identifiées; c'était également la source reconnue le plus souvent lors du sondage de décembre et d'avril auprès des étudiants.

D'autres sources de stress identifiées dans les comptes rendus des étudiants ont été liées aux aspects sociaux et personnels de leur vie; ces sources Étaient moins frÉquentes. Dans 66,2 pour cent des récits anecdotiques, les étudiants indiquaient que le stress gênait leur apprentissage.

Une étude de ce genre sur le stress fournit aux éducateurs des renseignements précieux concernant leurs étudiants. Ils peuvent se servir de ces données pour mettre au point des programmes de formation qui favorisent l'apprentissage et maîtrisent les facteurs susceptibles de causer une anxiété et un stress accrus pour les étudiants.