

107

COMMON STRESSFUL SITUATIONS ENCOUNTERED BY STUDENTS  
DURING THE FIRST CLINICAL NURSING COURSE

---

A THESIS 61

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING  
IN THE GRADUATE SCHOOL OF THE  
TEXAS WOMAN'S UNIVERSITY

COLLEGE OF  
NURSING

BY

MARY WALKER GUIDRY, B. S.

---

HOUSTON, TEXAS

December, 1970

## ACKNOWLEDGEMENTS

The investigator wishes to express her gratitude to the dean of the School of Nursing of the selected generic program, for permission to carry out the study; and to the students for their interest and participation in this study.

Expressions of appreciation are extended to Lois A. Alexanian, Assistant Professor of Nursing; Lucie C. M. Schults, Associate Professor of Nursing; and Catherine Temple, Assistant Professor of Nursing, Texas Woman's University, Houston Clinical Center, for their guidance and support in the research and writing of this thesis; and Dr. Richard Evans for his statistical consultation.

Sincere appreciation is extended to Gladys Nite, Professor, Texas Woman's University, Houston Clinical Center, for her invaluable contribution to my education.

Finally, the writer wishes to thank her family and friends, without whose encouragement and patience this study would never have been completed.

## TABLE OF CONTENTS

Chapter	
I.	Introduction . . . . . 1
	Statement of the Problem
	Assumptions
	Definitions
	Limitations
II.	REVIEW OF LITERATURE . . . . . 11
III.	METHODOLOGY . . . . . 34
	Type of Study
	Description of the Population
	Description of the Tools
	Data Collection
	Analysis of Data
IV.	PRESENTATION AND ANALYSIS OF DATA . . . . . 41
	Introduction
	Presentation and Discussion of Findings
	Summary of Findings
V.	SUMMARY, CONCLUSIONS AND RECOMMENDATIONS . . . . . 58
	BIBLIOGRAPHY . . . . . 64
APPENDICES	
A.	Students' Report of Critical Incidents . . . . . 70
B.	Taylor's Manifest Anxiety Scale . . . . . 71
C.	Formula Used for Statistical Computation . . . . . 76

## LIST OF TABLES

### Table

1. Degree of Anxiety and Frequency of Critical Incidents . . . . .	45
2. Significance of the Difference Between the Means of the Numbers of Critical Incidents Reported by Students with Low Anxiety and High Anxiety .	45
3. Frequency of Critical Incidents Reported Each Week for Six Weeks . . . . .	48
4. Categories of Stress Indicated by Respondents . .	48
5. Percentage Distribution of Categories of Stress .	49
6. Stress Related to Initial Clinical Experiences .	50
7. Stress Related to Interpersonal Relationships . .	52
8. Stress Related to Caring for Patients . . . . .	54
9. Stress Related to Feelings of Inadequacy . . . .	55
10. Stress Related to Fear of Failure . . . . .	56



CHAPTER I  
LIST OF ILLUSTRATIONS

Figure

1. Distribution of Population According to Frequency  
of Manifest Anxiety Scores . . . . . 43

## CHAPTER I

### INTRODUCTION

Although man has experienced anxiety since the beginning of time, it is only in recent years, with the growth of sophistication in the mental health professions and behavioral sciences, that we have begun to realize its enormous impact on human life. The list of phenomena in which anxiety plays a role is imposing. Nearly every identifiable form of pathology, physical and psychological is included.<sup>1</sup> Anxiety has a special role in the adjustive processes as both an indicator of response to stress and a precursor of further stress response.<sup>2</sup> Yet, there is no established body of theory that can be utilized for dependable predictions in relation to how people will act under specified conditions of environmental stress. Most behavioral scientists acknowledge that this constitutes a very serious lack in our present psychological knowledge, one which is being increasingly felt because of a growing practical need for dependable methods of building up stress tolerance.<sup>3</sup>

---

<sup>1</sup>Eugene E. Levitt, The Psychology of Anxiety (New York: The Bobbs-Merrill Company, Inc., 1967), p. 2.

<sup>2</sup>Charles D. Spielberger, Anxiety and Behavior (New York: Academic Press, Inc., 1966), p. 151.

<sup>3</sup>Irving L. Janis, Psychological Stress (New York: John Wiley and Sons, Inc., 1958), p. 5.

Only within the past twenty years or so have behavioral scientists begun to make systematic observations for the purpose of finding out how people feel, think and behave at times when they are facing emotional threats, pain, serious injury or death.<sup>4</sup> There is, however, growing appreciation of the important role mental health and emotional factors play in the academic and social adjustment of college students.

Even apparently well-adjusted students have their share of emotional difficulties. Heath and Gregory, in a study of male college sophomores, chosen on the basis of good health, satisfactory academic status, and overtly good social adjustment, reported that ninety per cent of their subjects raised questions or presented problems which were judged by the investigating staff as requiring professional aid for solution.<sup>5</sup>

Rust and Davie, in assessing the nature, frequency and severity of the personal problems of undergraduate college students, found that nearly eighty per cent of those who responded to their questionnaire reported that they had at least one personal problem during the current school year which bothered them "very often" or "fairly often"; thirty-five per cent of their sample indicated specifically that they

---

<sup>4</sup>Ibid., p. vii.

<sup>5</sup>C. W. Heath and L. W. Gregory, "Problems of Normal College Students and Their Families," School and Society, LXIII (May, 1946), 355-358.

had been troubled often by "nervousness".<sup>6</sup>

These findings are consistent with general observations that late adolescence in the American culture is a time of "storms and stress" and a period of unusual difficulty in adjustment.<sup>7</sup> The problems and the needs of the nursing student are similar to those of all late adolescents but with added problems and needs arising out of the environment of the school of nursing and the clinical situation.<sup>8</sup>

To determine the nature of conflicts experienced by nursing students during their first clinical nursing course, Hienemann analyzed data from a study of the integration of psychiatric concepts in the basic nursing curriculum and from students' diaries. The four major conflicts identified from these two sources were: (1) feelings of incompetence resulting from unrealistic expectations of performance; (2) negative feelings toward patients and patient care versus expectations of acceptance of all people and situations; (3) insights into motives of their own behavior; and (4) feelings of embarrassment, disgust, and fear.<sup>9</sup>

---

<sup>6</sup>Ralph M. Rust and James S. Davie, "The Personal Problems of College Students," Mental Hygiene, XLV (April, 1961), 250.

<sup>7</sup>C. W. Heath and L. W. Gregory, "Problems of Normal Students and Their Families," School and Society, XLIII (May, 1946), 356.

<sup>8</sup>Loretta E. Heidgerken, Teaching and Learning in Schools of Nursing (Philadelphia: J. B. Lippincott Company, 1965), p. 19.

<sup>9</sup>Edith M. Heinemann, "The Conflicting Life of a Student," Nursing Outlook, XII (March, 1964), 36.

One of the most comprehensive studies of nursing students was done by Fox and associates. Their research design involved the collection of descriptions of satisfying and stressful situations from students in twenty-three nursing schools over one academic year. They suggested that satisfaction in nursing education comes primarily from the nursing aspects, from the opportunities to care for the patients, while the stresses in nursing come primarily from the educational aspects. In addition, they also found these students had to contend with personal and social problems related to maturation.<sup>10</sup> Such conflicts can affect adversely the student's educational growth and progress and may lead to her decision to withdraw from the program. Teal and Fabrizio reported that approximately one-third of the total number of students who enter nursing school do not complete the program. Academic failure appears to be the greatest threat to graduation from baccalaureate programs, accounting for thirty-five per cent of withdrawals during one year from the twenty-two schools studied. Of the 109 academic drop outs, fifty per cent "felt emotional strain due to pressures and tensions in the school."<sup>11</sup>

---

<sup>10</sup>David J. Fox, et al., "Correlates of Satisfaction and Stress with Nursing School Experiences," Nursing Research, XII (Apring, 1963), 86.

<sup>11</sup>G. E. Teal and R. A. Fabrizio, Causes of Students Withdrawal from Nurse Training, quoted in Barbara C. Rotthamp, "Attrition Rates in Basic Baccalaureate Nursing Programs," Nursing Outlook, XVI (June, 1968), 45.

Some authorities believe that a certain amount of psychological stress (anxiety) will produce effective learning while others contend that anxiety impedes learning in direct proportion to its intensity. There is no formula for the precise amount of anxiety which is conducive to optimum learning for each student. Part of the learning process is understanding the anxiety and how to deal with it.

The studies of Buss,<sup>12</sup> Deese<sup>13</sup> and Mandler,<sup>14</sup> utilizing the Manifest Anxiety Scale as a measure of anxiety proneness, revealed that performance in a number of situations is related to the individual's level of anxiety. Perhaps the most important implications from these findings is that it is possible to identify members of the college population who, because of their emotional state, are not likely to function at levels commensurate with their intellectual potential. Assessment of the emotional state of students in schools of nursing would seem to be of particular importance since these students will, of necessity, perform under conditions of environmental stress. By identifying highly anxious students

---

<sup>12</sup>Arnold H. Buss, et al., "The Measurement of Anxiety in Clinical Situations," Journal of Consulting Psychology, XIX (1955), 125-129.

<sup>13</sup>James Deese, Richard S. Lazarus, and James Keenan, "Anxiety, Anxiety-Reduction, and Stress in Learning," Journal of Experimental Psychology, XLVI (1953), 55-56.

<sup>14</sup>George Mandler and Seymour B. Sarason, "A Study of Anxiety and Learning," Journal of Abnormal Social Psychology, XLVII (1952), 166-173.

at the earliest possible time, and offering them appropriate counseling and carefully planned learning experiences, the academic attrition among able students who fail because of difficulties in their emotional adjustment could be reduced.

### Statement of the Problem

The purposes of this study were: (1) to identify common stressful situations encountered by students during the first clinical nursing course in a generic program at a state supported college, and (2) to determine if there were significant relationships between anxiety proneness (measured by Taylor's Manifest Anxiety Scale) and the number of stressful situations reported.

### Assumptions

Related research in this area concerning stress with experiences in the nursing curriculum permitted the investigator to assume that:

- 1) Nursing students do experience stress during their first clinical course and that stress peaks are connected with the anticipation of and first contact with a situation.<sup>15</sup>
- 2) One's ability to focus on a situation is directly related to his level of anxiety at that time.<sup>16</sup>

---

<sup>15</sup>David J. Fox, et al., "Correlates of Satisfaction and Stress with Nursing School Experience," Nursing Research, XII (Spring, 1963), 87.

<sup>16</sup>J. A. Easterbrook, "The Effect of Emotion on Cue Utilization and the Organization of Behavior," Psychological Review, LXVI (May, 1959), 185.



3) There are many factors in both the physical environment and its emotional tone which reinforce or interfere with learning.<sup>17</sup>

4) There will be a significant difference between the number of stress producing situations reported by highly anxious students and their slightly anxious peers.<sup>18</sup>

5) The findings of this study will have practical implications significant to nursing education.<sup>19</sup>

### Definition of Terms

In this study the following terms were operationally defined:

Critical incident technique. Critical incident technique as designed by Flanagan and defined by Fiver and Gosnell as "a direct, factual approach for gathering information. . . a collection of information based on direct observation or reporting."<sup>20</sup>

---

<sup>17</sup>Loretta E. Heidgerken, Teaching and Learning in Schools of Nursing (Philadelphia: J. B. Lippincott Company, 1965), p. 113.

<sup>18</sup>Charles Spielberger, "The Effects of Manifest Anxiety on the Academic Achievement of College Student," Mental Hygiene, Vol. 46 (1962), 424.

<sup>19</sup>Fox, "Correlates of Satisfaction of Stress," p. 87.

<sup>20</sup>Grace Fivers and Doris Gosnell, Nursing Evaluation: The Problem and the Process (New York: The Macmillan Company, 1966), p. 10



Incident. "Any observable bit of human behavior sufficiently complete in itself to permit inference to be made about the person performing the act."<sup>21</sup>

Critical incident. "In order to be critical, an incident must make a significant difference in the outcome of the behavior; it must contribute either positively or negatively to the accomplishment of the aims of the activity."<sup>22</sup>

Manifest anxiety. Those behaviors or characteristics of an individual that lead you to classify him as: (a) nervous (i.e., mannerisms such as nail biting, knuckle-cracking, chain smoking; profuse perspiration); (b) tense (i.e., unable to relax; continually working under pressure, hand trembling, tics); (c) easily embarrassed (i.e., readily blushes, stammers); (d) worried (i.e., apprehensive over what will happen from day to day; doubts self continually).<sup>23</sup>

Manifest Anxiety Scale, (MAS). The MAS is a self-administering test for use with college and adult groups. This test was devised by J. A. Taylor and consists of fifty items from the Minnesota Multiphasic Personality Inventory which were judged by clinical psychologists as significant of manifest or overt anxiety.<sup>24</sup>

---

<sup>21</sup>Ibid.

<sup>22</sup>Ibid., p. 16.

<sup>23</sup>Donald R. Hoyt and Thomas M. Magoon, "A Validation Study of the Taylor Manifest Anxiety Scale," Journal of Clinical Psychology, X (1954), 357.

<sup>24</sup>Janet A. Taylor, "A Personality Scale of Manifest Anxiety," The Journal of Abnormal and Social Psychology, XLVIII (1953), 285-290.

Psychological stress. Changes in the environment which typically induced a high degree of emotional tension (in the average person) and interferes with normal patterns of behavior.<sup>25</sup>

Stress situation. A situation in which adjustment is difficult or impossible but in which motivation is very strong.<sup>26</sup>

Nursing Intervention I. A six semester hour, twelve week course designed to introduce the student to the clinical aspects of nursing. This course included nine weeks of clinical laboratory experiences during which time the students learned basic techniques of nurse-patient interaction and beginning nursing skills.

#### Limitations of the Study

The data gathering approach selected was based upon descriptions of stressful situations by individuals who participated in the situations. Further limitations were due to the participants failure to report situations of which they were aware but unwilling to report and to those situations in which the individuals responded without conscious awareness.

---

<sup>25</sup>Irvin L. Janis, Psychological Stress (New York: John Wiley and Sons, Incorporated, 1953), p. 12.

<sup>26</sup>Ibid., p. 13.

The findings of the study applied to the population sampled and generalizations beyond the research setting were limited due to individual differences.

## CHAPTER II

### REVIEW OF LITERATURE

An understanding of the variables which affect skilled performance when subjects are confronted by situational stressors is of great theoretical and practical importance.<sup>1</sup> There is general concensus that learning is affected by variables which can be broadly classified as teacher, learner, and situational. The teacher variables most frequently studied are attributes such as attitudes and personal characteristics; learner variables that have been extensively studied include levels of aspiration and motivation, manifest anxiety, general as well as specific intelligence, aptitude, age, and sex. Situational variables, defined as all of the elements external to the teacher and learner that have a potential influence on learning, have also received considerable investigation.<sup>2</sup>

In this study, the review of literature has been classified into three groups: those which deal with the effect of stress on performance; the effects of manifest

---

<sup>1</sup>Virginia S. Cleland, "The Effect of Stress on Performance," Nursing Research, XIV (Fall, 1965), 292-298.

<sup>2</sup>Marlene Kramer, et al., "Effect of Teacher and Situational Variables on Student Achievement," Nursing Research, XVII (January-February, 1968), 10-18.

anxiety on academic achievement; and, the effect of situational stressors on performance of nurses.

### The Effect of Stress on Performance

In the past decade there have been many studies conducted to determine the nature and processes of stress reactions.<sup>3</sup> In general, it has been found that subjects in stress situations show characteristic changes in many aspects of psychological functioning.<sup>4</sup> However, the results of studies investigating the effect of psychological stress on skill performance are characterized by semantic confusion and contradictory findings.<sup>5</sup>

With the exception of extreme, sudden life-threatening situations, it may be concluded that no stimulus is a stressor to all individuals exposed to it. The earlier assumption of a common all-or-none psycho-physiological stress state is untenable in the face of evidence to the contrary.<sup>6</sup>

---

<sup>3</sup>David Mechanic, Students Under Stress (New York: The Free Press of Glencoe, 1962), p. v.

<sup>4</sup>Harold Basowitz, et al., Anxiety and Stress (New York: McGraw-Hill Book Company, Inc., 1955), p. 10.

<sup>5</sup>Richard S. Lazarus, James Deese and Sonia F. Olser, "The Effects of Psychological Stress Upon Performance," Psychological Bulletin, XLIX (1952), 293-316.

<sup>6</sup>Mortimer H. Appley and Richard Trumbull, Psychological Stress: Issues in Research (New York: Appleton Century Crofts, 1967), p. 7.

Miller and associates concluded that "in a specific situation it becomes necessary to recognize the many different kinds of stress."<sup>7</sup> Lazarus, Deese, and Osler concluded that the effect of stress on performance are not general, but "will depend upon what the individual expects or demands of himself."<sup>8</sup> Easterbrook<sup>9</sup> and Sarason<sup>10</sup> pointed out that the effects of stress conditions on cognitive activity and skilled performance are complex; generalizations are difficult to formulate and those formulated must be heavily qualified. For example, Lazarus and Erikson generalized that "sometimes performance is impaired, sometimes it is facilitated, sometimes there is increased inter-individual variance."<sup>11</sup> Similar findings were reported by Sarason,<sup>12</sup> Martin,<sup>13</sup> and

---

<sup>7</sup>James Miller, A Bibliography for the Development of Experimental Stress-Sensitive Tests for Predicting Performance in Military Tasks (Washington, D. C.: Psychological Research Association, 7), p. 324.

<sup>8</sup>Lazarus, "Effects of Psychological Stress Upon Performance," p. 296.

<sup>9</sup>J. A. Easterbrook, "The Effects of Emotion on Cue Utilization and the Organization of Behavior," Psychological Review, LXVI (May, 1959), 183-201.

<sup>10</sup>Irving G. Sarason, "Empirical Finding and Theoretical Problems in the Use of Anxiety Scales," Psychological Bulletin, LVII (1960), 403-415.

<sup>11</sup>Richard Lazarus and Charles W. Erikson, "Psychological Stress and Its Personality Correlates: Part I, The Effects of Failure Stress Upon Skilled Performance," Journal of Experimental Psychology, XLIII (1952), 100-105.

<sup>12</sup>Sarason, "Empirical Findings and Problems in Use of Anxiety Scales," pp. 403-415.

<sup>13</sup>Barclay Martin, "The Assessment of Anxiety by Physiological Behavior Measures," Psychological Bulletin, LVIII (1961), 234-255.

Winkel and Sarason.<sup>14</sup> These studies revealed that the effects of stress on performance are influenced by a number of factors, examples of which are the nature of the threat stimulus, the motivation and personalities of the subject, the degree of threat, and experimenter--subject social interaction.

Martin, in his review of the experimental literature, stated:

Thus, there appear to be two rather loose empirical generalizations that can be reached on the basis of the studies reviewed: (a) that tasks involving relatively stronger and more numerous competing responses are more subject to the impairing effects of stress, and (b) increasing stress results in improved performance up to a point and impairment thereafter.<sup>15</sup>

The latter point of Martin's statement is very similar to the Yerkes-Dodson law, which states that a curvilinear relationship exists between levels of fear, conceptualized as a drive, and level of performance.<sup>16</sup> The study of Burgess and Hokenson,<sup>17</sup> using autonomic criteria of high drive, supported this empirical law, as has the study by Farber and

---

<sup>14</sup>G. H. Winkel and I. G. Sarason, "Subject Experimenter and Situational Variables in Research on Anxiety," Journal of Abnormal Social Psychology, LXVIII (1964), 601-608.

<sup>15</sup>Martin, "Assessment of Anxiety," pp. 234-255.

<sup>16</sup>Robert M. Yerkes and John D. Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit-Formation," Journal of Comparative Neurology, Psychology, XVIII (1908), 459-482.

<sup>17</sup>M. Burgess and J. E. Hokenson, "Effect of Increased Heart Rate on Intellectual Performance," Journal of Abnormal Social Psychology, LXVIII (1964), 85-91.

Spence<sup>18</sup> using pencil and paper indicators of high drive. In effect, moderate amounts of motivation or threat facilitate cognitive functioning while strong amounts impair it. The law further states that with an increase in difficulty of task there is a decrease in level of motivation for optimum performance of that task.

As a possible explanation for the Yerkes-Dodson law, Easterbrook advanced the concept of "range of cue utilization" which he defined as "the total number of environmental cues in any situation that an organism observes, maintains an orientation toward, responds to, or associates with a response."<sup>19</sup> Korchin<sup>20</sup> also found that anxiety disorganizes the utilization of stimulus cues in learning and performance by narrowing the range of attention and limiting perceptual-cue utilization.

Constriction of the perceptual field was demonstrated experimentally in a study by Postman and Bruner.<sup>21</sup> Subjects were asked to report words that were flashed on a screen too

---

<sup>18</sup>I. E. Farber and Kenneth W. Spence, "Complex Learning and Conditioning as a Function of Anxiety," Journal of Experimental Psychology, XLV (1953), 120-125.

<sup>19</sup>J. A. Easterbrook, "The Effects of Emotion on Behavior," p. 184.

<sup>20</sup>Sheldon J. Korchin, Anxiety and Cognition, quoted in Richard S. Lazarus, Psychological Stress and the Coping Process (New York: McGraw-Hill Book Company, 1966), p. 357.

<sup>21</sup>L. Postman and I. S. Bruner, "Perception Under Stress," Psychological Review, LV (1948), 314-324.



fast for accurate recognition. The exposure gradually increased in duration so that correct recognition was ultimately possible. Guesses about the stimulus word were solicited on every exposure even if the subject did not recognize the syllable presented. Some subjects were harassed and criticized as to their performance. Not only was the perceptual performance of the subjects under stress poorer than for those subjected to neutral conditions, but their prerecognition guesses also showed a more limited range of hypotheses than the prerecognition guesses of the nonstressed subjects. Their thinking tended to be narrowed and stereotyped by the experimentally induced stress.

Extending this theory further, Easterbrook<sup>22</sup> and Korchin<sup>23</sup> postulated that in anxiety of threat, constriction of perceptions occurs because only things which appear to be relevant to the danger are attended to. This represents a kind of motivated narrowing of attention rather than a disruption. Easterbrook views were summarized as follows:

The effect of emotion on behavior has been discussed in reference to the empirically derived generalization that the number of cues utilized in any situation tends to become smaller with increase in emotion.

On some tasks reduction in the range of cue utilization improves performance. Irrelevant cues are excluded and drive is then said to be organizing or motivating. In other tasks, proficiency demands the use of a wide range of

---

<sup>22</sup>Easterbrook, "The Effects of Emotion on Behavior," pp. 183-201.

<sup>23</sup>Korchin, "Anxiety and Cognition," p. 358.

cues, and drive is disorganizing or emotional. There seems to be an optimal range of cue utilization for each task.<sup>24</sup>

A related point was made by Fenz in commenting on the disruption of task performance observed in parachute jumpers anticipating a jump. His comments on the possible facilitating and disruptive effects of narrowing the focus of attention under stress were as follows:

It may thus be concluded that stress influences performance via several different mechanisms. Being sensitized to a task may facilitate performance in that task to the detriment of the performance of other tasks. If the focus is to be restricted to a particular aspect of a task, other aspects of the task will suffer, and the performance will decline. Thus, the increase in focus activity at high levels of stress can reach a point of deficit. An opposite phenomenon, that of inadequate focus and an attendant inability to respond differentially to relevant and irrelevant cues is also apt to occur at the highest levels of stress.<sup>25</sup>

Such motivated narrowing of attention was also demonstrated in an experiment by Babrick, Rankin, and Fitts.<sup>26</sup> The experiment involved the performance of a peripheral task simultaneously with the performance of a central task. The

---

<sup>24</sup>Easterbrook, "The Effects of Emotion on Behavior," pp. 197-198.

<sup>25</sup>W. D. Fenz, "Conflict and Stress as Related to Physiological Activation and Sensory, Perceptual, and Cognitive Functioning," Psychological Monograph, No. 8, LXXVIII (1964), 31-32.

<sup>26</sup>H. Babrick, R. E. Rankin and P. M. Fitts, The Effect of Motivation Upon Peripheral Perception During the Performance of a Central (Psychomotor) Task. (Lackland Air Force Base, San Antonio, Texas: Human Resources Research Center Bulletin, 1952), pp. 52-54.

former involved such intermittent performance as watching for peripheral lights and turning them out by means of switches, or checking an instrument dial and returning the pointer to the center whenever it was off. The central task was always a continuously changing one consisting of tracking a target and keeping on the target as long as possible.

Two conditions of motivation were employed. Subjects in the low motivation condition believed they were getting another practice trial on the task. The highly motivated condition involved cash payments scaled in accordance with performance levels. The conditions of motivation were varied for both the central and peripheral tasks. The results are summarized by the authors as follows:

The experimental results are in good agreement with the prediction that a condition of high motivation facilitates performance of a central (tracking) task but, in general, interferes with performance of peripheral tasks. The detrimental results of the bonus upon peripheral performance was most pronounced on the peripheral task in regard to which there was no expectation of reward, less pronounced on the peripheral task of reacting to light with somewhat greater expectation of reward, and least pronounced on the peripheral task in which expectation of reward was greatest.<sup>27</sup>

These findings do not rule out the disruptive concepts of threat or anxiety but they do demonstrate that the narrowing of attention under threatening conditions could be a motivational effect.

---

<sup>27</sup>Ibid., p. 7.

The studies of Frank<sup>28</sup> and Cohen<sup>29</sup> on "level of aspiration" have shown that unrealistically low aspiration levels are based on self-protective mechanisms against failure. Extending this reasoning, other types of defensive behavior could have either damaging or facilitating effects on performance, be they denial, projection, isolation, rationalization, or some other form. Such forms of coping orient the individual toward what must be done in the performance situation to protect his self-esteem, and the performance outcome will probably reflect the posture that is adopted. There is, however, no well-established theoretical or empirical constructs concerning the performance consequences of different defensive strategies.<sup>30</sup>

Performance decrement can be brought about in other ways than by defense. For example, the individual may be badly "shaken up" by the threat of failure and suffer severe anxiety with which he cannot cope by use of defensive strategies. He may become preoccupied with thoughts about his inadequacy and its consequences, or he may become tremulous

---

<sup>28</sup>J. D. Frank, "Some Psychological Determinants of Levels of Aspiration," American Journal of Psychology, XLVII (1935), 285-293.

<sup>29</sup>Louis D. Cohen, "Level of Aspiration Behavior and of Adequacy and Self Acceptance," Journal of Abnormal Social Psychology, XLIX (1954), 84-86.

<sup>30</sup>Richard S. Lazarus, Psychological Stress and the Coping Process (New York: McGraw-Hill Book Company, 1966), pp. 360-362.

and confused. Desperate efforts to improve are to no avail against the interfering effects of the threat reactions.<sup>31</sup>

This is essentially the explanation adopted by Sarason, Mandler, and Craighill.<sup>32</sup> Task-irrelevant responses are stimulated by the threat.<sup>33</sup>

A still different theory is that the threat of failure mobilizes a search for more appropriate forms of behavior that will work better. The threat provides information that previous approaches were not adequate. Attention is redirected from well-established habits of performance to the search for new types of techniques. These may or may not result in improvement. Performance may temporarily suffer, and in some instances, a better approach may finally be achieved.<sup>34</sup>

#### The Effects of Manifest Anxiety on Academic Achievement

The investigator reviewed studies which clearly demonstrate that emotional adjustment and intellectual capacity are important factors in the academic achievement of college students. Experimental investigations suggest that anxiety

---

<sup>31</sup>Ibid.

<sup>32</sup>Seymour B. Sarason, George Mandler, and P. C. Craighill, "The Effect of Differential Instructions on Anxiety and Learning," Journal of Abnormal Social Psychology, XLVII (1952), 561-565.

<sup>33</sup>Lazarus, Psychological Stress and Coping, p. 362.

<sup>34</sup>Irving L. Berger and Alvin R. Sutker, "The Relationship of Emotional Adjustment and Intellectual Capacity to Academic Achievement of College Students," Mental Hygiene, XL (January, 1956), 65-77.

detrimentally affects many cognitive processes such as problem-solving, incidental learning, ability to communicate, and performance on standard intelligence tests.<sup>35</sup> But, when investigations of the relationship between measures of student's anxiety or emotional adjustment and academic achievement are examined, the findings are equivocal and inconsistent.<sup>36</sup>

For example, Ruebush<sup>37</sup> has reported that anxiety prone children solved more problems as long as the task presented a challenge, while Korchin and Levine<sup>38</sup> have found that unstable and maladjusted students did less well than their more stable contemporaries. Other studies have reported no difference in the emotional adjustment scores of academic underachievers and overachievers.<sup>39</sup> Such inconsistencies have been attributed to inadequacies in the variety of personality tests which have been used, differences between the student populations which

---

<sup>35</sup>Eugene E. Levitt, The Psychology of Anxiety (New York: The Bobbs-Merrill Company, Inc., 1967), p. 152.

<sup>36</sup>Charles D. Spielberger, "The Effects of Manifest Anxiety on the Academic Achievement of College Students," Mental Hygiene, XLVI (1962), 421.

<sup>37</sup>B. K. Ruebush, "Interfering and Facilitating Effects of Test Anxiety," Journal of Abnormal and Social Psychology, LX (1960), 205-212.

<sup>38</sup>Sheldon J. Korchin and S. Levine, "Anxiety and Verbal Learning," Journal of Abnormal and Social Psychology, LIV (1957), 234-240.

<sup>39</sup>R. M. Rust and F. J. Ryan, "The Relationship of Some Rorschach Variable to Academic Behavior," Journal of Personality, XXI (June, 1953), 441-456.



have been studied, and varying criteria of academic success.<sup>40</sup>  
Also, it has been noted that methods of data analysis have frequently not taken into account the possibility that a given personality variable may have different effects for persons with differing intellectual endowments.<sup>41</sup>

Pursuing the above point, Spielberger and Katzenmeyer examined the relationship between anxiety and general scholastic achievement at the college level. They divided a large group of students into three subgroups on the basis of intelligence test scores: the lowest twenty per cent, the middle sixty per cent, and the highest twenty per cent. They then computed the correlation between grade-point averages (GPA) as a measure of college achievement and scores on the Manifest Anxiety Scale. They found no relationship between GPA and anxiety for the highest and lowest intelligence groups, and a small, negative relationship in the middle intelligence quotient (I.Q.) group.<sup>42</sup>

The grades of low aptitude students were uniformly low, irrespective of their anxiety level; poor academic performance apparently resulted from their limited ability.

---

<sup>40</sup>Charles D. Spielberger and W. G. Katzenmeyer, "Manifest Anxiety, Intelligence, and College Grades," Journal of Consulting Psychology, XXIII (1959), 278.

<sup>41</sup>Dale B. Harris, "Factors Affecting College Grades: A Review of the Literature, 1930-1937," Psychological Bulletin, XXXVII (March, 1940), 125-166.

<sup>42</sup>Spielberger and Katzenmeyer, "Anxiety, Intelligence and Grades," p. 278.

For the superior students, grades were high apparently independent of anxiety levels. Only in the middle range of intelligence, where capacity is neither limited nor extensive, has anxiety any effect on academic achievement.<sup>43</sup>

This point is further illustrated in another study by Spielberger, in which he followed up anxiety-prone college students after three years. The findings of this study provided evidence of the detrimental effects of anxiety on college grades and dropout rates resulting from academic failure. He found that more than twenty per cent had dropped out of school. But of those in the highest I. Q. group, only nine per cent had dropped out.<sup>44</sup>

The effect of anxiety-proneness on problem solving ability is illustrated in a study by Harleston.<sup>45</sup> The subjects were given two and one-half minutes to solve each of a series of easy and hard five-letter anagrams ("abele" is easy; "greerm" is hard). The breakdown into anxiety groups was accomplished by means of a modified form of the Test Anxiety Questionnaire. It was found that there is a linear relationship to anxiety, those of the lowest proneness

---

<sup>43</sup>Ibid.

<sup>44</sup>Spielberger, "Manifest Anxiety and Academic Achievement," p. 421.

<sup>45</sup>B. W. Harleston, "Test Anxiety and Performance in Problem-Solving Situations," Journal of Personality, XXX (1962), 557-573.



solving the most anagrams, those of the medium group, the next most, and those of the highest proneness, the smallest number.

The effect of anxiety on incidental learning is suggested by an experiment by Silverman.<sup>46</sup> The focused learning task consisted of moving a lever whenever a line of appropriate lengths appeared on a screen before the subject. During this performance, a muted voice in the background recited twenty-two syllable words. No attention was directed to this list by the experimenter; learning these words was not presented as part of the experimental situation.

One group of subjects was continuously threatened during performance by the possibility of an electric shock administered to the wrist and ankles. Another group performed under neutral conditions. Subsequent measurement disclosed that the unstressed group could recall almost twice as many of the background words as the threatened group. These findings appear to illustrate that anxiety had an interfering effect on incidental learning.<sup>47</sup>

Gynther attempted to determine the effect of anxiety proneness and stress on the ability to communicate. She identified high and low anxious groups by means of the Welch

---

<sup>46</sup>R. E. Silverman, "Anxiety and the Mode of Response," Journal of Abnormal and Social Psychology, XLIX (1954), 538-542.

<sup>47</sup>Ibid.

A. Foster Scale and objectively measured their ability to communicate verbally in a neutral and in a stress situation. Stress was induced by means of instructions calculated to arouse both test anxiety and evaluation apprehension.<sup>48</sup>

The task required each subject to answer eleven questions about himself. The questions were somewhat vague and presumably difficult to answer. Responses were tape-recorded and analyzed by a rating method that provided a statistically reliable index of "communicative efficiency" (CE). CE is based on a breakdown of each response into units; these units were then characterized by expert judges according to the degree to which each was relevant to the stimulus question.<sup>49</sup>

Gynther found that the stress condition reduced CE for both groups of subjects. In both conditions, the low anxious group communicated significantly more effectively, demonstrating about seventeen per cent more communicative efficiency than the high anxious group.<sup>50</sup>

Sarason and Mandler have demonstrated that anxiety is manifested by college students in conventional classroom test situations to such an extent that the general level of academic

---

<sup>48</sup>R. A. Gynther, "The Effects of Anxiety and of Situational Stress on Communicative Efficiency," Journal of Abnormal and Social Psychology, LIV (1957), 274-276.

<sup>49</sup>Ibid.

<sup>50</sup>Ibid.

performance is impaired. Strong motivations to achieve high grades appear to contribute directly to the adjustment difficulties of many students whose anxiety about failure is intensified by the academic situation.<sup>51</sup>

Wright, studying the effects of environmental pressures in the university system in relation to student stress and achievement, found that as satisfaction with self increased the amount of stress perceived in the environment tended to decrease and as this occurred achievement was enhanced.<sup>52</sup>

It is apparent that college life is characterized by conditions and expectations which may heighten anxieties already present in students or may induce new anxieties. To the extent that students with heightened anxieties can be identified early and offered appropriate counseling and guidance, it is possible that academic casualties and, in some cases, emotional disorders can be prevented.<sup>53</sup>

The Effects of Situational Stressors  
on Performance of Nurses

Brouerman and Lazarus have grouped situations producing stress into two principle classes: (a) ego-threatening

---

<sup>51</sup>Seymour B. Sarason and George Mandler, "Some Correlates of Test Anxiety," Journal of Abnormal and Social Psychology, XLVIII (1953), 447-448.

<sup>52</sup>J. J. Wright, "Environmental Stress Evaluation in a Student Community," Journal of American College Health, XII (February, 1964), 325-336.

<sup>53</sup>Spielberger, "Manifest Anxiety and Academic Achievement," p. 421.

stresses, and (b) cognitive-interference stresses.<sup>54</sup> Ego-threatening stress may be produced by presenting the subject with an unsolvable task; a set of false norms with which to compare his performance; or, by berating his performance while he is engaged in the task.

Cognitive-interference stress refers to the effects of techniques which create conflicting demands upon the subject's intellectual processes such as distractions, interruptions, time pressure, or requirements to do too many things simultaneously. In this review the situational stressors were of the type which could be expected to produce cognitive interference.<sup>55</sup>

It is believed that the two independent variables, 1) the need for special approval (a motivational variable) and 2) the stressors of the situation in which the subject is functioning (an environmental variable), may interact in an additive manner.<sup>56</sup> In Cleland's field experiment, the two independent variables were: 1) need for social approval as measured by the Marlowe-Crowne Social Desirability Scale, and 2) situational stressor condition as measured by the physical

---

<sup>54</sup>D. M. Brouerman and R. S. Lazarus, "Individual Differences in Task Performance Under Conditions of Cognitive Interference," Journal of Personality, XXVI (March, 1958), 94-105.

<sup>55</sup>Ibid.

<sup>56</sup>Virginia S. Cleland, "The Effects of Stress on Performance," Nursing Research, XIV (Fall, 1965), 292-298.

dependency of the patients, nursing staff available, time of testing, and type of work assignment of the nurse. Two dependent measures of behavior were: 1) performance on a nursing achievement test, and 2) performance on a social interaction test.<sup>57</sup>

Four graduated situational stressor conditions were defined and, after random assignment of subjects, fifteen different nurses ( $N = 60$ ) were tested while working under each condition. The fifteen subjects assigned to a particular stressor condition were further divided into three groups, each composed of five subjects with high, medium or low need for social approval.<sup>58</sup>

Support was found for the Easterbrook hypothesis that increased motivation decreases the range of cue utilization. Interaction of the variables, need for social approval and situational stresses, were found on the Nursing Achievement Test. Need for social approval produced a significant linear trend and that of the stressor conditions, a significant quadratic trend.<sup>59</sup>

Two years later Cleland conducted a similar study to assess the effects of stress on thinking. This study showed that thinking quality deteriorates as the quantity of

---

<sup>57</sup>Ibid.

<sup>58</sup>Ibid.

<sup>59</sup>Ibid.

environmental stressors increases; that deterioration is greater when the type thinking is more difficult; and that, if the factor of difficulty is held constant, deterioration is greater when the task involves using the broader range of cues present in social interaction.<sup>60</sup>

This finding, that social interaction deteriorates under mounting situational stress, has great significance for nursing. To this point Cleland commented:

To interact effectively with patients and staff, a nurse must perceive the cues necessary to distinguish the common and the uncommon elements regarding any given problems or request. If she is deluged by peripheral cues about other tasks to be performed, she may fail to perceive the cues that are most relevant to the patient with whom she interacts. For example, she might respond vaguely about "restricted activities for cardiac patients" rather than in the specific fashion appropriate for the patient with mild arteriosclerotic heart disease who is head of a family, lives in a one-floor suburban house, and manages a hardware store located three blocks from his home. Only when nurses have time to distinguish the cues related to patient's welfare can they be expected to offer individualized care.<sup>61</sup>

Pursuing the problem of situational stresses along a slightly different line, Kramer and associates studied the effects of one teacher and two situational variables on student achievement. The teacher variable was clinical expertness as measured by background preparation and experience. The situational variables were continuity of instructor

---

<sup>60</sup>Virginia S. Cleland, "Effects of Stress on Thinking," American Journal of Nursing, LXVII (January, 1967), 103-111.

<sup>61</sup>Ibid.

and contiguity of instruction. There were no significant differences in achievement scores among students who had three different clinical experience schedules designed to assess the effectiveness of contiguity of instruction, expertness of instruction, and continuity of instruction on student achievement. One of the major findings of this study was generated by the students' subjective evaluations. Regardless of what type of experience schedule they had had, significantly more of them liked and preferred the schedule characterized by contiguity of instruction and expertness of instructor than either of the other two schedules. The three major advantages of a contiguous experience with expert instruction as seen by the students were: 1) minimal transportation difficulties, convenient, less time consuming; 2) easier to compare and contrast experiences and problems across age continuum; 3) variety of instructors provided varied ideas and approaches. Results of this study have implications for teacher education, planning of student clinical experience, and selection of agencies for student experience.<sup>62</sup>

To determine the amount of stress and satisfaction of certain aspects of the curriculum that nursing students experience, David J. Fox, et al., studied three thousand students in twenty-three basic schools of nursing. Some of

---

<sup>62</sup>Marlene Kramer, et al., "Effect of Teacher and Situational Variables on Student Achievement," Nursing Research, XVII (January-February, 1968), 10-18.



the data presented from this study showed a consistent pattern: stress peaks are associated with the anticipation of and first contact with a situation. In terms of the informal evaluation of clinical ability, the most dreadful incidents were those involving criticism. The most satisfying incidents involved praise of the students' clinical ability.<sup>63</sup>

Fox, et al., reported that nursing students generally had a favorable reaction to their relationship with people in the hospital but that students were frequently placed in conflict situations because of the different expectations held with regard to their performance by hospital personnel in various positions.<sup>64</sup> These workers felt that there was a lack of communication or a lack of agreement between instructional and hospital personnel in regard to the nursing students' performances. They also reported that two-thirds of the students in diploma programs and two-fifths of the students in degree programs studied experienced conflict between what they were taught in class and what they were asked to do on the hospital unit.

The clinical experience provides a dominant and differentiating theme for nursing students in their report of stresses and satisfactions when compared with non-nursing

---

<sup>63</sup>David J. Fox, et al., "Correlates of Satisfaction and Stress with Nursing School Experience," Nursing Research, XII (Spring, 1963), 87.

<sup>64</sup>David J. Fox, et al., "The Nursing Student in the Hospital Setting," Hospitals, XXXVII (July, 1963), 50-56.



students. However, it is suggested that problems and satisfactions in the personal, social, and academic areas are similar in content and detail for both nursing and non-nursing students and these are common to the developmental tasks of young women in post-high school educational programs.<sup>65</sup>

Contrasting American nurse attitudes with British nurse attitudes toward work experience, Kramer discovered that there were commonalities in attitudinal formation towards practice and ideals that crossed the boundaries of nations. Significant findings of satisfactions and stress indicated that regardless of national systems, dislike of excessive rules and regulations in bureaucratic work organizations was paramount because it stifled individual initiative and judgment and interfered with patient care.<sup>66</sup>

Role confusion, conflict, and professional disillusionment were illustrated by Benne and Bennis who discussed nurse-doctor conflict, nurse-supervisor conflict and patient technical skill conflict. They propose that in adjustment to conflict nurses may develop low motivation and interest, rationalize away conflicting demands and organize with others

---

<sup>65</sup>David J. Fox, et al., Satisfying and Stressful Situations in Basic Programs in Nursing Education (New York: Bureau of Publications, Teachers College, Columbia University, 1965), pp. 192-193.

<sup>66</sup>Marlene Kramer, "Comparative Study of Characteristics, Attitudes and Opinions of Neophyte British and American Nurses," International Journal of Nursing Students, IV (December, 1967), 281-294.

to resist the demands of the institution.<sup>67</sup>

### Summary

The review of literature and the findings revealed supported the writer's basic assumption that there are stressful situations inherent in college life and clinical nursing experiences. Briefly summarized, the theoretical literature on stress suggested that effects of stress on performance are not general but are influenced by a number of factors such as the nature of the task, the nature of the threat stimulus and the personality of the subjects. It was also suggested that experiences were not necessarily in and of themselves stressful, but rather had a potential for a variety of reactions depending upon the person in the situation and depending upon such auxiliary circumstances as when the situation happened, what preceded it, and what the consequences were. To the extent that anxious students, likely to be underachievers or academic failures, can be identified early and offered effective counseling and guidance, academic casualties and in some cases, emotional disorders can be prevented.

---

<sup>67</sup>D. K. Benne and Warren Bennis, "Role Confusion and Conflict in Nursing, Part 1," American Journal of Nursing, LIX (February and March, 1959), 196-198, 380-383.

## CHAPTER III

### METHODOLOGY

#### Type of Study

The descriptive method was selected to identify common stressful situations encountered by nursing students during the first clinical nursing course, Nursing Intervention I, and to determine if there were significant relationships between the anxiety proneness of these students and the number of stress situations they reported. Data were obtained by utilizing two tools: the student's reports of critical incidents and Taylor's Manifest Anxiety Scale.

#### Description of the Population

The population in this study consisted of the total number of students (28) enrolled in Nursing Intervention I. This twelve weeks course, offered during the two summer sessions following the sophomore year in a generic program at a state supported college, introduced the students to the clinical aspects of the nursing major. Clinical experience was gained in a small general hospital. Prior to this time the participants had two prerequisite courses, Orientation to Nursing and the History of Nursing.

Family background of the students varied, however, most were from an upper lower income family. The age range was nineteen to twenty-five with an average age of twenty years. The group represented a broad spectrum of religious preferences with no one religious group predominating. Three of the students were male, twenty-five were female; three were married and twenty-five were single.

### Description of the Tools

The critical incident.--The critical incident technique was selected as the method for collecting data concerning stressful situations experienced by the students during their clinical laboratory assignments. This technique, designed by Flanagan, is a direct and factual approach for gathering information and according to Fivers and Gosnell, it reduces personal opinion and judgment to a minimum.<sup>1</sup> The critical incident form used in this study was a modification of the form used by Fox and associates.<sup>2</sup> (See Appendix A, page 70) It consisted of a carefully phrased statement designed to collect data about the behavior of nursing students during periods of stress experienced in clinical nursing practice.

---

<sup>1</sup>Grace Fivers and Doris Gosnell, Nursing Evaluation: The Problem and the Process (New York: The Macmillan Company, 1966), p. 10.

<sup>2</sup>David J. Fox, et al., "Correlates of Satisfaction and Stress with Nursing School Experience," Nursing Research, XII (1963), 83-85.

To satisfy the definition of a critical incident, the students were also instructed to state whether or not their feelings during this period of stress interfered with their performances at that particular time. The use of this form insured complete and consistent information and facilitated analysis of the data.

The Manifest Anxiety Scale.---Taylors' Manifest Anxiety Scale (MAS) was used to measure the students anxiety proneness, (See Appendix B, page 71). This tool is a convenient and objective device for rating the subject's differences in emotional responsiveness. It is a pencil and paper test that utilizes a series of items, judged by clinical psychologists, to describe both the physiological reactions reported by individuals suffering from anxiety reactions and the accompanying subjective reports of worry, self-doubt and anxiety. Taylor stated that the degree to which an individual admitted to characteristically exhibiting manifest symptoms of anxiety as described by items on the scale would be related to the magnitude of his emotional responsiveness and therefore to his level of drive in a stressful situation.<sup>3</sup>

The MAS was applicable and useful since one aspect of this study was designed to explore the relationship between anxiety as a personality variable and the number of critical incidents reported by the students.

---

<sup>3</sup>Janet A. Taylor, "A Personality Scale of Manifest Anxiety," The Journal of Abnormal and Social Psychology, XVIII (1953), 285-290.

### Data Collection

Permission to conduct this study was secured from the dean of the school of nursing of the selected generic program. The investigator, in conference with the instructors of the course in which the twenty-eight students were enrolled, explained the purposes and procedure of the study and arranged a time and place for weekly meetings with the students. An explanation of the purposes of the research was given to the students who volunteered to participate.

To determine the students' level of anxiety, the investigator administered the MAS test under the innocuous title of Biographical Inventory on June 11, 1970. Following a review of the purpose of the study, the MAS test was distributed and the participants were given instructions on how to take the test. The time required for completion of the written test by the participants in this study ranged from forty-five to seventy-five minutes, with an average time of approximately sixty minutes.

Thirty minutes were allotted each Wednesday for six weeks for the recording of critical incidents. At the first collection session the students were given the forms and the procedure for writing their report. They were assured that all information given would be held confidential and that only the investigator would see the critical incident forms. The students' names were omitted and an identification number which they selected from a number pool was used instead.

Additional instructions were given at subsequent sessions as necessary.

### Analysis of Data

To determine if significant relationships existed between anxiety proneness and the number of stress situations reported as outlined in the statement of the problem of this study, it was necessary for the investigator to divide the subjects according to their MAS scores into three classifications: (1) high-anxiety, (2) middle range-anxiety, and (3) low anxiety. The information obtained from administration of the MAS was tabulated by adding up the number of significant key items marked True or False. The range of possible scores was from zero to fifty, the higher scores indicated greater anxiety proneness.<sup>4</sup> The scores of the MAS were divided into thirds and the upper and lower thirds of the distribution were obtained. The nine students in the upper third denoted the high anxiety group and the nine students in the lower third the low anxiety group. The remaining ten students were classified the middle range of anxiety. The mean and standard deviation were computed for each of the three groups. The investigator applied the t-test to determine if significant differences existed between the means of each of the three classified groups and the number of stress situations

---

<sup>4</sup>Robert M. Allen, Personality Assessment Procedure (New York: Harper and Brothers, 1958), p. 49.

reported by the subjects in each group. (See Appendix C, page 78). Decisions regarding the significance of  $t$  values were made at the 0.05 level of probability.

Critical Incident.--As the critical incidents reports were obtained from the students, they were first reviewed to determine whether or not the reported incident met the criteria of a usable incident. Only those incidents which described stressful situations encountered during a clinical laboratory assignment were included.

The description of stressful situations were separated from extraneous materials and transcribed to a five-by-eight card. This card was devised to facilitate classifying the data and contained the following information: (1) identification number; (2) date of the incident; and (3) the incident reported and its identification as effective or ineffective. If more than one incident was described, each behavior was abstracted and recorded on a separate card.

After all incidents were recorded the data were analyzed by a process known as "category formulation." This procedure according to Flanagan included: (1) studying the incident in accordance with the purpose of the research; (2) formulating a rough classification system which would encompass the major areas of stress; (3) reclassifying the incidents according to the major areas formulated and revising areas if necessary; and (4) studying the stress areas within the major areas, grouping similarities of



behaviors together to formulate sub-areas, and writing specific descriptive statements to cover similarities of the incidents.<sup>5</sup> This process was repeated until all the incidents were classified and the major areas contained a minimum amount of overlapping.

The percentage of students reporting stress within a given category was computed. A common stressful situation was determined by twenty-five per cent of the students reporting an incident in any given category.

---

<sup>5</sup>J. C. Flanagan, Critical Requirements for Research Personnel, quoted in June T. Bailey, "Critical Incident Technique," Nursing Research, V (October, 1956), 52-64.

## CHAPTER IV

### PRESENTATION AND ANALYSIS OF DATA

#### Introduction

This descriptive study was designed to identify common stressful situations encountered by students during their first clinical nursing course. In addition, an attempt was made to determine whether or not significant relationships existed between anxiety proneness of these students and the number of stress situations they reported. Data were obtained by utilizing two tools: the students' report of critical incidents and Taylor's Manifest Anxiety Scale. Each of these tools is further discussed and the results are presented in the following pages.

Initially, the total number of students (35) enrolled in Nursing Intervention I were admitted to the study. One student withdrew from the course and six students failed the first summer session. These seven subjects were subsequently eliminated from the study sample since no meaningful analysis of data could be made. The subjects chosen for this study were from upper lower income families. There were three males and twenty-five females, twenty-six Negroes and two Mexican

Americans. The age range was nineteen to twenty-five with an average age of twenty years. Three of the students were married and twenty-five were single. The respondents listed a broad range of religious beliefs with no religious group predominating.

### Presentation and Discussion of Findings

To determine the level of anxiety proneness, data were obtained from the twenty-eight sophomore nursing students enrolled in Nursing Intervention I, by administering the Taylor's Manifest Anxiety Scale (MAS) under the innocuous title of Biographical Inventory. The scores on the MAS varied from eleven to thirty-nine in a distribution that was slightly slanted in the direction of high anxiety (See Figure 1, page 43). The upper and lower thirds of this distribution were selected as the high anxiety and low anxiety groups, respectively. The remaining subjects were classified in the middle range of anxiety. The scores of the low anxiety group ranged from 11 to 16, the moderate anxiety group 17 to 26, and those for the high anxiety group from 27 to 39.

Although the mean score (23) on the MAS indicates only a moderate degree of anxiety for this sample, this finding is somewhat contrary to the findings of Deese and associates who reported a much lower degree of anxiety

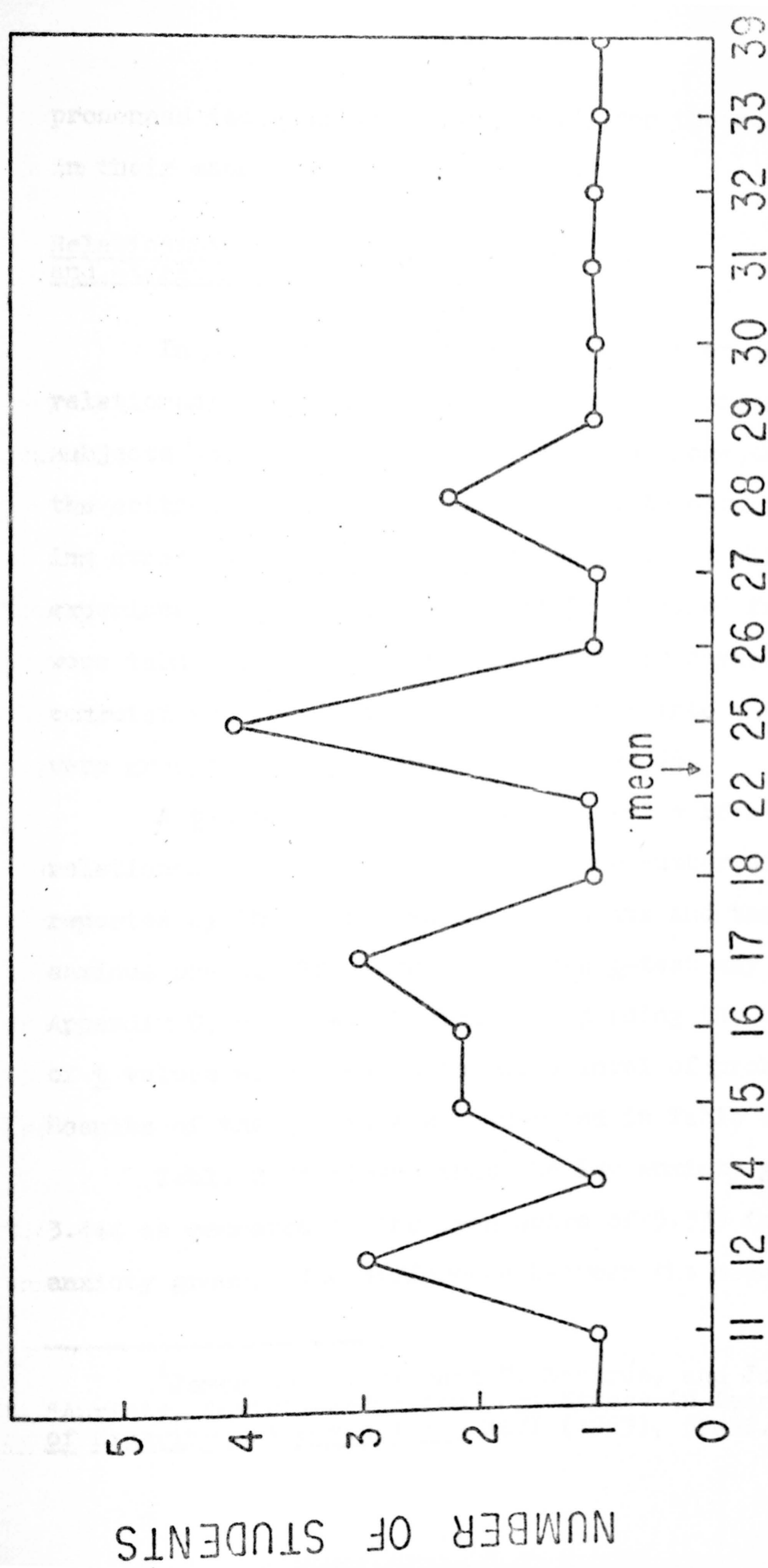


Fig. 1 Distribution of Population According to Frequency of Manifest Anxiety Scores

proneness (scores ranged from 0-17) for the college students in their sample.<sup>1</sup>

### Relationship Between Anxiety Proneness and Stress Situations

In an attempt to determine whether or not significant relationships existed between the anxiety proneness of the subjects and the number of stress situations they reported, the critical incident method was used to obtain data concerning stressful situations encountered during clinical laboratory experience. The critical incidents obtained from each subject were tabulated and the mean and standard deviations were computed for the three classifications into which the nurses were grouped as shown in Table 1, page 45.

A t-test was utilized to determine if a significant relationship existed between the mean number of incidents reported by the highly anxious students and their slightly anxious peers. The formula for the t-test may be found in Appendix C, page 76. Decisions regarding the significance of t values were made at the 0.05 level of probability. Results of the t-test are summarized in Table 2, page 45.

Table 2 discloses that the low anxiety group mean was 3.444 as compared to the mean score of 5.333 for the high anxiety group. The difference between the mean scores of the

---

<sup>1</sup>James Decse, Richard S. Lazarus, and James Keenan, "Anxiety, Anxiety-Reduction, and Stress in Learning," Journal of Experimental Psychology, XLVI (1953), 55-56.

TABLE 1

DEGREE OF ANXIETY AND FREQUENCY OF  
CRITICAL INCIDENTS

Group Classification	Frequency	Mean	S.D.
Low Anxiety N = 9	31	3.444	2.213
Moderate Anxiety N = 10	41	4.100	1.703
High Anxiety N = 9	48	5.333	2.355

TABLE 2

SIGNIFICANCE OF THE DIFFERENCE BETWEEN THE MEANS  
OF THE NUMBERS OF CRITICAL INCIDENTS REPORTED  
BY STUDENTS WITH LOW ANXIETY AND  
HIGH ANXIETY

Group Classification	Mean	S.D.	Difference between means	df	t-value t p	
Low Anxiety N = 9	3.444	2.624	-0.210	16	0.014	N.S.
High Anxiety N = 9	5.333	2.747				

Note: t-value required for significance

0.05 = 2.120

0.01 = 2.921

two groups was 0.210 and produced a t-value of 0.014, which was not significant at the 0.05 level of probability.

Therefore, the findings in this study indicated that highly anxious students did not report significantly more stressful situations than their slightly anxious peers. However, on the basis of mean values alone it is apparent those students with high anxiety reported more stress producing situations (See Table 1, page 45). These data reflect a trend toward a relationship between these two phenomena.

Due to the size of this sample, the investigator believed that the data were insufficient for accurate measurement. This opinion is supported by Levitt, who found that groups dealing with levels of anxiety which were composed of nine or ten subjects were regarded as "too small to permit reliable measurement."<sup>2</sup> The small sample also limits one's ability to generalize from the results. Another variable which may have affected these results was the lack of specificity of the tool for testing actual levels of anxiety during clinical experience.

### Analysis of Critical Incidents

A total of one hundred and thirty-eight critical incident reports described experiences causing stress in the clinical laboratory experience. Eighteen of the incidents reported were not applicable to this study. Incidents reported by the students described their feelings of frustration during

---

<sup>2</sup>Eugene E. Levitt, The Psychology of Anxiety (New York: The Bobbs-Merrill Company, Inc., 1967), p. 83.

the stress provoking experience, and many stated they were unable to think or perform adequately as a result of these feelings. These findings support the findings of Cleland, whose study showed that "thinking quality deteriorates as the quantity of environmental stressors increases; and that, deterioration is greater when the type of thinking is more difficult . . ."<sup>3</sup> These findings also support the Yerkes-Dodson Law, which states that moderate amounts of drive or threat facilitate cognitive functioning while strong amounts impair it.<sup>4</sup>

Further analysis of these data revealed that the number of critical incidents reported varied from week to week with the highest numbers reported on the third and fifth week as shown in Table 3, page 48. Based on this evidence, there was no significant difference between the number of incidents reported each week for a period of six weeks.

To show the relation of the stress reaction to an event in the clinical laboratory experience the incidents were divided into related categories. Table 4, page 48, illustrates the frequency of incidents according to categories of stress.

---

<sup>3</sup>Virginia A. Cleland, "Effects of Stress on Thinking," American Journal of Nursing, LXVII (January, 1967), 108-111.

<sup>4</sup>Robert M. Yerkes and John D. Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit Formation," Journal of Comparative Neurology, Psychology, XVIII (1908), 459-482.



TABLE 3

FREQUENCY OF CRITICAL INCIDENTS\* REPORTED  
EACH WEEK FOR SIX WEEKS

Date	Number of Students	Frequency	Mean
6/25/70	13	21	1.690
7/ 1/70	6	7	1.666
7/ 8/70	24	32	1.333
7/22/70	11	13	1.181
7/29/70	25	28	1.120
8/ 5/70	19	19	1.000

\*Total number of incidents--120

TABLE 4

CATEGORIES OF STRESS INDICATED BY RESPONDENTS

Students Indicating Stress	28 (100%)
Number of Incidents Reported	138
Incidents not Applicable to Study	18

Categories	Students	Frequency
Initial Clinical Experience	20	34
Interpersonal Relationships	18	36
Caring for Patients	11	19
Feelings of Inadequacy	10	11
Fear of Failure	8	10
Communications	6	6
Feelings of Embarrassment	5	5
Total	78 <sup>a</sup>	120

<sup>a</sup>Numbers shown total more than 28 because incidents were reported over a period of six weeks with some students reporting multiple incidents in various categories.

The percentage of students reporting stress within a given category was computed. A common stressful situation was determined by twenty-five or more per cent of the students reporting an incident in any given category. There were five major categories of common stressful situations identified from this study; namely, (1) initial clinical experiences, (2) interpersonal relationships, (3) caring for patients, (4) feelings of inadequacy, and (5) fear of failure. Table 5 reflects these categories in percentages. Each of these categories of stress will be discussed separately.

TABLE 5  
PERCENTAGE DISTRIBUTION OF CATEGORIES OF STRESS

Major Categories	Frequency of Incidents	Percentage of Students
Initial Clinical Experience	34	71
Interpersonal Relationships	36	64
Performance of Skills	19	39
Feelings of Inadequacy	11	35
Fear of Failure	10	29

Note: Events reported by twenty-five or more per cent of the students were considered common stressful situations.

Seventy-one per cent of the students recorded an incident which described stress related to an initial clinical experience. These findings support the findings of Fox and

associates who found a consistent pattern: stress peaks were connected with the anticipation of and first contact with a situation.<sup>5</sup>

As shown in Table 6, a further division into sub-categories indicated that fifty per cent of the incidents related to first experience with administration of medications, thirty-five per cent related to performance of skills, and the remaining fifteen per cent related to orientation to the hospital.

TABLE 6

## STRESS RELATED TO INITIAL CLINICAL EXPERIENCES

Category	Students		Incidents	
	Number	Per cent	Number	Per cent
Initial Clinical Experience	20	71	34	100
Orientation to Hospital			5	15
Administration of Medication			17	50
Performance of Skills			12	35
Total			34	100

"Dexterity, deftness, efficiency, these are qualities frequently exhibited by nurses and aspired to by students."<sup>6</sup> For example, when observing a nurse at work, a student may

<sup>5</sup>David J. Fox, et al., "Correlates of Satisfaction and Stress with Nursing School Experience," Nursing Research, XII (Spring, 1963), p. 87.

<sup>6</sup>Ernestine Wiedenbach, Meeting the Realities in Clinical Teaching (New York: Springer Publishing Company, Inc., 1969), p. 78.

marvel at her skill and efficiency. She yearns to display such competencies herself for she regards them as the hallmark of a nurse. Consequently, a student may anticipate her first clinical experience with trepidation and anxiety, not so much for fear that she will harm the patient as for fear that she may seem clumsy, stupid or inept to other nurses, doctors or even her instructor. Such anxiety can build up and interfere with her ability to carry out her assignment for patient care. But if the student has been helped to prepare herself in advance for what she will be expected to do and how to do it, and if provision is made for meeting the student's need to feel secure, the value to her of the clinical experience may be greatly enhanced.<sup>7</sup>

Stress provoking experiences related to interpersonal relations were expressed by sixty-four per cent of the students. Division of the incidents into sub-categories indicated that seventy-eight per cent of the incidents related to interpersonal relations with instructors as shown in Table 7, page 52. This finding supports the findings of Blassingame, who found that fifty per cent of the students' anxiety related to relationships with their instructors.<sup>8</sup>

The students related a wide variety of incidents concerning interpersonal relationships with their instructors;

---

<sup>7</sup>Ibid.

<sup>8</sup>Sandra Blassingame, "Nursing Students and Anxiety in the Clinical Laboratory Experience," (unpublished Master's Thesis, Texas Woman's University, 1970), p. 17.

TABLE 7

## STRESS RELATED TO INTERPERSONAL RELATIONSHIPS

Category	Students		Incidents	
	Number	Per cent	Number	Per cent
Interpersonal Relationship	18	64	36	100
With Instructor			24	78
With Staff			4	11
With Patients			2	5.5
With Peers			2	5.5
Total			36	100

however, several incidents gave sources for discussion. For example, one student stated:

I was horrified when I was awkward while giving an injection because my instructor grades so hard, even though its your first time. I am also afraid to ask too many questions because she might take quite a bit off my clinical experience grade.

Another student commented:

I was reprimanded by one instructor for failure to give a medication when another instructor and I had decided the medication should not be given. I was very belligerent towards the second instructor because I felt that she was antagonizing me due to another incident.

A third student reported:

I made a bed as I had been instructed by one instructor and another instructor came in and took it apart, saying I was doing everything wrong. I felt tense and upset, almost like crying, especially looking foolish in front of my patient. I am insecure, I feel that I will always make a goof or be embarrassed again.

The cause of the anxiety of the student in her relationship with the instructor varied in each incident. However, there seemed to be some factors which were common. The students were aware of constant supervision of their nursing care in the clinical laboratory experience. Evaluation and constructive criticism directed toward the student was seen as punishment. One student felt humiliated and embarrassed and viewed this experience as degrading.

Hilgard stated, "Learning under the control of reward is usually preferable to learning under the control of punishment. Correspondingly, learning motivated by success is preferable to learning motivated by failure."<sup>9</sup> According to Rines, "If acceptable behaviors are praised, these are more likely to be retained." In addition, Rines stated, when evaluating student's performance, "It is important, if learning is to continue, to give the student a feeling of having succeeded with attention to, but not emphasis on, the areas where she has made mistakes."<sup>10</sup> The student anxiety might be reduced if evaluations were presented as a learning experience and this idea was reinforced by the teacher in her relations with students.

---

<sup>9</sup>Ernest R. Hilgard, Theories of Learning, 2nd ed. (New York: Appleton-Century-Crofts, 1956), p. 486.

<sup>10</sup>Alice R. Rines, Evaluating Student Progress in Learning the Practice of Nursing (Columbia, New York: Teachers College, Columbia University, 1963), p. 34.

Stress provoking experiences related to caring for patients were expressed by thirty-nine per cent of the students. As such, it appeared less anxiety provoking than interpersonal relations and initial clinical experiences. This finding is consistent with those of Fox and associates who found that satisfaction in nursing education comes primarily from the nursing aspects, from the opportunities to care for the patients, while the stresses in nursing come primarily from the educational aspects.<sup>11</sup> Table 8 presents the findings related to caring for patients.

TABLE 8  
STRESS RELATED TO CARING FOR PATIENTS

Category	Students		Incidents	
	Number	Per cent	Number	Per cent
Caring for Patients	11	39	19	100
General Nursing Care			9	48
Immobolized Patient			6	31
Incontinent Patient			4	21
Total			19	100

From the recorded incidents it was found that certain behaviors were commonly exhibited by these students while performing under stress. They were insecure, slow and awkward. These findings support those of Rines who stated

<sup>11</sup>David J. Fox, et al., "Correlates of Satisfaction and Stress with Nursing School Experiences," Nursing Research, XII (Spring, 1963), 86.



that beginning students exhibited common behaviors. These behaviors were: "slowness, awkwardness, and hesistancy; concentration on what they were doing to the exclusion of all else; and seeing only the most obvious symptoms."<sup>12</sup> It was concluded that these were normal behaviors that occurred during the learning process and should act as guides in setting up a program of evaluation.

Thirty-five per cent of the students reported incidents which related to feelings of inadequacy during clinical laboratory experience as shown in Table 9.

TABLE 9

## STRESS RELATED TO FEELINGS OF INADEQUACY

Category	Students		Incidents	
	Number	Per cent	Number	Per cent
Feelings of Inadequacy	10	35	11	100
Evaluation of Own Ability			6	55.5
Lack of Knowledge			5	45.5
Total			11	100

As suggested by Wiedenbach, the student needs to assimilate, concurrently with her clinical experience, a body of theoretical and practical knowledge in order to function with security and competence in the clinical area. Wiedenbach points out that assimilation of this knowledge is enhanced by

<sup>12</sup>Rines, "Evaluating Student Progress," p. 63.

experience; however, she indicates the student may feel more secure as she begins clinical experience if she has gained some of the knowledge prior to her actual clinical practice.<sup>13</sup>

Twenty-nine per cent of the students recorded incidents relating to fear of failure. As shown in Table 10, fifty per cent of the incidents expressed concern for the level of ability expected by instructors and the remaining fifty per cent were stressed because of grades received on tests.

TABLE 10  
STRESS RELATED TO FEAR OF FAILURE

Category	Students Number - Per cent		Incidents Number - Per cent	
Fear of Failure	8	29	10	100
Level of Ability Expected by Instructors			5	50
Academic Achievements			5	50
Total			10	100

With regard to the finding concerning level of ability expected of the student, several incidents related to the "frequency with which clinical instructors expected the student to do something she did not know or could not do."

<sup>13</sup>Wiedenbach, Meeting the Realities in Clinical Teaching, p. 29.

The planning of objectives for the care of a patient cooperatively by the student and the instructor would allow both to clarify their expectations.

One incident reported by a student related an inability to concentrate during her patient care. She stated:

I have been very stressful about the upcoming final examination. I was stressed to the point that I was unable to perform in the hospital.

While anxiety experienced prior to examinations is not the primary focus of this study, it seemed appropriate to point out that studies have demonstrated that anxiety is manifested by college students in the conventional classroom test situation to such an extent that the general level of academic performance is impaired.<sup>14</sup>

#### Summary of Findings

The descriptive method was selected to identify common stressful situations encountered by nursing students during the first clinical nursing course and to determine if there was a significant relationship between anxiety proneness of these students and the number of stress situations they reported. Data were obtained utilizing two tools: the student's reports of critical incidents and Taylor's Manifest Anxiety Scale. The number of participants in this study was

---

<sup>14</sup>Seymour B. Sarason and George Wandler, "Some Correlates of Test Anxiety," Journal of Abnormal and Social Psychology, XLVIII (1963), 447-448.

twenty-eight; twenty-five were female, and the remaining three were male.

This study demonstrated that there are stressful situations inherent in college life and clinical nursing experiences. The findings are consistent with previous studies which demonstrated that college students and nursing students perform under conditions of environmental stress.

Although specific predictions were not made regarding the relationship between anxiety proneness and the number of stressful situations reported by students, the findings in this study indicated that highly anxious students did not report significantly more stressful situations than their slightly anxious peers. However, observation of mean values, alone, suggested a relationship between these phenomena.

Five categories of common stressful situations were identified from this study; namely, (1) initial clinical experiences, (2) interpersonal relationships, (3) caring for patients, (4) feelings of inadequacy, and (5) fear of failure. These were discussed in detail.

An important finding of this study was that certain behaviors were commonly exhibited by students in learning the practice of nursing. It was concluded that this finding should serve as a guide in setting up a program of evaluation.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purposes of this descriptive study were: (1) to identify common stressful situations encountered by students during the first clinical nursing course in a generic program at a state supported college, and (2) to determine if there were significant relationships between anxiety proneness (measured by Taylor's Manifest Anxiety Scale) and the number of stressful situations reported.

The population in this study consisted of the total number of students (28) enrolled in Nursing Intervention I. This twelve weeks course, offered during the two summer sessions following the sophomore year, introduced the students to the clinical aspects of the nursing major. Clinical experience was gained in a small general hospital. Data were obtained from the twenty-five females and three males by utilizing two tools: the student's report of critical incidents and Taylor's Manifest Anxiety Scale. Each student was asked to write one or two "critical incident" reports on stressful situations experienced in the clinical laboratory each week over a six week period. The number of incidents reported by students with high anxiety and low anxiety were

compared through the application of a t-test to determine if a significant difference existed between the mean scores of the groups.

The findings in this study indicated that highly anxious students did not report significantly more stressful situations than their slightly anxious peers. However, observation of mean values, alone, suggested a relationship between these phenomena.

A total of one hundred and twenty critical incidents reported by nursing students indicated they experienced stress in relation to the beginning clinical laboratory experience. Incidents reported by the students described their feelings of frustration during the stress provoking experience, and many stated they were unable to think or perform adequately as a result of these feelings. Moderate amounts of stress are desirable because it facilitates cognitive functioning by alerting the individual, but the amount which impedes performance is undesirable because it impairs cognitive functioning.

To show the relationship of stress reaction to an event in the clinical laboratory experience, the incidents were divided into related categories. A common stressful situation was determined by twenty-five or more per cent of the students reporting an incident in any given category. There were five major categories of common stressful situations identified from this study; namely, (1) initial clinical

experiences, (2) interpersonal relationship, (3) caring for patients, (4) feelings of inadequacy, and (5) fear of failure.

Of the five categories of common stressful situations, the most frequent incidence of stress producing situations were initial clinical experiences and interpersonal relationships. Seventy-one per cent of the students recorded incidents which described stress related to an initial clinical experience, while sixty-four per cent of the students reported stress provoking experiences related to interpersonal relations.

Because clinical experiences are an integral part of the total nursing curriculum, it is essential that they be carefully planned. Only in the clinical laboratory has the student an opportunity to test and apply theories and principles that she has studied. The limited time allotted to clinical experience makes it mandatory that experiences be educationally sound. Consequently, the clinical instructor has a very special place in the educational process, and she should seek practical means to protect the nursing student from the bombardment of environmental stimuli which may reduce her capacity for complex reasoning.

The following recommendations are made:

1. Replication of the study using the same methodology but increasing the sample.
2. Conduct a longitudinal study on the present population to assess the long range effects of



anxiety on performance in the clinical laboratory and to identify common stressful situations encountered at various levels of clinical experience.

Allan, Robert  
Harpe

Appley, Morris  
Street  
Century

Bebrick, H. J.  
Notes  
of  
San Antonio  
Bulletin

Basowits, Harold  
Griffin  
Hill

Benn, D. K.  
in  
LIX

## BIBLIOGRAPHY

Berg, Irving  
Emotion  
Academy  
Hygiene

Blossingame, Frank  
City  
Theater

Brounman, D. K.  
Differences  
Cognitive  
XXVI

Burgess, H. J.  
Rate of  
Abstract

Buss, Arnold  
"The  
Journal

## BIBLIOGRAPHY

- Allen, Robert M. Personality Assessment Procedure. New York: Harper and Brothers, 1958.
- Appley, Mortimer H., and Trumbull, Richard. Psychological Stress: Issues in Research. New York: Appleton Century Crofts, 1967.
- Babrick, H.; Raukin, R. E.; and Fitts, P. M. The Effect of Motivation upon Peripheral Perception During Performance of a Central Psychomotor Task. Lackland Air Force Base, San Antonio, Texas: Human Resources Research Center Bulletin, 1952.
- Basowitz, Harold; Persky, Harold; Korchin, Sheldon J; and Crinker, Roy R. Anxiety and Stress. New York: McGraw-Hill Book Company, Inc., 1955.
- Benne, D. K., and Bennis, Warren. "Role Confusion and Conflict in Nursing, Part 1 and 1." American Journal of Nursing, LIX (February and March, 1959), 196-198, 380-383.
- Berger, Irving L., and Sutker, Alvin R. "The Relationship of Emotional Adjustment and Intellectual Capacity to Academic Achievement of College Students." Mental Hygiene, XL (January, 1956), 65-77.
- Blassingame, Sandra. "Nursing Students and Anxiety in the Clinical Laboratory Experience." Unpublished Master's Thesis, Texas Woman's University, 1970.
- Brouerman, D. M., and Lazarus, Richard S. "Individual Differences in Task Performance Under Conditions of Cognitive Interference." Journal of Personality, XXVI (March, 1958), 94-105.
- Burgess, M., and Hekenson, J. E. "Effect of Increased Heart Rate on Intellectual Performance." Journal of Abnormal Social Psychology, LXVIII (1964), 85-91.
- Buss, Arnold H.; Wiener, Morten; Darkee, Ann; and Baer, Marc. "The Measurement of Anxiety in Clinical Situations." Journal of Consulting Psychology, XIX (1955), 125-129.

- Cleland, Virginia S. "The Effect of Stress on Performance." Nursing Research, XIV (Fall, 1965), 292-298.
- Cleland, Virginia S. "Effects of Stress on Thinking." American Journal of Nursing, LXVII (January, 1967), 108-111.
- Cohen, Louis D. "Level of Aspiration Behavior and of Adequacy and Self Acceptance." Journal of Abnormal Social Psychology, XLIX (1954), 84-86.
- Deese, James; Lazarus, Richard S.; and Keenan, James. "Anxiety, Anxiety-Reduction, and Stress in Learning." Journal of Experimental Psychology, XLVI (1953), 55-56.
- Easterbrook, J. A. "The Effects of Emotion on Cue Utilization and the Organization of Behavior." Psychological Review, LXVI (May, 1959), 183-201.
- Farber, I. E., and Spense, Kenneth W. "Complex Learning and Conditioning as a Function of Anxiety." Journal of Experimental Psychology, XLV (1953), 120-125.
- Fenz, W. D. "Conflict and Stress as Related to Physiological Activation and Sensory, Perceptual, and Cognitive Functioning." Psychological Monograph, No. 8, LXXVIII (1964), 31-32.
- Fivers, Grace, and Gosnell, Doris. Nursing Evaluation: The Problem and the Process. New York: The Macmillan Company, 1966.
- Flanagan, J. C. Critical Requirements for Research Personnel, quoted in June T. Bailey, "Critical Incident Technique," Nursing Research, V (October, 1956), 52-64.
- Fox, David J.; Diamond, Loraine K.; Welsh, Ruth C.; Knopf, Lucille; and Hodgins, Jean. "Correlates of Satisfaction and Stress with Nursing School Experiences." Nursing Research, XII (Spring, 1963), 83-88.
- Fox, David J.; Diamond, Loraine K.; Walsh, Ruth C.; Knopf, Lucille; and Hodgins, Jean. "The Nursing Student in the Hospital Setting." Hospitals, XXXVII (July, 1963), 50-56.
- Fox, David J.; Diamond, Loraine K.; Walsh, Ruth C.; Knopf, Lucille; and Hodgins, Jean. Satisfying and Stressful Situations in Basic Programs in Nursing Education. New York: Bureau of Publications, Teachers College, Columbia University, 1965.

- Frank, J. D. "Some Psychological Determinants of Levels of Aspiration." American Journal of Psychology, XLVII (1935), 285-293.
- Gynther, R. A. "The Effects of Anxiety and of Situational Stress on Communicative Efficiency." Journal of Abnormal and Social Psychology, LIV (1957), 174-276.
- Harleston, B. W. "Test Anxiety and Performance in Problem-Solving Situations." Journal of Personality, XXX (1962), 557-573.
- Harris, Dale B. "Factors Affecting College Grades: A Review of the Literature, 1930-1937." Psychological Bulletin, XXXVII (March, 1940), 125-166.
- Heath, C. W., and Gregory, L. W. "Problems of Normal College Students and Their Families." School and Society, LXIII (May, 1946), 355-358.
- Heidgerken, Loretta E. Teaching and Learning in Schools of Nursing. Philadelphia: J. B. Lippincott Company, 1965.
- Heinmann, Edith M. "The Conflicting Life of a Student," Nursing Outlook, XII (March, 1964), 34-38.
- Hilgard, Ernest R. Theories of Learning. 2nd ed. New York: Appleton-Century-Crofts, 1956.
- Hoyt, Donald R., and Magoon, Thomas M. "A Validation Study of the Taylor Manifest Anxiety Scale." Journal of Clinical Psychology, X (1954), 357-361.
- Janis, Irvin L. Psychological Stress. New York: John Wiley and Sons, Incorporated, 1958.
- Koenker, Robert H. Simplified Statistics. Bloomington, Illinois: McKnight and McKnight Publishing Company, 1961.
- Korchin, Sheldon J. Anxiety and Cognition, quoted in Lazarus, Richard S. Psychological Stress and the Coping Process. New York: McGraw-Hill Book Company, 1966.
- Korchin, Sheldon J., and Levine S. "Anxiety and Verbal Learning." Journal of Abnormal and Social Psychology, LIV (1957), 234-240.
- Kramer, Marlene. "Comparative Study of Characteristics, Attitudes and Opinions of Neophyte British and American Nurses." International Journal of Nursing Students, IV (December, 1967), 281-294.

- Kramer, Marlene; Hinshaw, Ada Sue; Patterson, Rella Beth; Taylor, Margaret; and Wallace, Margaret. "Effect of Teacher and Situational Variables on Student Achievement." Nursing Research, XVII (January-February, 1968), 10-18.
- Lazarus, Richard S. Psychological Stress and the Coping Process. New York: McGraw-Hill Book Company, 1966.
- Lazarus, Richard S., and Erickson, Charles W. "Psychological Stress and Its Personality Correlates: Part I, The Effects of Failure Stress Upon Skilled Performance." Journal of Experimental Psychology, XLIII (1952), 100-105.
- Lazarus, Richard S.; Deese, James; and Olser, Sonia F. "The Effects of Psychological Stress upon Performance." Psychological Bulletin, XLIX (1952), 293-316.
- Levitt, Eugene E. The Psychology of Anxiety. New York: The Bobbs-Merrill Company, Inc., 1967.
- Mandler, George and Sarason, Seymour B. "A Study of Anxiety and Learning." Journal of Abnormal Social Psychology, XLVII (1952), 166-173.
- Martin, Barclay. "The Assessment of Anxiety by Physiological Behavior Measures." Psychological Bulletin, LVIII (1961), 234-255.
- Machanic, David. Students Under Stress. New York: The Free Press of Glencoe, 1962.
- Miller, James. A Bibliography for the Development of Experimental Stress-sensitive Tests for Predicting Performance in Military Tasks. Washington, D. C.: Psychological Research Association, 7.
- Postman, L. and Bruner, I. S. "Perception Under Stress." Psychological Review, LV (1948), 314-423.
- Rines, Alice R. Evaluating Student Progress in Learning the Practice of Nursing. Columbia, New York: Teachers College, Columbia University, 1963.
- Ruebush, B. K. "Interfering and Facilitating Effects of Test Anxiety." Journal of Abnormal and Social Psychology, LX (1960), 205-212.
- Rust, Ralph M., and Ryan, F. J. "The Relationship of Some Rorschach Variable to Academic Behavior." Journal of Personality, XXI (June, 1953), 441-456.

- Rust, Ralph M. and Davie, James S. "The Personal Problems of College Students." Mental Hygiene, XLV (April, 1961), 250-255.
- Sarason, Irving G. "Empirical Findings and Theoretical Problems in the Use of Anxiety Scales." Psychological Bulletin, LVIII (1960), 403-415.
- Sarason, Seymout B.; Mandler, George; and Craighill, P. C. "The Effect of Differential Instructions on Anxiety and Learning." Journal of Abnormal Social Psychology, XLVII (1952), 561-565.
- Sarason, Seymout, and Mandler, George. "Some Correlates of Test Anxiety." Journal of Abnormal and Social Psychology, XLVIII (1953), 447-448.
- Silverman, R. E. "Anxiety and the Mode of Response." Journal of Abnormal and Social Psychology, XLIX (1954), 538-542.
- Spielberger, Charles D. "The Effects of Manifest Anxiety on the Academic Achievement of College Students." Mental Hygiene, XLVI (1962), 420-428.
- Spielberger, Charles D., and Katzenmeyer, W. B. "Manifest Anxiety, Intelligence, and College Grades." Journal of Consulting Psychology, XXIII (1959), 278-281.
- Taylor, Janet A. "A Personality Scale of Manifest Anxiety." The Journal of Abnormal and Social Psychology, XLVIII (1953), 285-290.
- Teal, G. E., and Fabrizio, R. A. Causes of Students Withdrawal From Nurse Training, quoted in Rotthamp, Barbara C. "Attrition Rates in Basic Baccalaureate Nursing Programs." Nursing Outlook, XVI (June, 1968), 44-47.
- Wiendenbach, Ernestine. Meeting the Realities in Clinical Teaching. New York: Springer Publishing Company, Inc., 1969.
- Winkel, G. H., and Sarason, I. G. "Subject Experimenter and Situational Variables in Research on Anxiety." Journal of Abnormal Social Psychology, LXVIII (1964), 601-608.
- Wright, J. J. "Environmental Stress Evaluation in a Student Community." Journal of American College Health, XII (February, 1964), 325-336.
- Yerkes, Robert M., and Dodson, John D. "The Relation of Strength of Stimulus to Rapidity of Habit-Formation." Journal of Comparative Neurology, Psychology, XVIII (1908), 459-482.



2022

Student's Name

Directions:

## APPENDICES

1. Recall  
week  
Please  
feeling  
week

2. In the  
your



## APPENDIX A

### STUDENT'S REPORT OF CRITICAL INCIDENTS

Student's Number: \_\_\_\_\_ Date: \_\_\_\_\_

**Directions:** Sometimes things happen which are stressful to us. We may feel afraid, desperate, fearful, frightened, nervous, panicky, shaky, tense, terrified, upset or worried. Or, sometimes we may be "tied in knots", have "butterflies in the stomach", perspire, feel restless, cry or have palpitations of the heart. Of course all people feel and react differently and when you are in stressful situations you may experience one or more of these feelings or you may experience other feelings.

1. Recall one or two incidents that occurred during the past week that were stressful to you. Describe these incidents. Please be specific and tell exactly what happened and your feelings during the situations. If none occurred this week please state "no incidents".
2. In what way was what you were doing helped or hindered by your feelings?

## APPENDIX B

## BIOGRAPHICAL INVENTORY

Print your name, the date, the date of your birth, age, and sex in the spaces provided at the bottom of this sheet.

The statements in this inventory represent experiences, ways of doing things, or beliefs or preferences that are true of some people but are not true of others. You are to read each statement and decide whether or not it is true with respect to yourself. If it is true or mostly true, circle the "T" in the left hand column corresponding with that statement. If the statement is not usually true or is not true at all, circle the "F" in the left hand column corresponding with that statement. You must answer the statement as carefully and honestly as you can. There are no correct or wrong answers: we are interested in the way you work and in the things you believe.

Remember: Circle the letter T if the statement is true or mostly true; circle the letter F if the answer is false or mostly false. Be sure to circle the letter that is in the same row as the item you are answering. Mark each item as you come to it; be sure to mark one, and only one, answer for each item. Here is an example:

T      F      I would like to be an artist.

If you would like to be an artist, that is, if the statement is true as far as you are concerned, you would circle the T.

If the statement is false, you would circle the F.

If you have any questions, please ask them now.

Name \_\_\_\_\_ Date \_\_\_\_\_ Birthday \_\_\_\_\_

Age \_\_\_\_\_ Sex \_\_\_\_\_

5. I am often \_\_\_\_\_
7. I am often \_\_\_\_\_
11. I have very \_\_\_\_\_
13. I work hard \_\_\_\_\_
14. I cannot \_\_\_\_\_
15. I worry very \_\_\_\_\_
18. I frequently \_\_\_\_\_  
something \_\_\_\_\_
24. I blush \_\_\_\_\_
25. I have \_\_\_\_\_  
(True)
26. I worry \_\_\_\_\_
27. I practically \_\_\_\_\_
33. I am often \_\_\_\_\_
35. I have \_\_\_\_\_
36. My hands are \_\_\_\_\_
37. I sweat very \_\_\_\_\_
39. When sub- \_\_\_\_\_  
is very \_\_\_\_\_
41. I do not \_\_\_\_\_  
solid \_\_\_\_\_
43. I feel \_\_\_\_\_

## TAYLOR MANIFEST ANXIETY SCALE

Items included on the Manifest Anxiety Scale and Responses Scored as "Anxious" Items are numbered as they appear in the Complete Biographical Inventory (Taylor, 1953).

4. I do not tire quickly. (False)
5. I am often sick to my stomach. (True)
7. I am about as nervous as other people. (False)
11. I have very few headaches. (False)
13. I work under a great deal of strain. (True)
14. I cannot keep my mind on one thing. (True)
16. I worry over money and business. (True)
18. I frequently notice my hand shakes when I try to do something. (True)
24. I blush as often as others. (False)
25. I have diarrhea ("the runs") once a month or more. (True)
26. I worry quite a bit over possible troubles. (True)
27. I practically never blush. (False)
33. I am often afraid that I am going to blush. (True)
35. I have nightmares every few nights. (True)
36. My hands and feet are usually warm enough. (False)
37. I sweat very easily even on cool days. (True)
38. When embarrassed I often break out in a sweat which is very annoying. (True)
41. I do not often notice my heart pounding and I am seldom short of breath. (False)
43. I feel hungry almost all the time. (True)

44. Often my bowels don't move for several days at a time.  
(True)
48. I have a great deal of stomach trouble. (True)
51. At times I lose sleep over worry. (True)
54. My sleep is restless and disturbed. (True)
56. I often dream about things I don't like to tell other people. (True)
66. I am easily embarrassed. (True)
67. My feelings are hurt easier than most people. (True)
77. I often find myself worrying about something. (True)
82. I wish I could be as happy as others. (True)
83. I am usually calm and not easily upset. (False)
86. I cry easily. (True)
87. I feel anxious about something or someone almost all of the time. (True)
94. I am happy most of the time. (False)
99. It makes me nervous to have to wait. (True)
100. At times I feel so restless that I cannot sit in a chair for very long. (True)
103. Sometimes I become so excited that I find it hard to get to sleep. (True)
107. I have often felt that I faced so many difficulties I could not overcome them. (True)
112. At times I have been worried beyond reason about something that really did not matter. (True)
117. I do not have as many fears as my friends. (False)
123. I have been afraid of things or people that I know could not hurt me. (True)
136. I certainly feel useless at times. (True)
138. I find it hard to keep my mind on a task or job.  
(True)

- 145. I am more self conscious than most people. (True)
- 152. I am the kind of person who takes things hard. (True)
- 153. I am a very nervous person. (True)
- 163. Life is often a strain for me. (True)
- 164. At times I think I am no good at all. (True)
- 168. I am not at all confident of myself. (True)
- 183. At times I feel that I am going to crack up. (True)
- 187. I don't like to face a difficulty or make an important decision. (True)
- 190. I am very confident of myself. (False)

These items are interspersed among the 175 buffer items of the Biographical Inventory. An illustration follows.

- T F 1. I would rather win than lose in a game.
- T F 2. I am often the last one to give up trying to do a thing.
- T F 3. There is usually only one best way to solve most problems.
- T F 4. I do not tire quickly.
- T F 5. I am often sick to my stomach.
- T F 6. I am in just as good physical health as most of my friends.

## APPENDIX C

## FORMULA USED FOR STATISTICAL COMPUTATION

t-value - test for the significance of the difference  
between the means of two independent groups.<sup>1</sup>

$$t = \frac{M_1 - M_2}{\sqrt{\left[ \frac{\sum X^2 + \sum Y^2}{N_1 + N_2 - 2} \right] \left[ \frac{N_1 + N_2}{N_1 N_2} \right]}}$$

Standard error of the difference between means

Key:  $M_1$  = mean for group one

$M_2$  = mean for group two

$N_1$  = number of cases in group one

$N_2$  = number of cases in group two

$X$  = raw scores for group one

$Y$  = raw scores for group two

$df = N_1 + N_2 - 2$

<sup>1</sup>Robert H. Koener, Simplified Statistics (Bloomington, Illinois: McKnight & McKnight Publishing Company, 1961), p. 87.