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## Perceived Sources and Level of Stress Experienced by Student Nurses in Associate and Baccalaureate Degree Programs

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**PERCEIVED SOURCES AND LEVEL OF STRESS  
EXPERIENCED BY STUDENT NURSES IN  
ASSOCIATE AND BACCALAUREATE DEGREE PROGRAMS**

**By**

**Lori J. Kane**

**A THESIS**

**Submitted to  
Grand Valley State University  
in partial fulfillment of the requirements  
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## **ABSTRACT**

### **PERCEIVED SOURCES AND LEVEL OF STRESS EXPERIENCED BY STUDENT NURSES IN ASSOCIATE AND BACCALAUREATE DEGREE PROGRAMS**

**By**

**Lori J. Kane**

This study examined possible differences in levels of stress and perceived sources of stress in student nurses attending associate degree programs and baccalaureate degree programs. A combination of Lazarus' theory of cognitive appraisal with Roy's Adaptation Model provided the conceptual framework. One hundred and sixteen students from a public university, two private Christian colleges and two community colleges participated in the study. The Student Stress and Coping Inventory (SSCI) questionnaire was used to measure stressful situations and/or experiences from students beginning the second semester of their first year in the nursing program. Reliability of the questionnaire was established at 0.91. Paired t-tests analysis of perceived levels of stress between the two educational groups of nursing students yielded no difference at the .05 level of significance. Negative correlations were identified between grade point average and being employed and level of stress. Several implications for nursing education were identified.

**This is dedicated to all the students who are enrolled in a nursing program - A hope to make a difference.**

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## Chapter I

### INTRODUCTION

Students who choose the field of nursing may find that the goal of graduation is difficult to achieve due to stress from the educational process itself. Students often are not prepared to handle the complexities of the nursing profession and nursing education. In addition, nursing students are expected to demonstrate a high level of responsibility and accountability in their work with seriously ill patients (Carter, 1982).

Meeting the course objectives for a nursing theory course and adequately preparing for the clinical assignment is extremely time consuming. Nursing students spend several hours a week caring for a client and/or family members while in the clinical setting. The student nurse must be knowledgeable of the client's diagnosis, treatments, medication, and diagnostic tests prior to providing actual care. Also, a plan of care outlining the appropriate nursing interventions designed to achieve desirable outcomes must be developed.

The dominant theme for nursing students in their report of stressful experiences occurred during their clinical rotations (Beck, Hackett, Srivastava, McKim, Rockwell, 1997; Admi, 1997; Oermann, Standfest, 1997; Garrett, Manuel, & Vincent, 1976). Nursing students must learn how to use many

different types of equipment and accurately perform an array of psychomotor skills as part of their educational process. In addition, the environment in the clinical setting is often fast paced, high pressured and noisy making it difficult to concentrate. The potential for serious error in the clinical setting, where a student works with clients in varying stages of health or illness, can be terrifying (Sobol, 1978).

Another area perceived as stressful for a nursing student is the close monitoring of his/her clinical performance by a clinical instructor. The faculty member who has the power to confer low grades and expel the student from the school may be perceived as an authority figure (Policinski & Davidhizar, 1985). The students' ability to develop a plan of care, accurately perform psychomotor skills, and knowledgeably discuss the diagnosis and treatments of their assigned clients is constantly evaluated by the clinical instructor. Nursing students can experience feelings of tension and stress if their clinical performance does not satisfactorily meet the behavioral objectives established for the clinical course.

The amount of perceived stress inherent in the educational process may also depend upon the students' age and maturity. Students who are in late adolescence when they enter nursing may find the educational process more stressful because they are attempting to reconcile the conflicting task of role diffusion. During this stage students are consumed with growing up and extending away from former environments, and are involved in seeking their

identity (Mattson, 1990). In addition, student nurses are also faced with the demands and problems of education which may range from stressors created by examinations and schedule conflicts to first experiences with terminal illness and death. Different stressors are encountered by older students when they leave familiar roles and responsibilities and enter nursing school. The new expectations required of them frequently lead to stress. Moreover, many older students are married, working, and responsible for child care in addition to attending class. Stress occurs when the responsibilities associated with these roles conflict with student responsibilities.

### Problem Statement

The educational process required for nursing students can be a very stressful experience. Identified sources of stress include: (a) adjusting to a rigorous program of theory and clinical practice, (b) faculty members, and (c) age and maturity of the student nurse. Stress can decrease a student's academic performance thereby influencing the level of care provided to a patient. The first step when assisting a student should be identifying specific sources and levels of perceived stressors.

### Purpose

The purpose of this study was to examine possible differences in levels of stress and perceived sources of stress in student nurses attending associate degree and baccalaureate degree programs. It is anticipated that learning and academic performance can be enhanced when nursing faculty assist the student

in identifying sources of stress and ways of reducing stress. Perhaps, a student nurse who is capable of learning more will provide a higher level of health care. In addition, nursing faculty are challenged to compare their teaching style and/or teaching strategies with the sources of stress identified in this study. Without compromising established quality and standards of education, it is hoped that nursing faculty would attempt to reduce or eliminate sources that create additional stress for the student.

## Chapter II

### LITERATURE AND CONCEPTUAL FRAMEWORK

#### Literature Review

The considerable stress involved in nursing education has not captured the interest of many investigators. The review of literature did not clearly isolate the factors that are responsible for the stress. In addition, research studies addressing stress in the associate degree nursing student were not found.

Beck and Srivastava (1991) conducted a study to identify and rank order sources of stress in baccalaureate nursing students. Data was gathered from baccalaureate nursing students (N=94) by means of a survey consisting of three main instruments (a) General Health Questionnaire (GHQ), (b) Stress Inventory, and (c) a simple profile sheet. Analysis of variance for GHQ scores showed significant difference at the .05 level between registered nursing students and generic students, with the generic students reporting higher GHQ scores. The results of the GHQ indicates that the mean scores for all groups were considerably higher than the accepted cut-off score. Some of the items that were ranked as high stressors were long hours of study (92%), examination grades (85%), lack of timely feedback (75%), financial responsibilities (71%), atmosphere created by clinical faculty (61%), and patient care responsibilities

(54%). The relatively small sample size precludes generalization beyond the study sample. In addition, this study looked at selected characteristics of the students from one baccalaureate nursing program.

Garrett, Manuel & Vincent (1976) completed a study to identify, categorize, and compare the experiences considered stressful by nursing students completing their sophomore, junior, and senior levels of study. The Critical Incident Technique was used as the measurement tool. The subjects were instructed to describe two stressful experiences which had occurred during the past school year. Four major categories were established (a) academic, (b) social, (c) personal, and (d) clinical. A fifth category, titled "other" was added to include data that did not pertain to the above categories. The sample (N = 133) consisted of 111 females and 22 males who were between the ages of 18 and 23. The study showed the total responses of stressful experiences for sophomore, junior, and senior level nursing students were 28.8% clinical experience category, 27.8% personal category, and 24.1% were descriptive of experiences in the academic category. Of the total sample respondents, 9.9% were categorized as social experiences and 9.4% as "other." The results from this study showed that clinical experience was one of the dominant themes for reports of stressful experiences by nursing students. However, the students' perception of clinical experiences as stressful decreased as they progressed in academic level. Chi-square analysis revealed no significant relationship existed between categories of stressful experiences and levels of academic study

at the .05 level. The results of this study were descriptive in nature and applicable to a narrow population of 18 to 23 year-old female nursing students from one baccalaureate nursing program. In addition, responses were not ranked in order of priority so further analysis could not be done.

Mancini, Lavecchis & Clegg (1983) conducted a study which examined the effects of a stress management program on the stress experienced by students who were pursuing a Master of Science Degree in Nursing. A pretest post-test experimental and control group design was used. The sample (N=16) consisted of 7 experimental and 9 control group subjects. Spielbergers' A-State Anxiety Inventory and the Palmer Sweat Print procedure were used as the measurement tools. The study results revealed that the control group experienced significantly more stresses based on a  $X^2$  value of 7.91(df=1,  $p<.01$ ). Also, there were significantly more professionally generated stresses than personally generated stresses based on a  $X^2$  value of 12.36 (df=1,  $p<.001$ ). Stresses from the classroom and theoretical requirements were the major causes of professionally generated stress in this group of students. The findings revealed that subjects did not practice the stress management program with the exception of reduction in the use of caffeine intake. However, the experimental group reported statistically significant fewer stressful experiences. The small sample size and noncompliance of the stress management program into the daily lives of the experimental subjects were the major limitations of this study.



## Summary

The nursing literature is consistent in its identification of the stresses of baccalaureate nursing education. However, no research has been done to examine the stresses in the associate degree nursing student. In addition, the majority of subjects in each of the studies were between the ages of 18-23. Additional research involving these two areas would help facilitate future curriculum and/or environmental alterations.

## Theoretical Framework

The theoretical framework for this study is based upon the theory of cognitive appraisal of stress as described by Richard S. Lazarus (Figure 1) and the Theory of Person as an Adaptive System from the Roy Adaptation Model. A brief description of the main concepts in each of the theories will be delineated with an application to the variables under investigation.

### **Lazarus' theory of cognitive appraisal**

#### Stress

Lazarus (1984) examines stress from a psychosocial frame of reference rather than from physiologic indices. According to Lazarus, stress is a dynamic, ongoing relationship between the person and the environment which is appraised by the individual as exceeding his or her resources. The two factors that determine stress are situational factors and personal factors.

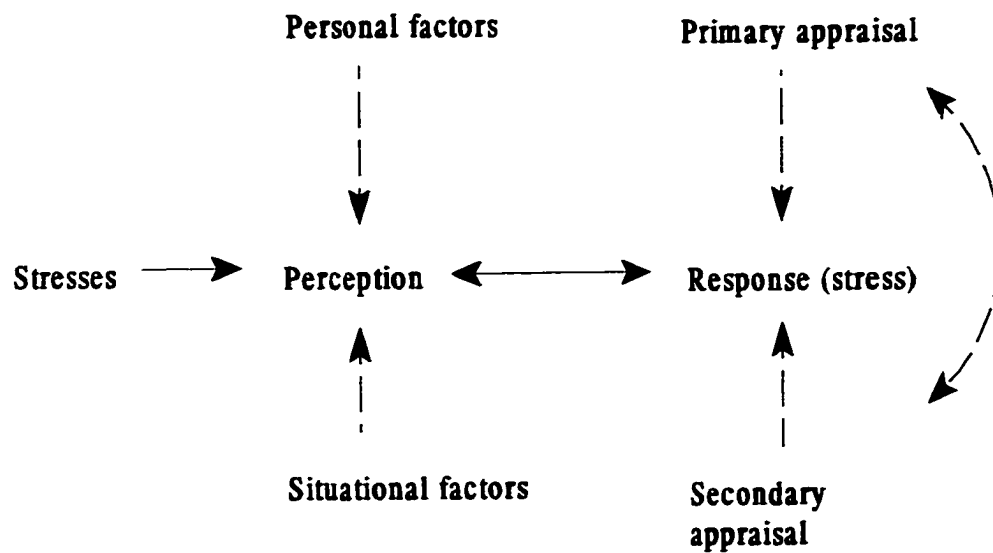


Figure 1. Investigator's interpretations of Lazarus' Theory of Cognitive Appraisal of Stress.

### Situational Factors

Situational factors define the properties of events that make them stressful. These factors focus on the person's perception of the situation. Administering an intramuscular injection for the first time is an example of a stressful, situational factor commonly experienced by a nursing student.

### Personal Factors

Personal factors concern the psychological structure of the individual. These factors operate essentially as dispositions or tendencies to evaluate cues in particular ways. When arriving for a clinical rotation, the student will sometimes discover the assignment has been changed because the patient was discharged. New assignments and/or new doctors' orders as well as a change in the patients' health status may alter the expectations for the day. The student is required to set or readjust priorities when changes occur. These unexpected changes may be perceived as stressful to some students.

### Cognitive Appraisal

The process of cognitive appraisal is necessary for a specific event to be judged stressful. Cognitive appraisal is the process of categorizing an encounter, and the various facets, with respect to the significance for well-being (primary appraisal) or to the resources and options available to an individual (secondary appraisal). Lazarus believes the two appraisals occur concurrently and interact with each other in determining the degree

of stress and the strength and quality of the emotional reaction.

### Primary Appraisal

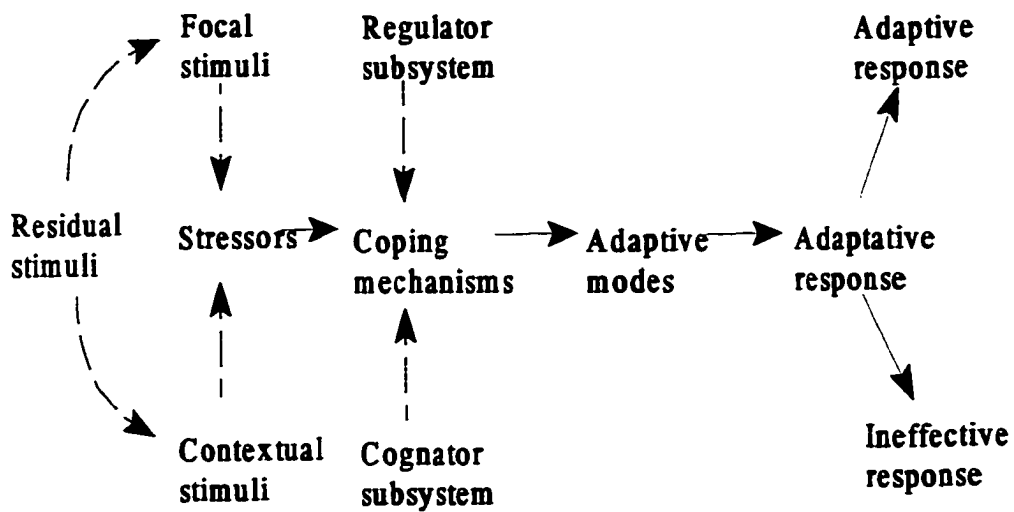
Through primary appraisal, an individual evaluates a stressful situation as a threat, challenge, or harm/loss. Threat refers to the potential for harm; challenge refers to the potential for mastery, growth, or gain; and harm/loss refers to injury already done (Lazarus & Folkman, 1984). The level of stress experienced by a student who failed a nursing theory examination would be contingent on many factors. Using primary appraisal the student would evaluate the possibility of failing the entire course and decide if this is likely or unlikely.

### Secondary Appraisal

Secondary appraisal is also a cognitive evaluation used to identify various options that are available for dealing with a stressful situation. Using the example of the student who failed a nursing theory examination, secondary appraisal would also determine the level of stress experienced by the student. Identifying faculty to provide additional insight, utilizing a tutorial service or improving studying habits are options a student might employ when secondary appraisal is utilized.

### **Roys' Adaptation Model**

The Roy Adaptation Model (1991) (Figure 2) describes the environment as comprising stimuli from external and internal sources that act as stressors. These stimuli serve as input to the person, provoking a response



**Figure 2.** Investigator's intpretation of Roys' Theory of Person as an Adaptive System.

response. The stimuli have been categorized as focal, contextual, and residual.

### Focal Stimuli

Focal stimuli is the degree of change that precipitates adaptive behavior. Focal stimuli is the stimulus immediately confronting the person that prompts a person to seek relief by demanding an adaptive response. This demand for an adaptive response can also be referred to as a stressor (Roy & Roberts, 1981). Taking a nursing theory examination is an example of focal stimuli.

### Contextual Stimuli

Contextual stimuli refers to all other stimuli present in the situation, or surrounding the event, that contributes to the effect of the stressful perception. Contextual stimuli is created by focal stimulus. Taking a nursing theory examination in a room which is extremely warm or cool could create additional stress for the nursing student.

### Residual Stimuli

Residual stimuli affect the current situation, although this effect cannot be validated or measured. Such factors as beliefs, attitudes, experience, or traits are considered residual stimuli (Roy & Roberts, 1981). However, if residual stimuli can be validated, they are recategorized as either focal or contextual stimuli. A nursing student with a poor self-image may perceive the nursing theory examination to be more stressful.

Helson (1964) identified particular outcomes of the combined effect of the three classes of stimuli (focal, contextual, residual). Helson calls this combined effect the adaptation level (Roy & Roberts, 1981).

### Adaptation Level

Adaptation level is a condition of the person relative to adaptation. It is a constantly changing point that represents the person's ability to cope with the changing environment in a positive manner. Adaptation level sets up a zone or range within which stimulation will lead to adaptive responses. Successfully completing the behavioral objectives for a clinical nursing course is an example of adaptive response. Stimuli falling outside the adaptation zone leads to ineffective responses. Dropping a clinical nursing course due to the inability to cope with the stress associated with a clinical assignment is an ineffective response.

### Coping Mechanisms

Coping refers to behavior exhibited by a person in response to a stimuli. Coping is any attempt to master a new situation that can be potentially threatening, frustrating, challenging or gratifying (Roy & Roberts, 1981). Coping has been closely linked to the process of adaptation and it has a variety of meanings.

According to Roy, coping mechanisms are inherited (genetically determined) or acquired ways of responding to the changing environment. Coping mechanisms are divided into two types (a) regulator, and (b)

cognator subsystems. These two subsystems are linked together through the process of perception.

### **Regulator Subsystem**

This subsystem is primarily used as a mechanism to cope with physiological stimuli. The regulator system is described by inputs. Inputs are stimuli from the external state of dynamic equilibrium. The inputs are chemical in nature or have been transduced into neural information. Inputs such as light, touch, pain, odor, and position in space are all transduced into electrical, neural inputs (Roy & Roberts, 1981). Frequently, the regulator subsystem operates at a level below cognitive awareness (Roy & Roberts, 1981).

### **Cognator Subsystem**

This subsystem is mainly used as a mechanism to cope with psychological stimuli. Four kinds of processes have been identified within the cognator subsystem. The first process includes perceptual/information processing, the processes of selective attention, coding, and memory. Learning is the next process and comprises of imitation, reinforcement, and insight. The third kind of process identified is judgment. Judgment involves the process of problem solving and decision making. Lastly, emotion process involves seeking relief and affective appraisal and attachment (Roy & Roberts, 1981).



### **Adaptative Modes**

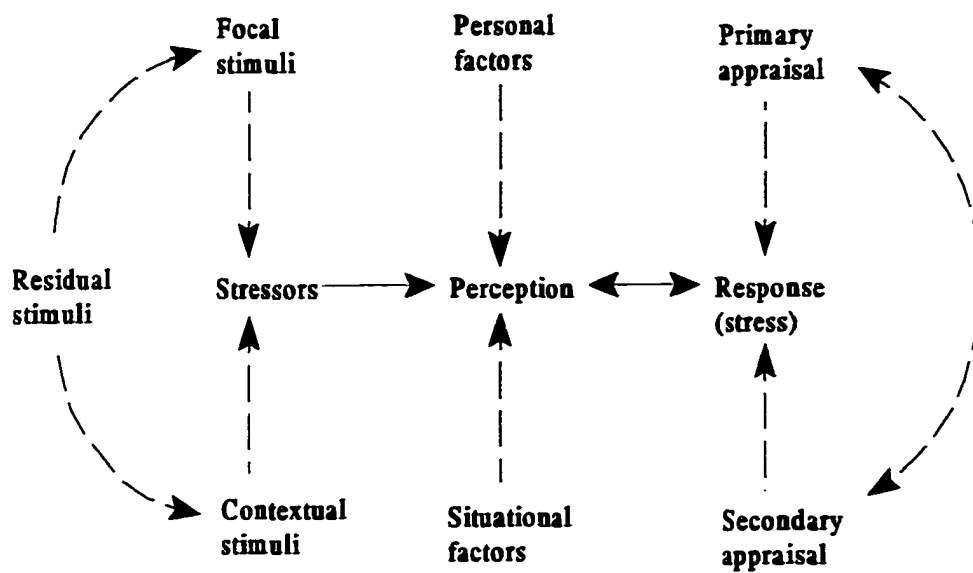
Adaptive modes are ways or methods of adapting or coping. A person has four adaptive modes (a) physiological, (b) self-concept, (c) role function, and (d) interdependence. The regulator and cognator subsystems must be seen as the ways or methods of adapting or coping (Roy & Roberts, 1981).

### **Adaptative Responses**

Adaptative responses are behaviors that contribute to the general goals of a person. Examples of adaptive responses include: (a) survival, (b) growth, (c) reproduction , and (d) mastery. A state of adaptation is brought about through adaptive responses (Roy & Roberts, 1981).

### **Summary**

A review of literature supports the fact that there is a great deal of stress present among nursing students. Lazarus' theory of cognitive appraisal combined with Roy's Adaptation Model provides an appropriate conceptual framework on which to base this study (Figure 3). Lazarus' theory describes factors that nursing students determine as stressful. In addition, this theory describes how stress is appraised by the nursing students. Roys' theory assists in identifying internal and external sources associated with nursing education that act as stressful experiences.



**Figure 3.** Investigator's interpretation of conceptual framework integrating Lazarus' theory of cognitive appraisal with Roy's Adaptation Model.

### **Primary Research Question**

- A. Do associate and baccalaureate nursing students differ in their perceived sources of stress?

### **Secondary Research Questions**

- B. What level of stress is experienced by student nurses from an associate degree program and baccalaureate degree program?
- C. Is there a relationship between intervening variables and level of stress?
- a. Is there a relationship between age and level of stress?
  - b. Is there a relationship between (GPA) and level of stress?
- D. Is there a difference between intervening variables and level of stress?
- a. Is there a difference between gender and level of stress?
  - b. Is there a difference between ethnicity and level of stress experienced by white and nonwhite students?
  - c. Is there a difference between being employed while attending college and the level of stress?

### **Definitions of terms**

1. Associate degree nursing student: a student who is admitted to a nursing program in a community/junior college who anticipates receiving an associate's degree in nursing upon graduation.
2. Baccalaureate degree nursing student: a student who is admitted to a

nursing program in a college or university who anticipates receiving a bachelor's degree in nursing upon graduation.

3. Perceived sources: individualized awareness based on understanding of a situation.

4. High level stress: a score on the Student Stress and Coping Inventory (SSCI) questionnaire 2.7 or above (Appendix A).

5. Low level stress: a score on the SSCI questionnaire below 2.7 (Appendix A).

## **Chapter III**

### **METHODS**

#### **Design**

A comparative, descriptive design was used to identify the sources of stress in associate degree and baccalaureate nursing students. The study was conducted in a natural setting with no manipulation or modification of the environment. A questionnaire was used as the research tool to collect data from students who were beginning the second semester of their first year in the nursing program.

#### **Subjects**

The study was conducted using associate degree nursing students from two midwestern community colleges and baccalaureate nursing students from two midwestern universities.

Students who met the following criteria were asked to participate:

- 1) attend the selected associate degree or baccalaureate degree nursing programs on a full-time basis.
- 2) speak English as the primary language.
- 3) have no previous nursing education.
- 4) not experiencing a major crisis ie. death of family member, divorce, newly diagnosis medical condition.

### Study sites

The study sites included a public university, two private Christian colleges and two community colleges. All of the settings were within 35 miles of a metropolitan area with a population of 187,000 people. The public university was established in 1960 and enrolls 10,554 full time students and 5,122 part time students. The students come from within the state, out-of-state and other countries. The university has baccalaureate, baccalaureate completion and Master of Science in Nursing programs. The private Christian colleges have a joint baccalaureate program. Both colleges have been established for more than 75 years and each have an enrollment of approximately 4,000 full time students and 300 part time students. The students come from within the state, across the United States, Canada and other countries to attend these colleges. One of the community colleges used in this study is located within the large metropolitan area. This community college was established 78 years ago and enrolls approximately 4,519 full time students and 8,519 part time students. The other community college is located in a smaller city approximately 35 miles away from the metropolitan area. This community college was established in 1926 and enrolls approximately 1,360 full time students and 3,260 part time students. Both community colleges have licensed practical nurse and associate degree nurse programs. The community colleges primarily draw students from their local metropolitan areas, adjacent counties and to a lesser degree from within the state, other states and countries.

## Instrument

The questionnaire that was used is the Student Stress and Coping Inventory (SSCI) (Appendix A). The questionnaire was developed by the nursing faculty at Lehman College of the City University of New York with the assistance of social workers and senior nursing students. The SSCI contains three sections; stressful situations or experiences, coping and biographical. The stressful situations or experiences section is further divided into five subscales: (a) nursing classrooms, (b) nursing clinical experiences, (c) non-nursing classrooms and laboratories, and (d) college environment and social/personal environment in relation to attending school. The items are arranged on a 4-point Likert scale, with 1 indicating "not at all stressful," and 4 indicating "extremely stressful." Two additional items (item 24 & item 25) were added to the nursing clinical experience subscale based upon review of literature. Section two reflects problem-focused and emotional-focused coping strategies. Participants indicate on a 4-point Likert scale the extent to which a response or reaction is used, with 1 as "not used" and 4 as "used a great deal." For the purpose of this study, the stressful situations or experiences section of this instrument was used. Subjects' biographical information comprises section three.

A pilot test consisted of 147 students who were enrolled at Lehman College, 127 students at a similar college, and 24 students from a small private college. Representatives of each level of the nursing programs were included in the pilot sample.

Reliability as internal consistency was assessed using Cronbach's alpha for each of the subscales in the SSCI using data from the pilot sample. The alphas were as follows: nursing classroom, .85; nursing clinical situation, .91; other (non-nursing) classes and laboratories, .91; college environment, .84; social/personal environment, .85; total stress, .81; and coping, .76.

Reliability coefficients were well above the .50 levels, considered satisfactory. No corrected item-total correlations were negative, and all were of sufficient magnitude ( $r > .113$ ).

During instrument development, CVIs were computed for the five stress subscales and the coping scale based on rater agreement. Nursing faculty members at Lehman College who were experienced in conducting stress workshops for nursing students and other members of the college community judged content validity. The CVI for the stress subscales and coping scale were as follows: nursing classroom, .625; clinical situation, .79; other (non-nursing) classrooms and laboratories, .675; college environment, .50; social/personal environment, 1.00; and coping 1.00. Although the CVI was only .50 for the college environment subscale, items were not changed because they were generated from student interviews.

The last section of the questionnaire was a profile sheet which contained demographic and background information. This profile sheet was altered to meet the interests of this study. Nine questions pertaining to specific income levels, questions about current level and year in college and questions regarding



Registered Nurse status were eliminated for lack of relevance to this study. It was hoped that this information would be useful in seeking correlations among variables thereby making the findings more meaningful.

### Procedure

Upon receiving approval by the Human Research Review Committee at Grand Valley State University and participating schools, permission was requested from classroom teachers to administer the questionnaire to nursing students during ten minutes of a regularly scheduled class period. All students who were enrolled in the nursing course who were present were asked to participate. A verbal explanation was given to potential participants describing the questionnaire, criteria used to select/eliminate subjects, risks and benefits, and assuring confidentiality and anonymity. In addition, a "cover letter" that contained the verbal instruction script was distributed to each subject (Appendix B). Return of a completed questionnaire implied voluntary consent from the subjects.

The completed questionnaires were collected in a container convenient to the door of the classroom. This assisted in receiving the greatest number of completed surveys and also helped to assure anonymity. A time for questions was provided after the questionnaires were distributed. The investigator was available during completion of the questionnaire should any concerns arise. Her phone number was available to the students.

Data was gathered no earlier than four weeks into a semester and not on a day when an examination was given. Students would have had sufficient clinical experience on which to base their responses and administration after an examination may confound responses associated with a test. A convenience sample of second semester, first year associate degree nursing students and second semester, third year baccalaureate degree nursing students was used. Results were shared with participants upon request.

## Chapter IV

### Data Analysis

Data was collected from associate degree nursing students who were beginning the second semester of their first year and second semester, third year baccalaureate degree nursing students. A total stress score was derived from each completed questionnaire. A t-test was used to determine the statistical differences between the groups of nursing students using interval level data.

Interval level data was obtained with the demographic data of age, work experience and grade point average (GPA). Pearson's R was used to determine the statistical relationships with this level of data. Gender and ethnicity generated nominal level of data. The researcher was unable to utilize this data due to insufficient number of subjects.

Data analysis was computed by using the Statistical Package for the Social Sciences (SPSSX) software. Reliability of the questionnaire was established at 0.91.

### Characteristics of the Subjects

The sample (N=116) was primarily from baccalaureate degree nursing students (N=78), with (N=38) from associate nursing students. The subjects of the two groups were similar in gender, ethnicity, existence of an adequate

support system and child care responsibilities (Table 1).

The groups were different in their age, living arrangements, previous health field experience, hours spent working each week, and perceived GPA (Table 2).

**Table 1. Demographics of Student Similarities**

Demographic Data	N	% ADN	N	% BSN
Gender				
Female	34	89.47%	72	92.31%
Male	4	10.53%	6	7.69%
Ethnicity				
White	37	97.37%	73	93.59%
Nonwhite	1	2.63%	5	6.41%
Adequate Support System				
Yes	28	73.68%	70	89.75%
No	10	26.32%	8	10.25%
Child Care Responsibilities				
No	24	63.15%	67	85.89%
Yes	14	36.85%	11	14.11%

The characteristics of age, gender and marital status of the two groups of nursing students are similar to those characteristics found nationally.

According to the National Advisory Council on Nurse Education and Practice, the average age at graduation from baccalaureate degree programs was 26.1 years, whereas associate program graduates tend to be older with the average age at 32.1 years. Men comprised 7.3% of all graduate nurses (NLN, 1989).

In addition, greater than 60% of all baccalaureate graduates are single whereas, associate graduates are more likely to be married, separated/divorced or widowed (NLN, 1991b).

**Table 2. Demographics of Student Differences**

Demographic Data	N	% ADN	N	% BSN
<b>Age</b>				
18-27	11	28.94%	63	80.77%
28-37	20	52.63%	7	8.98%
< 38	7	18.43%	8	10.25%
<b>Living Arrangements</b>				
Home with parents	4	10.52%	19	24.35%
Married	23	60.52%	12	15.39%
Friends	2	5.26%	41	52.56%
Other	8	21.07%	4	5.14%
Missing data	1	2.63%	2	2.56%
<b>Previous Health Field Experience</b>				
Yes	24	63.15%	41	52.55%
No	14	36.85%	37	47.45%
<b>Hours Working each Week</b>				
Not Working	13	34.22%	14	17.94%
1-5	5	13.15%	12	15.38%
6-11	8	21.05%	21	26.92%
12-18	6	15.79%	16	20.52%
< 19	6	15.79%	15	19.24%
<b>Perceived GPA</b>				
3.50 & above	11	31.65%	38	48.72%
3.45 & below	25	68.35%	40	51.28%

## Research Questions/Techniques

Research Question 1: Do associate and baccalaureate nursing students differ in their perceived sources of stress?

Table 3 lists the most frequently identified perceived sources of stress identified by the associate and baccalaureate degree nursing students.

Table 3. Most Frequently Identified Perceived Sources of Stress

Item	Mean Stress Score
<b>Associate Degree Nursing Students</b>	
Taking examinations	3.45
Afraid of failing	3.35
Examination preparation	3.35
Workload	3.25
Making an error	3.15
Being confronted with an emergency	3.10
Feeling Fatigue	3.10
<b>Baccalaureate Degree Nursing Students</b>	
Being confronted with an emergency	3.60
Examination preparation	3.30
Workload	3.15
Taking examinations	3.10
No time	3.05
Making an error	3.05
Content presentation on examination	2.95
Performing psychomotor skills	2.95

**Research Question 2: What level of stress is experienced by student nurses from an associate degree program and baccalaureate degree program?**

There was no significant difference in perceived level of stress between the two groups. ( $t = -1.01$ ,  $df = 62$  2-tail probability = .316). A pooled variance was done ( $F = 1.39$ , 2-tail probability = .235).

**Research Question 3: Is there a relationship between age and level of stress?**

No significant correlation was found between age and level of stress ( $r = -.04135$ ,  $p > .65$ ).

**Research Question 4: Is there a relationship between perceived GPA and level of stress?**

A significant negative correlation was found between perceived GPA and level of stress ( $r = -.19721$   $p < .05$ ). The lower the perceived GPA, the higher the level of stress was experienced by the students.

**Research Question 5: Is there a difference between gender and level of stress?**

Not enough data was gathered to analyze this question due to an insufficient sample size.

**Research Question 6: Is there a difference between ethnicity and level of stress experienced by white and nonwhite students?**

Not enough data was gathered to analyze this question due to an insufficient sample size.

**Research Question 7: Is there a relationship between being employed while attending college and level of stress?**

A significant positive correlation was found between being employed while attending college and level of stress ( $r = .23171$   $p < .05$ ). The more a student nurse worked while attending college the higher their perceived level of stress.



## Chapter V

### Discussion

The perceived sources of stress identified by nursing students in this study have similarities found in the study by Beck and Srivastava (1991). Students in both studies reported that long hours of study, taking examinations, grades and lack of free time as being stressful. However, the students in this study identified that performing psychomotor skills, potentially caring for a patient in an emergency situation and classroom content presented on an examination as stress producing as well. The students in Beck and Srivastava identified financial responsibilities, administration response to students, university education for nurses, and atmosphere created by clinical faculty as stress producing.

Nursing students who participated in the study by Garrett, Manuel and Vincent (1976) identified experiences that occurred during their clinical rotations as most stressful. In this study, the nursing students reported academic experiences as most stressful.

Mancini, Lavecchis and Clegg (1983) found that nursing students felt classroom and theoretical requirements were the major causes of stress. The results of this study also supports that students perceived preparing and taking examinations more stressful than patient care responsibilities.

A greater understanding of the perceived sources and level of stress experienced by the nursing students who participated in this study occurred by implementing Lazarus' theory of cognitive appraisal and Roys' Adaptation Model. According to Lazarus, the two factors that an individual determines as stressful are situational factors and personal factors. The students in this study appraised situational factors of attending nursing school more stressful than personal factors. In addition, the nursing students utilized cognitive appraisal to identify specific stressful factors which occurs within the nursing education process. The external and internal sources that act as stressors as identified by Roys' Adaptation Model was also utilized in data analysis. The presentation of classroom content on the examination was identified as stressful during data interpretation. This external stressor created a high level of perceived stress for many of the students who participated in this study. An internal source of stimuli that also created a high level of stress for some nursing students in this study were feeling like they were unable to meet their personal academic expectations.

#### Implications For Nursing Education

Several implications for nursing education become evident. The findings suggest that clinical faculty need to remember that nursing students experience a high level of stress during their clinical experience. According to this study, performing psychomotor skills, fear of making a mistake and being involved in an emergency situation created a high level of stress. Faculty should not develop

creative ways to challenge and maximize the clinical experience until after the students' skill level and confidence increases.

In light of study findings regarding level of stress experienced in the classroom, the faculty should remember that high levels of stress exist before and after an examination. Despite this finding, there is no substitution for learning the content and/or adjusting academic standards. However, perhaps various teaching styles and/or teaching strategies would change the level of stress experienced by the students.

The level of stress experienced by employed students suggests that working while attending nursing school creates added stress. Exploring other options to meet financial responsibilities might help to reduce the students' stress level. This would be especially important with students who are employed and experiencing a lower grade point average.

### Limitations

A major limitation to this study was the small sample size of associate degree nursing students. Although sixty seven nursing students who were attending a community college were approached by the researcher, only thirty eight of them met the criteria and agreed to participate in the study. The majority of the twenty nine associate degree nursing students who did not qualify for the study attended school on a part time basis. Another limitation of this study was the SSCI questionnaire was administered to nursing students from the same geographical area. Including nursing students outside the midwestern area

would improve the representedness of the data collected and make it more generalizable.

### **Recommendations for Further Research**

After completion of the data analysis and comparison of the data with current research literature, the researcher has the following recommendations:

1. replication of the research with a larger sample size of associate degree nursing students is needed to provide greater empirical support.
2. conduct longitudinal studies to track changes in the students' perceptions as they progress through the educational process.
3. analyze biographical data not used in this study to describe the subjects.
4. conduct research utilizing subjects with an increased representation of ethnic minorities and gender.

### **Conclusion**

This study was done to examine the perceived sources and level of stress in baccalaureate and associate degree nursing students. The motivation to complete the study came from personal work experiences with student nurses and the lack of empirical research in the literature describing sources of stress..

This research identified several findings of significance: (a) the perceived sources of stress are similar between the baccalaureate and associate degree nursing student, (b) a lower grade point average contributes to a student's stress level, and (c) being employed while attending college also contributes to the level of stress a student experiences. Unfortunately, limited data precluded the

examination of potential differences on how ethnicity and gender affect level of stress.

The findings in this study support the literature in that a high level of stress is experienced by students who attend a nursing program. Nursing students who participated in this study identified academic experiences as most stressful. Not all stresses and problems experienced by nursing students can be eliminated. However, nursing educators need to critically examine potential classroom stresses and develop ways of reducing or eliminating them. Perhaps the elimination and reduction of unnecessary stresses would facilitate student learning resulting in a higher level of health care delivery.

## **APPENDICES**

## Appendix A

### Student Stress and Coping Inventory

#### SECTION A: STRESSFUL SITUATIONS OR EXPERIENCES

Stress is defined as something in a person's environment that he/she believes or feels is upsetting, threatening, or endangering to him/her.

The items in this section are divided into two areas of a student nurse's environment. These items describe situations or experiences which may be perceived as stressful. **Please circle one answer indicating the level of stress that you have experienced.**

In responding to these items you are to consider only the time period that has elapsed since the beginning of this semester.

Situational Factors	1 not at all stressful	2 slightly stressful	3 moderately stressful	4 extremely stressful
1. Excessive workload (amount of work, type of assignments, amount of content covered)	1	2	3	4
2. Preparing for examinations focusing on textbook and/or lecture material)	1	2	3	4
3. Announcements of course requirements (handouts, syllabus)	1	2	3	4
4. Meeting demands of more than one course assignments, tests, too many credits)	1	2	3	4
5. Presentation of content in examinations (not sure what is being asked, manner in which questions are structured)	1	2	3	4
6. Attitude of faculty	1	2	3	4

<b>Situational Factors</b>	<b>1 not at all stressful</b>	<b>2 slightly stressful</b>	<b>3 moderately stressful</b>	<b>4 extremely stressful</b>
7. Student participation in developing course content and requirements (presenting a topic)	1	2	3	4
8. Due dates of assignments (negotiating dates with faculty, change of dates by faculty)	1	2	3	4
9. Course content not stimulating/challenging	1	2	3	4
10. Physical environment (length of classes, size of classes, seating, acoustics, temperature of room)	1	2	3	4
11. Availability of faculty for academic help	1	2	3	4
12. Receptiveness of faculty for academic help	1	2	3	4
13. Taking examinations	1	2	3	4
14. Coordinating classes and clinical schedules	1	2	3	4
15. Academic skills needed for level of work required	1	2	3	4
16. Evaluation by faculty	1	2	3	4
17. Availability of faculty for assistance	1	2	3	4
18. Condition of clients assigned (dying, disfigured, chronic illness)	1	2	3	4
19. Age of client	1	2	3	4
20. Sex of client (same sex/ opposite sex)	1	2	3	4



<b>Situational Factors</b>	<b>1 not at all stressful</b>	<b>2 slightly stressful</b>	<b>3 moderately stressful</b>	<b>4 extremely stressful</b>
21. The physical environment of the clinical agency (equipment, odor, sights)	1	2	3	4
22. Performing psychomotor skills (dressing changes, injections, urinary cath.)	1	2	3	4
23. Being in an emergency situation	1	2	3	4
24. Unexpected change in clinical assignment	1	2	3	4
25. New orders written by the physician	1	2	3	4
26. Organizational structure of clinical agency (channels of communication and authority)	1	2	3	4
27. Evaluation of performance by clinical agency nursing staff	1	2	3	4
28. Preparing for clinical assignments	1	2	3	4
29. Traveling to clinical setting (time, distance)	1	2	3	4
30. Parking at clinical setting	1	2	3	4
31. Travel to college (time, distance)	1	2	3	4
32. Parking at college	1	2	3	4
33. Purchasing textbooks and other course materials	1	2	3	4
34. Library facilities	1	2	3	4
35. Holding a job while attending school	1	2	3	4
36. Present financial status	1	2	3	4
37. Child care	1	2	3	4

<b>Personal Factors</b>	<b>1 not at all stressful</b>	<b>2 slightly stressful</b>	<b>3 moderately stressful</b>	<b>4 extremely stressful</b>
1. Competition with other students	1	2	3	4
2. Possibility of failure	1	2	3	4
3. Asking questions/speaking in class	1	2	3	4
4. Interactions with other students	1	2	3	4
5. Meeting own expectations of academic performance	1	2	3	4
6. Meeting own expectations in caring for clients	1	2	3	4
7. Receptiveness of faculty for assistance	1	2	3	4
8. Level of own competency (feelings of preparedness for client care)	1	2	3	4
9. Communicating with clients	1	2	3	4
10. Interaction with members of the health care team	1	2	3	4
11. Own abilities to meet requirements of the clinical assignment	1	2	3	4
12. Exposure to experiences that will prepare me for nursing practice (level of assignment)	1	2	3	4
13. Possibility of making an error (medication, assessment of client)	1	2	3	4
14. Exposure to contagious disease/ "catch" something	1	2	3	4
15. Evaluation of performance by client(s)	1	2	3	4

<b>Personal Factors</b>	<b>1 not at all stressful</b>	<b>2 slightly stressful</b>	<b>3 moderately stressful</b>	<b>4 extremely stressful</b>
16. Being in a new environment/ situation	1	2	3	4
17. Physical contact with a stranger	1	2	3	4
18. Seeking and/or receiving academic counseling	1	2	3	4
19. Seeking and/or receiving student counseling	1	2	3	4
20. Seeking and/or receiving tutorial assistance	1	2	3	4
21. Interactions with students in other disciplines	1	2	3	4
22. Involvement in campus extracurricular activities	1	2	3	4
23. Fatigue/energy level	1	2	3	4
24. Ability to sleep	1	2	3	4
25. Relationships/interactions with family members	1	2	3	4
26. Relationships/interactions with friends	1	2	3	4
27. Relationships/interactions with significant other	1	2	3	4
28. Family responsibilities	1	2	3	4
29. Insufficient time to do the things you want	1	2	3	4
30. Physical status (health, weight)	1	2	3	4

## SECTION B: BIOGRAPHICAL DATA

1. Your age (Optional):
  1. Under 18 years
  2. 18-22 years
  3. 23-27 years
  4. 28-32 years
  5. 33-37 years
  6. 38-42 years
  7. 43-47 years
  8. 48-52 years
  9. Over 52 years
2. Sex (Optional): 1. Male      2. Female
3. Ethnicity (Optional):
  1. White, Non Hispanic
  2. Hispanic
  3. Black, Non Hispanic
  4. Asian or Pacific Islands
  5. American Indian
  6. Other (specify) \_\_\_\_\_
4. Number of children under 21 years living in household
  1. none
  2. one
  3. two
  4. three
  5. more than three (specify) \_\_\_\_\_
5. Number of adults living in household other than yourself
  1. none
  2. one
  3. two
  4. three
  5. more than three (specify) \_\_\_\_\_
6. Relationship of above (circle as many as appropriate)
  1. husband
  2. wife
  3. mother
  4. father
  5. friend
  6. your adult child
  7. other (specify)
7. Total number of hours per week you are currently employed while attending college
  1. less than 6
  2. 6-11 hours
  3. 12-18 hours
  4. 19-24 hours
  5. 25-30 hours
  6. 31-35 hours
  7. 36 hours or more
  8. not working
8. How many semesters/quarters of this nursing program have you attended? \_\_\_\_\_
9. Have you worked in the health field? yes \_\_\_\_\_ no \_\_\_\_\_
10. What was your job title?  
\_\_\_\_ Nurse Aide  
\_\_\_\_ Patient Care Technician  
\_\_\_\_ Medical Technologist  
\_\_\_\_ Unit Secretary  
\_\_\_\_ Other

11. Do you hold another degree? yes \_\_\_\_\_ no \_\_\_\_\_
12. List your major \_\_\_\_\_
13. Do you feel you have an adequate support system? yes \_\_\_\_\_ no \_\_\_\_\_
14. Are you responsible for child care? yes \_\_\_\_\_ no \_\_\_\_\_
15. Grade point average last semester \_\_\_\_\_
16. Average grade point average \_\_\_\_\_

**Thank you for your participation**

Waltz, C.F. & Strickland, O.L. (1990). Measurement of nursing outcomes. New York: Springer.

## **Appendix B:**

### **Verbal Instruction/Cover letter to Research Participants**

**You are being asked to participate in a research study designed to identify factors that cause you to feel stressed during your nursing education program. The study will be offered to all students who attend school full time, speak English as a primary language, and who do not have any previous nursing education. In addition, if you have experienced a major personal crisis please do not fill out this questionnaire. Your participation is voluntary and returning the completed questionnaire implies your consent. It will take approximately 10 minutes to complete the questionnaire. It is VERY IMPORTANT that you fill out the entire questionnaire. When you have completed the questionnaire please place it in the designated box.**

**There are no anticipated risks. There is no cost for your participation nor will you receive any direct benefits. Participation in this study will not affect your academic grade. Some items on the assessment instrument may raise questions or concerns. Should this occur, the researcher will be available to answer these questions or refer you to appropriate resources. If you choose not to participate in the research study, just return your blank questionnaire in the designated box. Results of the study will be available to you by request.**

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