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ROLE CONFLICT, ROLE AMBIGUITY, AND ANXIETY AMONG REGISTERED NURSES AND GENERIC STUDENTS IN BACCALAUREATE NURSING PROGRAMS

by

Pamela A. Baj

DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF NURSING SCIENCE

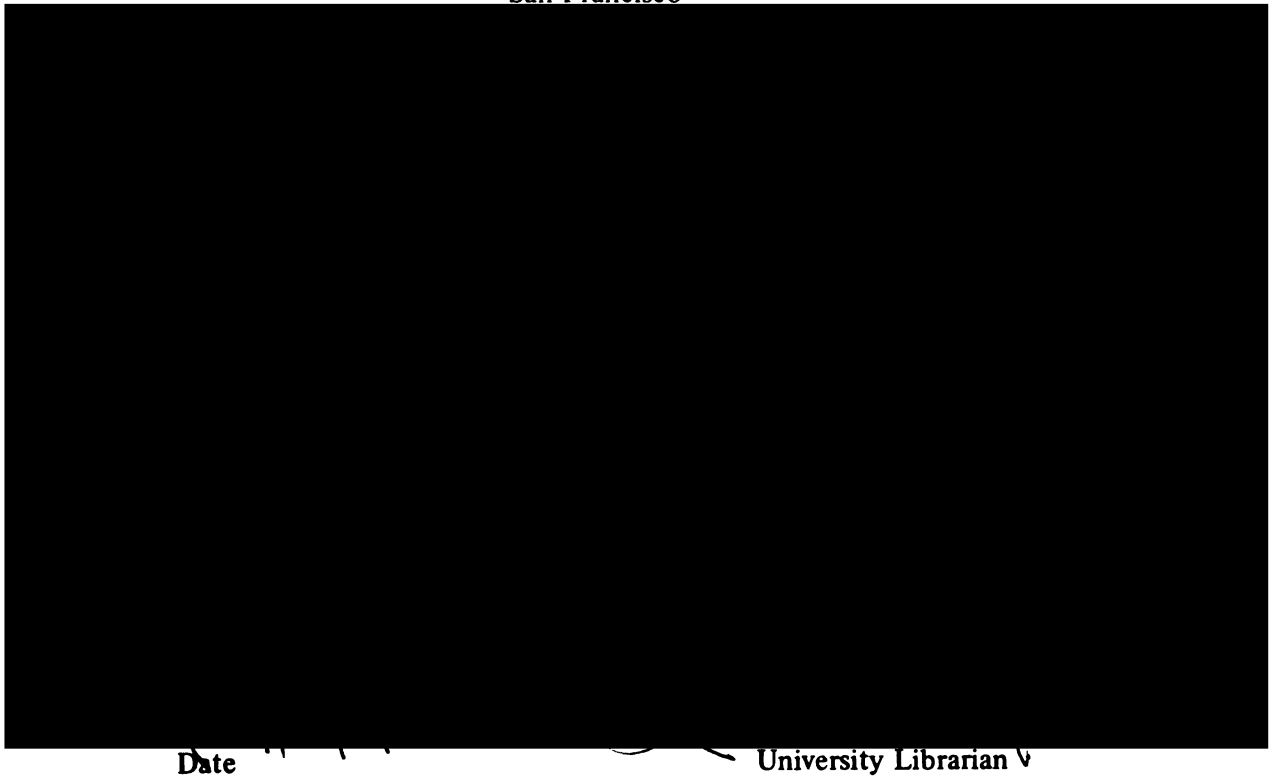
in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA

San Francisco



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Abstract

The overwhelming majority of nurses today continue to be prepared at the diploma or associate degree level despite the call of nursing leadership to make the baccalaureate (BSN) the minimum credential for entry into practice. Substantial numbers of registered nurses return to school for a BSN. Anecdotal reports continue to appear about the stress of the RN to BSN transition but little research has been done to identify the elements of stress in this transition. In this study 141 RN and 110 generic students were surveyed across 18 California generic BSN programs to assess levels of role stress and role strain. Role stress was measured utilizing a 30-item instrument, the Rizzo Conflict/ Ambiguity Scale, and role strain was measured using the 40-item Spielberger State-Trait Anxiety Inventory. Information on demographic characteristics of the sample population was obtained by questionnaire. Data analysis was performed to examine the differences in levels of role stress and role strain in two student populations (RN and generic BSN students). There were no significant differences between RN and BSN students in measured levels of role stress and role strain. However multiple regression analysis demonstrated that role ambiguity was a valid predictor of levels of role strain (state anxiety) in both RN and BSN students ($R^2 = 0.218$). Implications for future nursing research and education are presented.

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Acknowledgments

It is with much gratitude and love that I acknowledge the many contributions of my husband, Dr. Richard Gordon Glogau. His unwavering optimism, confidence, and understanding are largely responsible for the successful completion of this project. I am grateful for the encouragement of my parents, Theodore and Irene Baj, my sister and brother-in-law, Theodora and James Penny, as well as all members of my immediate family who have been a constant source of strength.

Special recognition is afforded to the faculty members of my dissertation committee. I am extremely grateful to Dr. William Holzemer, Chairperson, for all his inestimable help and guidance. I am indebted to Dr. June Bailey, who has been my mentor and inspiring role model, and to Dr. Sandra Weiss and Dr. David Chiriboga for their excellent assistance and advice.

I would also like to acknowledge Dr. Beverly Hall, Dean Margretta Styles and Dr. Virginia Carrieri who have served as members of my preliminary and qualifying examination committees. Dr. Mary Rapson, Dr. Helen O'Shea, Dr. Pat Benner, and Dr. Leonard Pearlin have all made helpful suggestions and shared their experience and research with me in consultation on this project.

I am extremely grateful for the cooperation and support

of Dean Fay Bower, Sr. Geraldine McDonnell, and Dr. Joan Green and all my fellow colleagues at the University of San Francisco School of Nursing who have helped me achieve my goal. The continuous support of Akemi Hiraki, Carol Brosnan-Denton, Brenda Burkinshaw, Sheila Pacheco, Dr. Eleanor Hein and Jean Nicholson is warmly remembered.

I owe much to my RN colleagues whose endless loyalty, kindnesses, and encouragement were deeply appreciated. Sincere thanks is extended to Barbara Bielan, Debbie Avakian, Sharon Lantzy, Lynne Pompetti, Dale Dash, Donna Manganaro, Duane Walker, Dr. Patty Zindler-Wernet, Dr. Annita B. Watson, Dr. Robyn Nelson, Dr. Judy Moran, Karen Kawauchi, and Diane Hendricks.

A special note of appreciation is extended to all participating Deans and Directors of Nursing Schools who graciously granted permission to utilize their settings, and to the respective faculty members who facilitated distribution of the questionnaires.

This study could not be completed without the cooperation of all participating nursing students as well as my own students at the University of San Francisco who have served as the inspiration for this dissertation.

Chapter One

Introduction

Nursing's increasing professionalism continues to pose challenges for nursing education. Although nursing organizations have taken strong stands in support of baccalaureate education for nurses, the majority of registered nurses continue to begin their careers with either an associate degree or a hospital diploma credential (NLN, 1982). Registered nurses returning for a bachelor of science degree in nursing represent an identifiable population within the baccalaureate student bodies. It is unclear whether faculty and administrators of baccalaureate nursing programs envisioned the problems of dissatisfaction and high attrition rate of registered nurse (RN) students who return to school to earn the baccalaureate nursing degree (BSN).

Statement of the Problem

Numerous articles have described the general dissatisfaction of RN students enrolled in BSN programs (Balogh, 1970; Boddie, 1970; Hillsmith, 1978; Muzio, 1979; Shane, 1980; Wilson, 1978; Woolley, 1978; Zorn, 1980). For example, Woolley (1978) reported that one-third of an entering group of RN students dropped out before completion due to: (a) academic performance, (b) ill health, (c) personal crises, and (d) a general disillusionment with the program. Similar disaffections of returning RN students were noted by other authors (Wilson, 1978; Shane, 1980; Hillsmith, 1978).

Although most authors acknowledge that the stress of work schedules, finances, and problems with familial support contribute to the high drop-out rate, the RN students report that a discriminatory class system exists: "The insistence that one is a professional while, at the same time one is pursuing the degree which labels one 'professional' leads to a very definite ambivalence" (Hillsmith, 1978, p. 100). The implication is that the RN student by the very act of returning to school is exposing herself to two potentially conflicting sets of expectations: those views of RN students held by the faculty and views held by the students themselves. A student comments: "I greatly resent being told I can't hold a position (head nurse, supervisor) without the BSN when I have proven myself capable of performing the duties that go with that position" (Hillsmith, 1978, p. 101). Yet the faculty may view the RN student quite differently: "The change we are encouraging our RN students to make is not simply in the amount of knowledge or accumulation of credits they can gain; instead, it is a whole behavioral change - in their attitudes, role, and functions" (Woolley, 1978, p. 103).

Several authors (Hillsmith, 1978; Balogh, 1970; Woolley, 1978; Shane, 1980) have chronicled the tensions that the RN students face. A few authors have attempted to speculate on the nature of the process involved (Muzio, 1979; Shane, 1980; Woolley, 1978). However studies of the stressors of returning RN students are missing. In

essence, although most authors agree that RN students are subject to stress, there is little known about the sources of stress in these students.

Purpose of the Study

The recurring theme in numerous anecdotal accounts of the RN-BSN transition is one of role change, that is the requirement to leave a set of behaviors associated with one role (RN) and acquire a new set of behaviors associated with a new role (BSN). It is within this role change that a major source of stress for the RN students is likely to be found (Hillsmith, 1978; Balogh, 1970; Woolley, 1978; Muzio, 1979). The purposes of the present study include the following:

1. to determine the level of role stress experienced by RN students and generic students enrolled in generic BSN programs.

2. to determine the levels of role strain (anxiety) of RN students and generic students in generic BSN programs.

3. to determine any correlation between role stress and role strain (anxiety) experienced by RN students and their generic student counterparts.

Context of the Problem

The American Nurses Association (ANA) resolved in June 1978 "that by 1985 minimum preparation for entry into professional nursing practice is the baccalaureate degree in nursing" (ANA Convention, 1978, p. 1232). By defining the RN license as necessary for entry into practice, the ANA

focused attention on the variety of educational experiences in nursing education and the ability of the nurse to move among them. The ANA position in 1978, viewed in the historical context, can be seen as an inevitable movement of nursing education away from its hospital based beginnings toward the modern era of professional liberal education.

Prior to the turn of the century, hospital-based instruction was primarily task-oriented and very limited. House rules for nursing students at Massachusetts General Hospital in the late nineteenth century consisted of approximately 20 lines of instruction pertaining to personal hygiene and dress. Nursing education did not become a part of the liberal tradition of college and university learning until Richard Olding Beard opened the University of Minnesota for nursing students in 1909 (Nayer, 1979). But the overwhelming majority of nursing education remained in the hospital as a two year course of instruction.

In 1923 the Goldmark Report was published by the Rockefeller Foundation. This study recommended the strengthening of university education for nurses as well as establishment of programs for subsidiary workers destined to become vocational or practical nurses (Goldmark, 1923). At the time there were over 1750 diploma programs in the country. Fledgling university programs for nurses were begun at Yale, Vanderbilt, and Case Western Reserve.

Twenty-five years later, the Brown Report was published and marked a new era in nursing education. Brown (1948)

identified the need to educate nurses as professionals with a broad liberal education, well versed in the social sciences and prepared to handle the demands for educators, supervisors, and administrators. At the time this report was written (1948) there were 1042 diploma programs and only 114 baccalaureate programs in the country (Nayer, 1979). At the same time there were large numbers of junior colleges eager to include nurses into their new and burgeoning offerings. About 96 junior college programs in nursing existed at that time, and about fifty programs continued to open each year. Hospital programs were faced with economic competition from the university and junior college programs. Confronting the mounting costs of education and the competition from university and junior college programs, the diploma hospital programs began the inevitable decline which has continued to the present day.

The relative financial climate of the 1950s and the impetus of the Brown Report (1948) facilitated the position of the ANA Committee on Current and Long Term Goals' to present the following recommendation during the 1960 convention: "within the next 20-30 years, those entering the profession shall be secured in a program that provides an intellectual, technical and cultural component of both liberal arts and professional education," ("Goal Three," 1979). The ANA membership was urged to promote the baccalaureate degree in nursing (BSN) as the basic educational foundation for nursing. However, members of the

ANA who were largely diploma graduates rebelled.

Advances in medical technology of the 1960s supported the desirability of baccalaureate education in nursing, and the baccalaureate programs continued to grow at the expense of the diploma programs. By 1966 there were 797 diploma programs, 210 baccalaureate and 218 associate degree programs (Nayer, 1979).

In 1965 the ANA released a position paper from the Committee on Nursing Education ("ANA Educational Preparation," 1965) that specified that all nursing education should take place in institutions of higher learning, that professional practice should be at the baccalaureate level, and technical practice at the associate degree level. The subsidiary "practical nurses" would no longer be trained as such. This position was adopted by New York State Nurses Association and studied by many others. Inflation continued to make diploma programs which were hospital-based expensive. Hospital administrators had difficulty justifying the diploma school costs to the patients in the form of increased charges. As a consequence, diploma schools continued to close.

Finally in 1978 the ANA House of Delegates adopted the now famous "1985 Resolution" ("ANA Convention," 1978) which called for baccalaureate education as the minimum level preparation for all nurses licensed for professional practice for the first time in 1985. But the demographic data for nurses in 1977 compiled by the National League of

Nursing ("Some Statistics," 1978) showed an enormous disparity between this farsighted goal of the ANA and the reality of nursing education in recent times. The total number of baccalaureate nursing programs had risen to 341. Nationally, however, 67% of all RNs had the diploma as their highest credential and 11% had the associate degree as their highest credential. But the total of 120,000 baccalaureate students included only about 16% who were RNs seeking a higher credential. Two out of three of these RN students were enrolled in generic baccalaureate programs ("Some statistics," 1978). While setting a laudably high goal for professional preparation, nursing leadership clearly had done little to bring the diploma and associate degree graduates who comprised the majority of the existing nursing workforce into the mainstream of baccalaureate education.

Threatened by implied or imagined loss of economic and professional security, diploma and associate degree graduates with years of clinical working experience viewed possible return to baccalaureate generic programs with frustration and indignation. Numerous articles detailed the stresses of the RN students and the attempts of educators to meet the challenge with alternative pathways to the BSN such as "two-step" programs, articulated degree programs and external degree programs (Badossi, 1980; Balogh, 1970; Banertscher, 1979; Boddie, 1970; Choinski, 1978; "Diploma School," 1980; Galliford, 1970; Hillsmith, 1978; La Violette, 1979; McGettigan, 1970; McKay, 1978; MacMaster,

1979; Muzio, 1979; Nyquist, 1973; Rosenstein, 1978; Shane, 1980; Tourneau, 1970; Woolley, 1978). A central question addressed in many of these articles was is it desireable, recognizing the inevitable progression of nursing within the baccalaureate tradition, for RNs to return to a generic baccalaureate program to obtain a BS or BSN?

On the surface, the arguments on both sides appear relatively simple. Strongly in favor of the generic baccalaureate pathway for RNs are several historical and philosophical educational points. In order to take its place among the professions, the field of nursing in all likelihood will eventually require professional preparation beyond the baccalaureate (Nayer, 1979). There appears to be no reason to assume that nurses require less of a liberal base than do their counterparts in medicine and law. In addition to these points of philosophy, there is a strong historical and social pressure to have all students acquire a generic baccalaureate experience. The "college degree" was and, perhaps to some extent still is, the post-war mark of the liberally educated person. A student taking a path leading to a professional degree has traditionally moved from the lower to upper divisions. i.e. from two years to four years and beyond. In keeping with this philosophy nursing content within the baccalaureate is reserved for the upper division in order to build on the liberal base (Waters, 1976). Consequently the awarding of undergraduate credit or advanced standing for nursing courses taken within

the diploma or associate degree setting would seem to be in direct violation of this concept. This has led many nursing educators to insist that nursing content remain within the junior and senior baccalaureate years, and that RNs wishing to obtain the baccalaureate degree should reenter the traditional generic baccalaureate pathway.

Countering these views of support for the generic baccalaureate degree program for RNs are the opinions of many of the RNs themselves. RNs who return for the baccalaureate degree tend to do so at considerable cost in time and money. The average diploma graduate obtains a generic baccalaureate degree 11.2 years after receiving a diploma credential ("ANA National Sample," 1979). In addition it has been noted that:

> while accusations that baccalaureate content was all the same as that taught in diploma and associate degree programs are unfounded, neither has it been quite true that it was all different . . . . Bolstered by a dominant practical view of the work of nursing, many RNs found it easy to devalue the contribution baccalaureate could make to the daily work world of being an RN," (Waters, 1976, p. 5).

Despite the division of feeling within the profession over the best way to approach the problem of baccalaureate education for RN students, it is evident that the problem will not simply evaporate. Driven by historical imperative, economic necessity, chance opportunity, and/or genuine

desire to broaden their knowledge and competency, increasing numbers of RNs are returning to school to obtain the baccalaureate credential (Hillsmith, 1978).

Some leaders in the field of nursing education anticipated a temporary pool of applicants to baccalaureate programs following the ANA's 1978 resolution which would abate after five years or so (de Tornyay, 1979). They sincerely hoped that attrition would eventually weed out the pool of potential applicants, envisioning among other things the future demise of the diploma programs along with the departure of older diploma or associate degree nurses from the workforce. In addition, they felt the resolution would clearly delineate the difference between professional (baccalaureate) education and technical (associate degree) education in nursing.

Statistics on the matriculation and applicant pools of baccalaureate programs would indicate otherwise. As of 1980 there were 21,140 RN students enrolled in BSN programs in the United States out of a total of 98,190 students in 371 baccalaureate programs that prepare for initial practice (NLN, 1982). This represented an increase in RN enrollment of 21.9 percent over the previous year. In fact, the enrollment of RN students has risen from 6,557 in 1971 to 21,140 in 1980 in the BSN programs. However, the last figure does not include the RN students enrolled in baccalaureate non-nursing programs which totalled 12,531 in 1980 (NLN, 1982).

There are several reasons why the problem of the RN-BSN student will continue to be an increasingly dominant problem in nursing education. First, regardless of intentions of organized nursing manifested through the ANA 1985 Resolution, at the present time no state in the union requires a baccalaureate credential as the minimum requirement for entry into practice (Styles, 1982). The states for the most part regulate the practice of nursing by licensure, and to date they are more than willing to grant practice entry credentials to diploma and associate degree graduates. Since employment is often the priority goal of the RN and these lower level credentials offer quicker and cheaper access to practice than the baccalaureate degrees, it seems self-evident that there will continue to be diploma and associate degree graduates for as long as these programs continue to receive legislative approval.

Second, of the 1,360 basic RN programs in the United States in 1980, only 377 were baccalaureate programs while 697 were associate degree and 311 were diploma programs(NLN, 1982). In addition, the associate degree programs continued their steady percentage increase in number (4 percent over the previous year) to match the decline in diploma programs (6 percent). Yet for the last ten years the number of baccalaureate programs has varied less than 1 percent from year to year (NLN, 1982). Recent developments such as the closure of Skidmore College's 60 year old baccalaureate program and the proposed replacement of Duke's baccalaureate

program with an associate degree program (AJN News, 1982) would seem to indicate that many nurses will continue to acquire less than a baccalaureate credential as their first credential. It is highly likely therefore that the pool of potential RN applicants to baccalaureate programs will continue to rise for some time.

Need for the Study

Professional nursing is committed to the upward academic mobility of nurses (Resolutions, 1978). Despite the continued search for new and innovative alternatives to provide for this upward mobility, the vast majority of RN students currently engaged in the search for a BSN degree are enrolled in generic baccalaureate curricula (NLN, 1982). The generic baccalaureate programs enjoy a major advantage over their less conventional alternatives: the academic and bureaucratic machinery necessary to sustain a curriculum in the university setting already exists, largely to educate the incoming novice students who will attain the BSN as the prescribed minimum credential for entry into practice. It seems evident from the statistics already reviewed that past increases in the numbers of RN students who will enter into baccalaureate programs will continue. One can only speculate how much faster this number might increase if the major economic recession of the early 1980's had not tempered the rate of increase in all baccalaureate enrollments (Styles, 1982).

Since generic baccalaureate programs are likely to

continue as the model educational pathway for some time, it is worthwhile to study the nature of the transitions and stressors faced by these RN students so that responsible ways of dealing with their potential distress can be developed. When the nature of the problem is more clearly understood, the process of transition from RN to BSN may be facilitated. The majority of RNs in this country are still outside the baccalaureate mainstream. The distress of RNs who endure the transitions of a BSN program are widely acknowledged. However, information on the nature of the transition of these students is needed to facilitate the entry, retention, and graduation of RN nurses enrolled in baccalaureate programs. Styles and Wilson (1979) stated:

> Since upward mobility is such an established and popular tradition in this country, we should expect that, while incremental education in nursing may not be the norm in an upgraded system of nursing education and credentialing, provision must continue to be made for those who, for a number of reasons, are exceptions to the generic mode (p. 45).

Conceptual Framework

There are three major conceptual areas underlying the study: (a) the concept of stress; (b) the concepts of role and role stress; and (c) the concept of anxiety. Each will be presented as the conceptual framework of the study.

Concepts of Stress

The concept of stress has been approached by various researchers as a stimulus, as a response to a stimulus (Mason, 1975), and finally as the interrelationship between stimulus and response (Lazarus & Launier, 1978). Selye, the originator of the modern concept of stress, developed his ideas as an outgrowth of his studies on the General Adaptation Syndrome, a biological phenomenon seen in laboratory animals subjected to noxious stimuli (Selye, 1976). He described the triad of adrenal hypertrophy, thymic involution, and gastric ulceration observed in these animals as the stress response, originally conceived as a totally physical phenomenon. Selye saw this biological syndrome as a nonspecific response of physiological systems. Selye contended that all noxious agents imposed on a higher level organism resulted in a nonspecific final common pathway.

Mason (1975) and others have established through experimental conditions that confounding variables in the experimental animal laboratory systems which Selye examined may have misled Selye and other earlier investigators. In reality, the responses of the neuroendocrine system are extremely complex, specific, and are capable of responding to a broad category of psychological and phsyiological stimuli which are termed collectively "arousal".

The response of the organism to individual stimuli is somewhat specific. With further understanding of the discrete variables which intervene between stimuli and the

response of the organism, Selye (1974) further modified his earlier generalist, nonspecific, mechanistic view by suggesting that stress may be harmful (distress) or beneficial (eustress). This subjective, value centered view of stress recognized the importance of mediating psychological influences on the physiological systems, in short, the effect of the mind on the body. By examining the separation of physical from psychological aspects of stress, the attention of investigators was turned to the psychological responses to stress.

Psychological interpretations of stress evolved along different pathways. Two major directions in the psychological interpretation of stress developed: the psychoanalytic approach personified by Vaillant (1977) and others, and the cognitive appraisal perspective whose chief proponent is Lazarus (1978). The psychoanalysts view stress through the mediating processes of the individual (coping) and the patterns of individual behavior (adaptation). They see coping as a set of defense mechanisms which are classified a priori as beneficial or pathological. The outcome then depends on which defense mechanism is selected. Mason (1975) and others have pointed out that the confusion of values and context with the process of coping leads this approach astray. For instance, what may be ineffective, pathological coping (e.g., denial) for one individual in a particular setting may be both effective and protective for another individual in a different setting. Although the same

mechanisms are employed in both instances, the values may be ascribed to each response quite differently.

Lazarus (1978) described the evolution of the understanding of the stress concept over a 30 year time frame. Initially stress was used interchangeably with distress or anxiety as a major pathological modes of adaptation (psychoanalytic view), a sort of intrapsychic pain which was used to explain behavior as tension-reducing and therefore self-reinforcing. However, two trends historically evolved in psychology which Lazarus (1978) credits with development of more encompassing and dynamic use of the term.

First there was a movement from normative research, where large populations were studied to derive common elements of descriptive behavior, to ipsative research which emphasized individual characteristics and differences. The second trend was the rise of cognitive process in the explanation of human behavior. Lazarus (1978) states:

> For example, whereas in 1950 coping was almost universally viewed as a product of emotion and emotion viewed as a drive, my colleagues and I press the argument that emotions (and stress) are products of cognition, that is, of the way a person appraises or construes his or her relationship with the environment (p. 5).

The idea that stress evolves from one's <u>perception</u> of his or her relationship with the environment is important to the

understanding of the modern concept of stress. Lazarus (1978) has termed this perceived relationship between person and environment a transaction to emphasize two important aspects. One, the relationship between person and environment or between two variables is not uni-directional but a two-way approach and probably multi-directional. Secondly, the use of the word transaction implies a simultaneous modification of both person and environment in a mutually dependent fashion. This transactional nature of stress is underscored in its modern usage, for it focuses attention not on the stimulus, nor on the response but on the relationship between the two.

Definition of Stress

The modern usage of the word stress then is not confined to stimulus, response, physical, psychological, specific, or general parameters. The stress concept according to Lazarus (1978) and others applies to the entire phenomenon. Lazarus defined a stress condition to occur when "any event in which environmental or internal demands (or both) tax or exceed the adaptive resources of an individual, social system, or tissue system" (Lazarus, 1978, p. 96).

Measurement of Stress

Within Lazarus' framework of stress, special problems inherent in measuring or quantifying stress in general and RN baccalaureate students in particular become apparent. The level of the system under consideration needs to be

considered in defining stress.

As a hierarchy of systems, humans can be analyzed on various levels: cultural, social, psychological, and physiological. Although the four levels unquestionably interrelate with one another, one needs to consider which level is the subject of discussion in any particular situation. For instance, although psychological forces may affect somatic responses, it is difficult to use physiological stress measures to index psychological stress since "the same somatic response could have many non-psychological causes" (Lazarus, 1978, p. 17). This aspect of stress may be described as its multi-level nature and must be kept in mind when stress is being measured or described in any subject.

Since the modern definition of stress hinges on perception, the investigator needs to rely on self-reporting of subjects. For practical purposes this almost always involves a verbal or written reporting by the subject to the investigator of the subject's perception of the environment. The data is therefore by definition secondhand and lacks investigator verification. This is a problem that needs to be recognized as inherent in psycho-social stress research.

The transactional nature of stress implies flux or change. The element of time is thereby introduced into the measurement of stress. Perhaps measurements should be taken over time or at intervals appropriate to some psychosocial situations in order to accurately characterize stress.

Psychometric testing, however, tends to measure the instantaneous responses of individuals rather than the many responses of a single individual over time. The practicalities of field research often dictate that the instantaneous normative approach is usually more easily completed by the investigator than is the ipsative approach which tends to be more longitudinal. Validity may be increased by sampling at various intervals of time since measurement may more closely parallel the transaction process. If one is left with momentary glimpses of the process, only part of the stress transaction may be ascertained and an incomplete view may result.

The problem for "those who adopt this emphasis is the difficulty of developing research methods suitable to flux and change as opposed to stability" (Lazarus, 1978, p. 15). The instruments frequently utilized to measure stress tend to freeze the respondent at one point in time and assume that the moment is representative of the respondent's condition at other times. The theoretical case may be argued that in a dynamic state, the appearance of stability is illusory. For instance, a metaphor can be drawn to the photographic representation of the ballet. Though a single snapshot may accurately portray the position of the dancers at a given moment, one would need to see a movie or series of snapshots taken in sequence in order to appreciate the character of the dance as a whole. Too frequently in psychosocial research on stress one is given merely a single

snapshot when one needs to see the entire film in order to discern the relationship of the respondents to the variables in question.

The cognitive approach to stress

Stress has been described as the transactional event in which the perceived demands on an individual tax his physiological, psychological, or social resources. The scientific measurement of such events is tempered by the limitations already discussed. Difficulties in verifying self-reported perceptions, focusing on group vs. individual differences, and taking measurements at a given instant in time vs. a longitudinal time frame may limit validity of the investigation. It is significant that despite the powerfully persuasive nature of the cognitive appraisal approach to stress, there exists no reliable instrument for measurement of cognitive appraisal. The majority of instruments used in psychosocial stress continues to be normative instruments derived from a largely psychoanalytic background. These instruments tend to be highly reliable and lend themselves well to use in large sample studies such as the present study of RN students.

Anxiety: An Index of Stress

In this study, a normative tool developed by Spielberger (1970) will be used as a measurement of the response aspect of the stress phenomenon in RN students. Although anxiety is derived from the psychoanalytic view of stress, an examination of Spielberger's concept will show it is not

incompatible with the cognitive transactional view of stress. Spielberger (1970) conceptualized anxiety as a part of the stress phenomenon. He described anxiety as:

> a transitory emotional state or condition of the human organism that is characterized by subjective, consciously perceived feelings of tension and apprehension, and heightened autonomic nervous system activity . . . [which] may vary in intensity and fluctuate over time(p. 3).

He labeled this condition of tension "state anxiety" or A-State. This condition of the moment is contrasted with what he calls "trait anxiety" or A-Trait. Trait anxiety is used by Spielberger to refer to "anxiety proneness, that is, the differences between people in the tendency to respond to situations perceived as threatening with elevations in A-State intensity" (p. 3).

The temporal differences between A-State and A-Trait are important: A-State is how anxious one feels <u>now</u> whereas A-Trait is how anxious one tends to react at other times confronted with other threatening situations.

> State anxiety, like kinetic energy, refers to an empirical process or reaction taking place at a particular moment in time and at a given level of intensity. Trait anxiety, like potential energy, indicates differences in the strength of a latent disposition to manifest a certain type of reaction (p. 3). . . . whether or not people who differ in A-Trait

> will show corresponding differences in A-State depends upon the extent to which a specific situation is perceived [emphasis added] by a particular individual as dangerous or threatening, and this is greatly influenced by individual's past experience (p. 3).

Thus there is no clear distinction between the cognitive and psychoanalytic views of stress as anxiety. The psychoanalytic view of anxiety recognizes the intrapsychic pain and maladaptive responses that are part of anxiety. The cognitive view of anxiety also recognizes perception by the individual as an important element of anxiety. This study will examine a perceived stress among the nursing students, the stress of role change.

The Concept of Role

Socialization was defined by Hardy (1978) as the process which prepares "individuals with the general knowledge, skills, and dispositions that will enable them to function as able members of their societies" (p. 65). In the symbolic interaction perspective of socialization favored by Turner (1962), attention is focused on the meaning which "the acts and symbols of actors in the process of interaction have for each other" (Conway, 1978, p. 20). Within this context, role is defined by Hardy (1978) as the "expected and the actual behaviors associated with a position"(p. 75) held by the actors or role occupants.

The Concept of Role Stress

Historically the concepts of role stress developed out

of the classical schools of organization theory (Katz, 1978; Kahn, 1964). Classical organization theories implied that complex social organizations were structured around vertical chains of command and that there was a one-to-one relationship within this chain of command. Each person responded to a superior directly above and directed an inferior below. The classical theory of organization promoted individual responsibility and ease of accountability. Hardy postulated that prevailing social conditions such as inadequate socialization, rapid changes in social organization, and accelerated technology all contribute to the role stress commonly observed in social organizations (1978, p. 79).

Types of Role Stress

Six types of role problems are identified by Hardy (1978): role ambiguity, role conflict, role incongruity, role overload, role incompetence, and role overqualification. Overqualification and incompetence refer to the excess resources or deficit resources that a role occupant posesses for a given position. Overload occurs when the role occupant is capable but pressed by excessive demands (such as inadequate time allotted for the job) which prevent fulfilling role obligations. Role conflict exists when existing role expectations for a given role are contradictory or mutually exclusive. Role ambiguity may occur when the expectations for a given role are lacking in clarity, are vague, or ill-defined. Role incongruity was

defined by Hardy (1978) as a situation where "a role occupant finds that expectations for his role performance run counter to his self-perception, disposition, attitudes, and values" (p.. 82). Hardy further noted that "socialization into one of the professions [can] create conflict between the individual's values and those of the profession" (p. 82).

There is considerable overlap among these different forms of role stress. Specifically, role incongruity may contain elements of role conflict and role ambiguity. Role incongruity occurs when the individual's perception of his own role requirements contrasts with what is expected of his role by others. This may occur because of explicit stated policy or directives (role conflict) which are opposed to the role which an individual perceives for himself. Or because no clear definition of expectations is given (role ambiguity), an individual cannot determine whether the role expectations match his own perception of the role.

Anecdotal evidence has been presented that the RN students clearly express feelings of role incongruity, conflict, and ambiguity (see, for example, Hillsmith, 1978; Wilson, 1978; Woolley, 1978). RN students cannot match their concept of RN with the role of student, either because the role is not clearly defined (role ambiguity), or because the expectations for the role on the part of the faculty and institutions do not match the students' own perception of the role (role conflict).

Status Inconsistency and Role Stress (Conflict/Ambiguity)

According to Rizzo (1970), when the behaviors expected of an individual are inconsistent, role stress occurs, and the individual will "experience stress, become dissatisfied, and perform less effectively" (p. 151). Taylor (1973) described several sociological theories as "social consistency theories," which predict,

> some form of psychological strain arising from inconsistency or incongruity between hierarchical statuses taken at the same point in time (as in the status-inconsistency formulation), between statuses which are not necessarily hierarchical (status integration), between one or more status dimensions at two or more points in time (mobility), or between an individual's attitude and some standard of his group (p. 1193).

Lenski (1954) is credited with development of the concept of status inconsistency. The concept has received empirical support by later investigators (Hornung, 1977, 1978; Jackson, 1962; Kahn & French, 1970; Taylor, 1973). Essentially Lenski (1954) described a sociological phenomenon where an individual simultaneously occupies different levels on a given social order. For instance, a person engaged in the academic professions is all too familiar with the problem of low salary (low social status) combined with high academic rank (high social status). The incongruity, according to Lenski, leads naturally to a form

of psychological stress.

The present study of RN students involves issues of status inconsistency. As indicated by Hillsmith (1978), Woolley (1978), and Wilson (1978), the RN students enter the BSN generic programs on two levels of a hierarchical scale of social order. On the one hand they may have been employed, salaried, constructive individuals working in places of high public trust as nurses (high status). On the other hand they may be returning to school in generic programs where the faculty can see them as technical nurses, the curriculum deals with them as novices (i.e., students), and they associate with younger generic students who have, for the most part, never been independent of their families (low social status). And since the majority of the RN students are employed while going to school (Zorn, 1980; Hillsmith, 1978), they are simultaneously occupying both roles.

Role Stress produces Role Strain

Hardy (1978) further elaborated the concept of role stress as a problematic social condition which leads to an individual internal response (strain). Thus disparity in expected and actual behaviors leads to an internal tension. Role stress creates role strain. In essence role stress is the psychological outcome of the disparity in roles. External role stress leads to internal strain. The individual finds himself placed in a situation which exceeds his adaptive response (stress) and therefore leads to a

perceived internal response (strain).

Goode (1960) has provided a definition of role strain, the inevitable consequence of role stress, as the felt difficulty in fulfilling role obligations, a subjective response to role problems. This "felt difficulty" can be manifested in a variety of psychological parameters: fear, guilt, anger, hostility, despair, or anxiety.

Anxiety as a manifestation of Role Strain

Spielberger's concept of anxiety as "consciously perceived feelings of tension and apprehension" certainly qualifies as a "felt difficulty" or "subjective response". Anxiety is not the only response of the organism, since role strain can conceivably lead to other subjective responses such as guilt, sense of inadequacy, anger, et cetera. Nevertheless the concept of anxiety as a component of role strain seems useful. A central concept of the present study is that the role stress encountered by the RN student enrolled in the baccalaureate program leads predictably to role strain, of which one component, at least, may be increased anxiety.

Status Inconsistency, Role Conflict and Role Strain

The status inconsistency of RN-BSN students exposes them to role stress. By assuming positions of differing social status, RN students are subject to differing role expectations, behaviors, responsibilities, and rewards for the two positions, i.e., role conflict and role ambiguity. Stress thus becomes a progression: status inconsistency

leads to role stress (conflict/ambiguity) which in turn leads to role strain (anxiety).

Assumptions

Several assumptions have been made about the study of the nature of stress in the RN students:

1. Although changes in role are central to the academic experience of all students, the propriety of the role change is not the focus. The debate between technical vs. professional nurse is not at issue. The stress encountered by one group of students making this transition is the question and not whether the transition should be made. For the purposes of this study it is assumed that the movement from RN to BSN is desirable, and any obstacle to this transition is undesirable.

2. In this study, stress as the stress response per se, is used with a negative connotation, although it is possible that a certain amount of distress (anxiety) is indeed necessary for the role change to take place. Although the study examines stress as a by-product of the change, it may be in part a catalyst for the change. If RN students do in fact experience higher levels of stress than their colleagues, it may or may not be necessary and/or desirable from an educational point of view.

3. Although stress on the psychological level results from a personal, individual perception, it is the collective experience of many individual students which will be

measured. It is assumed that the experiences of stress can be shared and from the data some predictive values may be developed for students.

4. Although generic baccalaureate students will be used as a frame of reference against which the experience of the RN students will be measured, the two populations are not wholly comparable. For example, according to Sobol (1978), McKay (1978), and MacMasters (1979) generic students are undergoing their own difficult transitions. Moreover their demographic characteristics may not be the same as their RN counterparts (Zorn, 1980). Nevertheless the generic students are the only group to which the RNs may be compared since they are exposed to the same curriculum, faculty, and professional role expectations.

Definition of Terms

RN baccalaureate students: students enrolled in baccalaureate nursing degree programs in undergraduate California schools in the junior and senior years who have acquired the RN credential prior to entering the BSN program as indicated on the demographic survey in this study.

Generic students: students enrolled in baccalaureate nursing degree programs in undergraduate California schools in the junior and senior years who have no prior credential in nursing as indicated on the demographic survey in this study.

Role Conflict: a condition which exists when role expectations for an individual student are contradictory or

mutually exclusive (Hardy, 1978) as measured by the Rizzo Role Conflict & Ambiguity Scale (Rizzo, 1970).

Role Ambiguity: a condition which exists when role expectations for an individual student are lacking in clarity, are vague, or are ill-defined (Hardy, 1978) as measured by the Rizzo Role Conflict & Ambiguity Scale (Rizzo, 1970).

State Anxiety: the degree of subjective, consciously perceived feelings of tension and apprehension (Spielberger, 1970) as measured by the A-State scale on the Spielberger STAI Inventory.

Trait Anxiety: the degree of anxiety proneness or tendency to respond to situations with elevations in State Anxiety (Spielberger, 1970) as measured by the A-Trait scale on the Spielberger STAI Inventory.

Null Hypotheses

The null hypotheses for the study include the following statements pertaining to the independent variable of student status (RN vs. generic) and the dependent variables of role stress (role conflict/ambiguity) and role strain (state/trait anxiety):

1. There is no difference in levels of role stress (role conflict/ambiguity) experienced by RN baccalaureate students as compared to their generic student colleagues.

2. There is no difference in levels of role strain (state/trait anxiety) experienced by RN baccalaureate

students as compared to their generic student colleagues.

3. There is no correlation between levels of role stress (role conflict/ambiguity) and levels of role strain (state/trait anxiety) in RN baccalaureate students or in their generic student colleagues.

Chapter Two

Review of Relevant Literature

Many authors have directed their attention to the RN student returning to school (Badossi, 1980; Balogh, 1970; Banertscher, 1979; Boddie, 1970; Choinski, 1978; "Diploma schools," 1980; Galliford, 1970; Hillsmith, 1978; La Violette, 1979; McGettigan, 1970; MacMaster, 1979; Muzio, 1979; Nyquist, 1973; Rosenstein, 1978; Shane, 1980; Styles, 1982; Tourneau, 1970; Wilson, 1978; Woolley, 1978). Some authors have focused more specifically on the phenomenon of the RN student in the baccalaureate nursing program (Balogh, 1970; Boddie, 1970; Hillsmith, 1978; Muzio, 1979; Shane, 1980; Wilson, 1978; Woolley, 1978; Zorn, 1980). Most authors seem aware of the difficulties encountered by the RN baccalaureate student, but their analysis of the situation remains anecdotal and descriptive in the narrative sense. Few authors have attempted to measure or quantify the RN-BSN transition phenomenon in some meaningful way, but there are some germinal studies in the literature which provide a background to the current study.

Hillsmith (1978) conducted a questionnaire survery of 119 RN students at the University of Bridgeport (Connecticut) in 1976-1977. Approximately two-thirds of the questionnaires distributed were returned. Simple statistical compilations of the data were performed. The author used the material to identify a number of points of dissatisfaction among the RN students who were enrolled in

the BSN program. While hinting at the existence of such stressors as finances, work schedules, and lack of familial support, the paper identified a common distressed or negative attitude among the RN respondents.

Differences in how students view themselves as compared to how they are viewed by the faculty may be a significant source of tension. One RN student respondent noted: "The resentment comes from the devaluation and criticism of the diploma program and its grads" (Hillsmith, 1978, p. 101). The study findings supported instances of discrepancies in role perception. RN students envisioned themselves as professional, knowledgable, skilled, and valued members of the health care system who were being maligned by various factions vaguely identified as "they" or "them". Without commenting on the accuracy of their perceptions, the RN students clearly felt they were being singled out as second-class citizens by faculty, the National League for Nursing, the American Nurses Association, and baccalaureate education in general. Yet as they commonly observed in their responses to the questionnaires:

> With the exception of the specialties (occupational, school and public health), some psychiatric hospitals, and several ICUs, technical and professional nurses <u>are</u> used interchangeably in a majority of the facilities in which these nurses work. Every day they see little or no difference in administrator's treatment of the technical and the professional nurse,

> and every week they go to classes where the implied assumption is that only the BSN is truly professional and worthy of being promoted. This is doubly hard to take for those nurses in supervisory positions, because they reached those positions without the BSN. No wonder, then, that there is cynicism and resentment among them in this "Do-as-I-say-and-not-do-as-I-do" world of nursing! (Hillsmith, 1978, p. 102)

In essence Hillsmith's study provides support for the idea that RN students entering the baccalaureate nursing degree programs encounter a substantial degree of role inconsistency. For example, they assume one set of responsibilities, ranks, and privileges connected with one role (RN) while they are accorded an entirely different set of responsibilities, ranks, and privileges with another role (BSN student).

Woolley (1978) presented an examination of the transition from RN to BSN from a faculty viewpoint. The paper chronicled the anecdotal strains and tensions that accompanied the introduction of a class of RN students to a BSN program. No attempt was made to quantify or measure the experiences, but they were presented in a narrative form, and an attempt was made to interpret the phenomena in terms of several sociological theories of change. Basically Woolley saw the source of the students' anxieties and tensions as a problem in socialization and role change: "We felt that the major cause of the anxiety was not amenable to

change in our methods or the curriculum, but needed to be resolved by the students as they coped with the changes they were experiencing" (p. 104). Woolley noted that the students "place a high value on their experience" (p. 103), and yet the program was designed to "effect the changes required and prevent reinforcement of traditional behaviors by keeping students out of the hospital setting: all of their clinical nursing experience takes place within the community" (p. 104).

In essence, the faculty identified the role inconsistency the students encountered. Students had high self-perceptions based on prior work experience coupled with low self-perceptions as novice students. Students were assigned to non-acute care setting where their previous acute care experience as RNs was of little status benefit. The motivation behind such a decision was not stated, although it was stated that removal from familiar settings and familiar patterns of behavior would somehow facilitate the transition from RN to BSN. No data were presented to support such a thesis however, nor were any data presented to support the various socialization models discussed in the remainder of the article as frameworks to explain the RN to BSN transition. It may be just as likely that assignment of students to non-acute care settings may have intensified the students feeling of incongruity and status inconsistency.

The article concluded with the unsupported suggestion that "we must remember that what we really should be doing

is increasing options, not merely substituting one defined set of behaviors for another" (p. 108), implying that the transition from RN to BSN invovlved an expansion of roles. In summary, Woolley's paper contributed further anecdotal evidence of the existence of role inconsistency in RN-BSN students, but there was no development of the idea through further investigation or testing.

Substantial information was developed by Wilson (1978) who conducted in-depth interviews with RN students collected as a theoretical sample of students withdrawing from a baccalaureate program. Utilizing the grounded theory approach, she identified a phase of adjustment and assessment on the student's part which was critical to the student's continuation of the program. She labelled this initial phase a matching process, "a match between what the program is selling and what the nursing student in buying. Central to this exchange is the student's perception of what the nursing program is offering and how she views herself" (p. 49). Wilson noted that another "matching" area concerned the student expectations of the teaching strategies and courses. The student's personal capabilities were also acknowledged to have an impact on the matching process, however no data were presented to further support this line of reasoning.

If one substitutes the word "consistency" for "match", the data which Wilson developed through the interview process can be viewed as further support for the existence

of role inconsistency in the RN students. The students expected one set of behaviors or expectations. However, they were presented with a different set of behaviors or expectations. Specifically with regards to vocation, they perceived themselves in a high status role (employed, professional nurse) while they were treated by the program as occupying a very low status role (technical, skill oriented, student). Wilson notes:

> A number of withdrawal students commented on the existence of hidden agendas or double messages in the program. One of them said:
>
> > It seemed as if everything had a double message. I was told the program emphasized self-direction; and then when I did anything, I was told to check with an instructor. (p. 441)

Wilson concluded the article with a categorization of the withdrawal strategies employed by the students and advocates better communication as a solution to the problem. There was no attempt to relate the role inconsistencies to a larger theoretical framework nor data to suggest how the role inconsistency leads to the withdrawal of the disaffected students from the program.

A significant article on the subject of RN baccalaureate nursing students was authored by Muzio and Ohashi (1979). Although the paper is wholly expository and speculative, it did identify several aspects of the problem of the RN to BSN transition. The authors questioned

"whether the standards, program objectives, and educational processes and structures originally developed for generic students are appropriate for the RN group" (p. 528).

The three characteristics of the RN group which Muzio and Ohashi identified as affecting learning are: (a) prior knowledge and patterns of thought, (b) previous socialization, and (c) variations in age and life stage (Muzio, 1979). Unfortunately, the authors made an assumption which they did not support with data, namely, that the RN students are concrete thinkers, somehow frozen in their intellectual development.

The authors followed the model of Piaget, suggesting that students must undergo a period of physical manipulation of objects, repeating the experience until the student can generalize the experience to abstract thought and arrive at the formal operational stage of learning. It was noted by Kidd (1977) that Piaget's theories revolve largely around learning theory derived from work with children and may not be appropriate for interpretation of adult learning.

Muzio and Ohashi, however, recognized that experiential knowledge was acquired by the RN students but that the faculty was unable to fully evaluate how the experiential knowledge was obtained. The inability of the faculty to effectively evaluate the RN students' prior learning, according to Muzio and Ohashi, was because of problems which the students had in identifying their prior experiences. Muzio and Ohashi did not futher address the problem of

evaluation, but they inferred that discrimination with regards to perceived levels of ability might be a factor. For example, RN students perceive themselves as high in status with regards to prior experience and the faculty (for whatever reason) perceives them as low in status.

While self-actualization as described by Maslow (1971) was suggested by Muzio and Ohashi as the major motivation for the return of the RN student to the BSN program, there was no presentation of data to support this. When contrasted with generic students, RNs were said to be demographically older and more concerned with different issues relating to maturity and adult development. The authors speculated that as adult learners the RNs tend to be interested in specific areas of knowledge or practice rather than general entry level issues. Muzio and Ohashi stated that "most [RN student] nurses with experience in practice have already been socialized into characteristic role behaviors" (1979, p. 530).

Kramer (1974) had already established that these values and standards conflict with what is expected of baccalaureate graduates. Muzio and Ohashi pointed out that the RNs are therefore expected to undergo role change during the BSN program where the generic students are undergoing role development. They stated: "For them [RN students], prior values, norms, and standards must be rejected before new roles can be assumed. This is a difficult and often painful task"(p. 531). The authors

concluded their article by stating:

> Although little research-based information describing the differences between RNs and non-RNs in baccalaureate programs exists, we cannot ignore the preponderance of information from adult development, adult education, and social theory that indicates the reality of these differences. Prior knowledge, patterns of thinking, previous socialization, life stage, and career goals are all factors with major implications for educational planning and research. Such sources of differences between these two groups of students can provide rational support for the evaluation of the generic program as the model for RN education (p. 532).

Not all authors have found differences between the generic baccalaureate students and RN students to be as pronounced as those described by Muzio and Ohashi. Gortner (1968) surveyed nursing majors in twelve western universities and compared RN and generic senior students. While the RN students did show higher professional orientation, there was no significant difference between the two groups in personality, interest patterns, or career choice. The RN students came from lower socioeconomic backgrounds than the generic students and demonstrated a higher degree of upward social mobility.

There is a dearth of data on the stressors encountered by the RN students as compared to the generic students.

There are, however, numerous articles written during the last 40 years detailing the stress responses of students enrolled in a variety of programs and geographical locations (Babcock, 1949; Davis, 1963; Davitz, 1972; Fox, 1963; Gray, 1980; Heineman, 1964; Hutcheson, 1979; Ingmire, 1952; Knopke, 1979; Kramer, 1974; Linn, 1975; McKay, 1978; MacMasters, 1979; Mallory, 1982; Packard, 1979; Reres, 1979; Reiter, 1947; Sams, 1968; Sobol, 1978; Stein, 1969; Weinstein, 1970; Willman, 1976; Zunker, 1975). Although these authors surveyed the stressors encountered by nursing students in generic baccalaureate, diploma and associate degree programs, they did not specifically examine the stressors of RN students enrolled in generic baccalaureate programs. Only one study (Sobol, 1978) attempted to document the nursing student's response to stress as a function of differing individual characterisitics, in this case, degree of self-actualization.

Several authors have focused on the process of socialization which RN students undergo in baccalaureate programs (Brown, 1960; Glass, 1981; Gortner, 1968; Gray, 1980; Mallory, 1982; Meyer, 1960; Mullendore, 1974; Watson, 1982; Wilson, 1978). The link, however, between the resocialization and the stress experienced by these students has not been supported by scientific investigation.

Summary

In summary, a review of the literature indicates that numerous authors have reported the difficulty which RN

students encounter in making the transition from a registered nurse to that of student nurse enrolled in a generic baccalaureate curriculum. The literature also suggests that the difficulty registered nurses experience in their transitional role of practicing nurse to student nurse may be due to discrepancies in perceived and experienced roles. An outcome of the difficulty RNs experience in role transition may be some degree of psychological distress, particularly anxiety.

Chapter Three

Methodology

Study Design

The study employed a cross-sectional design (Colton, 1974) which provides a view of relationships between variables at a given point in time. The purpose was to assess the significance of relationships among the variables of student status, role stress (role conflict and role ambiguity) and role strain (anxiety) in RN-BSN nursing students. Student status was treated as the independent variable whereas role stress (conflict/ambiguity) and role strain (anxiety) comprise the dependent variables as presented in Table 1.

Table 1

Variables Studied

Student Status (Independent Variable)	Role Stress (Dependent Variable)	Role Strain (Dependent Variable)
RN	conflict/ambiguity	anxiety
generic	conflict/ambiguity	anxiety

Demographic characteristics identified by the study were labeled as moderator variables. These variables help define membership in the independent variable groups of generic or RN students. However, they are not part of the hypotheses

under examination.

Sample and Sampling Procedures

All junior and senior baccalaureate nursing students enrolled in California colleges and universities which admit RN students to NLN-accredited generic baccalaureate nursing degree programs comprised the study population. In 1983 there were 18 California colleges and universities which admitted RN students to generic baccalaureate curricula (NLN, 1982). For the purposes of this study, nursing programs which admit RN students to upper level university courses or who bypass the four year generic BSN pathway were excluded. For example, there are a number of alternative pathways to the BSN degree which have been developed both in and outside of California. Such programs as the "Second Step" program (Galliford, 1980) offer two years of primarily upper division (junior and senior year) studies and grant credit for the basic nursing education RN students obtained in associate degree or diploma nursing programs. Other programs, designated "articulated" programs (Stevens, 1981), move the student from a lower to a higher level degree, including the BSN along the way. For example, the associate degree RN in some programs may progress directly to the master's level within the confines of one program. Still a third type of program, the "external degree" program (Studebaker, 1982), which relies on independent study, proficiency testing, and lacks the typical socialization of traditional generic degree programs was also eliminated from

consideration.

The total number of junior and senior students enrolled in the 18 institutions eligible for participation in the study was 3,421, of whom 577 held the RN credential. Letters of invitation were sent to the directors and deans of these nursing programs inviting them to participate in the study (Appendix A). Directors of the schools of nursing who agreed to participate in the study were assured of anonymity. Of 18 directors invited, 12 consented to participate, 4 refused, and 2 failed to respond to the invitation. Four directors refused to participate, citing a variety of reasons. One director stated that the study needed approval from an intramural committee which would not meet for four months. Thus they would be unable to meet the timeframe for collecting the data. A second director stated that they had a moratorium on research of all kinds which utilized their student body. The third and fourth directors gave no reason for their refusal to participate.

In summary, subjects were junior and senior RN baccalaureate nursing students and their generic student counterparts enrolled in generic curricula in twelve California colleges and universities. There were 3,421 students in the total designated population available for sampling. Of these, 251 actually participated in the study.

Human Research Protection

The study was submitted for review and approval by the University of California San Francisco Committee on Human

Research, and received approval 939809 prior to contacting the nursing schools. Students who received a questionnaire packet were invited to participate (see cover letter presented in Appendix B). Questionnaires were unmarked, uncoded, and anonymous. Return of the questionnaire in the pre-addressed envelope constituted informed consent. Those students choosing not to participate simply discarded the packet and retained their anonymity.

Data Collection

The deans and directors of the 12 programs who consented to participate were asked to identify a faculty contact person who would be willing to distribute questionnaires and instruments to the RN students and a corresponding number of generic baccalaureate students enrolled in the junior and senior classes of each school. The faculty who were designated were chosen because they had access to most of the RN and generic students enrolled in the nursing programs as clinical instructors for the students. Faculty distributed a total of 265 questionnaires to RN students in the junior and senior years, and 265 questionnaires were distributed to corresponding generic baccalaureate students.

Faculty contact people were instructed in writing (see letter presented in Appendix C) to distribute the questionnaires to all the RN students and to an equal number of generic students. Faculty were provided with specific written instructions to be read to the students (see

instructions presented in Appendix D) at the time of the distribution of the packets.

Students were invited to participate and were provided with specific instructions by a cover letter (Appendix B). Respondents were requested to complete the questionnaires and return them in pre-addressed, stamped envelopes which were provided. The faculty who distributed the packet of questionnaire and instruments had no further contact with the questionnaires once distributed, nor were they aware of the degree of participation of the students who received the packet. This was done to avoid undue influence on student responses by the faculty. All questionnaires were distributed to the students during the period from March 15, 1983 to April 26, 1983 and were requested to be returned to the investigator by April 30, 1983. Because of the large number of settings involved, it was left to the discretion of the faculty contact persons to decide which day to distribute the packets to the individual students. Once the packets were received by the students, they had the option of responding on any day they wished as long as it was the end of a day when they had received instruction in a clinical setting.

The students and faculty contact people were instructed that the questionnaires were to be filled out at the end of a day of clinical experience as an attempt to standardize the administration of the questionnaires. The time and setting were chosen specifically to eliminate as much of the

influence of environmental variations in classroom settings, campuses, homes, and time of day, as possible. It was assumed that there is enough similarity in acute care hospital settings from teaching hospital to teaching hospital to provide some stability to the testing background.

Instrumentation

The questionnaire packets distributed to the students consisted of three parts: (a) the demographic questionnaire, (b) the Rizzo Role Conflict & Ambiguity Scale, and (c) the Spielberger State-Trait Anxiety Inventory (STAI). Each part will be reviewed individually.

Demographic questionnaire. The first section was a demographic survey of biographical data on the subjects. Such moderator variables as age, sex, marital status, dependents, year in school, type of school, financial aid status, income, prior schooling, mother's level of education, prior vocational experience, general health, recent major life events, current employment, days missed from school, and academic grade point average are reflected in the questionnaire shown in Appendix E. In particular, this section of the questionnaire identified the independent variables of student status, whether the respondent was an RN or a generic baccalaureate student. Twenty-four independent, moderator variables were categorized by this portion of the questionnaire, reported in Table 2.

Table 2

Variables Assessing Socio-Demographic and Professional Characteristics

	Variable	Type	Function
1	sex	Discontinuous	Moderator
2	age	Continuous	Moderator
3	year in program	Discontinuous	Moderator
4	semester admitted	Discontinuous	Moderator
5	nursing employment	Continuous	Moderator
6	non-nursing employment	Continuous	Moderator
7	financial aid	Discontinuous	Moderator
8	school type	Discontinuous	Moderator
9	marital status	Disctoniinous	Moderator
10	dependents	Continuous	Moderator
11	life events/stresses	Discontinuous	Moderator
12	health	Discontinuous	Moderator
13	days missed	Continuous	Moderator
14	student status	Discontinous	Independent
15	years as RN	Continuous	Moderator
16	RN training	Discontinuous	Moderator
17	last job as RN	Discontinuous	Moderator
18	practice setting	Discontinuous	Moderator
19	clinical area	Discontinuous	Moderator
20	motivation	Discontinuous	Moderator
21	household income	Discontinuous	Moderator
22	mothers education	Discontinuous	Moderator
23	GPA	Continuous	Moderator
24	other degrees	Discontinuous	Moderator

Rizzo role conflict & ambiguity scale. This instrument was developed by Rizzo, House, and Lirtzman (1970) to assess role conflict and role ambiguity of persons in complex organizations. The theoretical basis for the development of the test items was that they reflect concepts commonly found in the literature on role theory, specifically role conflict and role ambiguity. The items were originally administered by Rizzo to management personnel in a bureaucratic organization. Rizzo then

performed factor analysis of the items using an image covariance method and varimax rotation.

Two factors, role conflict and role ambiguity, were found to be statistically significant. Kuder-Richardson internal consistency reliabilities with Spearman-Brown corrections were obtained in two separate samplings of the test population. The reliabilities for role conflict were .82. Role ambiguity reliabilities were reported as .78 and .81. Test-retest reliabilities were not available for this instrument.

Numerous investigators have used this instrument for their published investigations (Tosi, 1971; Organ and Greene, 1974; Johnson and Stinson, 1975; Keller, 1975; Miles, 1976; Rogers and Molnar, 1976; Shuler, 1977). Rapson (1980) used the Rizzo tool in a nursing study on multiple task-role requirements as a source of role stress in university nursing faculty.

Role conflict. Four aspects of role conflict were identified by Rizzo. The first was conflict between the respondent's internal standards or values and the expected role behavior (items 3, 5, 27, 29). These items can be identified as person-role conflict.

The second was conflict between the time, resources, or capabilities of the respondent and the expected role behavior (items 1, 11, 15, 17, 25). This conflict may be interpersonal when a person in a related role indicates incompatibility. Conflict may also be related to

organizational demands which generate the conflict. From the respondent's view, the conflict may be either intra-role conflict or person-role conflict, e.g., inadequate capability.

The third aspect identified by Rizzo was conflict between several roles for the same person which require different or incompatible behaviors, or changing behaviors to fit the situation (items 7, 19). This is role overload and is inter-role conflict for the respondents as they attempt to fill more than one position in the role system.

The fourth and last aspect was conflict in the form of incompatible policies (items 9, 13); conflicting requests from others (item 21); and incompatible standards of evaluation (item 23) which represent conflicting expectations and organizational demands. As Rizzo pointed out role conflict items are not mutually exclusive and independent. Many items suggest sanctions attached to the role behaviors and are therefore interrelated with role ambiguity components.

Role ambiguity. Rizzo characterized role ambiguity in two ways. The first was the predictability of the outcome or responses to one's behavior such as reflected in items 8, 16, 24, 30. These items reflect whether or not respondents depend on the consistency of environmental and social reaction in relation to role behaviors. The second characterization was the existence and clarity of behavioral requirements which emanate from the environment and which

may guide behavior or provide knowledge that the role behavior is appropriate. Items 2, 4, 6, 10, 12, 14, 18, 20, 22, 26, 28, reflect environmental behavioral requirements which are further described as follows:

> certainty about duties, authority, allocation of time, and relationships with others; the clarity or existence of guides, directives, policies; and the ability to predict sanctions as outcomes of behaviors. (Rizzo, 1970, p. 156.)

Respondents are asked to indicate their responses to each item by marking a Likert-type scale from 1 to 7, with 1 being "always false" and 7 being "always true". In this manner, the subject's individual responses to each item can be scored and compared with responses to other items as well as to other subjects' responses.

All odd numbered items on the Rizzo scale are scored for role conflict, and all even numbered items are scored for role ambiguity. Polarity differences require transposition or reversal of the marked answers before summing the total for the following items: 1, 2, 4, 7, 10, 12, 15, 16, 17, 20, 24, 26, 29.

Factor Analysis of the Rizzo Instrument

When Rizzo originally reported his instrument for measurement of role conflict and ambiguity, he factor analyzed the 30 items and extracted two factors which accounted for 56 percent of the common variance of the 30-item set (Rizzo, 1970). He found 14 items loading

greater or equal to .30 on one of the factors which he used in developing the scale. Complex items, those that scored high on both factors, were excluded.

In order to closely parallel Rizzo's development of this scale, the 30-item set used in the present study was also subjected to factor analysis using an image covariance method and varimax rotation. Three successive factor analyses yielded an 18-item set with the varimax rotation factor matrix shown in Table 3.

Table 3

Varimax Rotation Factor Matrix for 18-Item Rizzo Test

Item Number	Factor 1	Factor 2
1	0.635	-----
4	0.531	-----
5	-----	0.206
9	-----	0.372
10	0.464	-----
11	-----	0.384
12	0.672	-----
13	-----	0.633
15	0.404	-----
16	0.453	-----
20	0.669	0.337
21	-----	0.696

Table 3 continued

Item Number	Factor 1	Factor 2
23	-----	0.518
24	0.443	-----
25	-----	0.516
26	0.590	-----
27	0.190	-----
30	0.438	-----

Cronbach alphas (split-half) were then computed after elimination of items to determine reliability of the instrument both before and after each successive factor analysis as presented in Table 4.

Table 4

Comparison of Cronbach Alphas (Split Half) on the Rizzo Instrument after Factor Analysis and Subsequent Item Reduction

	Conflict	Ambiguity	Total
Round 1 30 Items	.768	.832	.847
Round 2 24 Items	.794	.750	.879
Round 3 18 Items	.766	.799	.833

The first analysis on 30-items resulted in the elimination of six items with factor loadings below .30 and the resulting increase of the Cronbach alpha from .847 for 30 items to .879 for 24 items. The second factor analysis resulted in extraction of six more items with low factor loadings. The alpha for the new 18 items fell to .833; however, the alpha for the ambiguity elements rose to .799. The factor analysis was terminated at this point because of the slight fall in the total alpha and the final number of elements extracted approximating Rizzo's prior scale.

The alphas computed for the 18-item set compared well with those found by Rizzo. On a 14-item set he found alphas of .816 for conflict and .780 for ambiguity compared to .766 and .799 respectively in the 18-item set of the present study. A total of ten items pertain to role conflict and eight items to role ambiguity.

The responses to the Rizzo instrument were scored according to the method described previously in Chapter 3. Raw scores for conflict and ambiguity were obtained by totalling the ten and eight items respectively, after the appropriate reversal of items 1, 4, 10, 12, 15, 16, 20, 24, and 26. A combined score for the instrument was computed by addition of the raw scores for both conflict and ambiguity. It should be noted that items 5 and 27 are not functioning well with factor loading scores less than .3, but it was felt that further extraction would be undesirable because (a) the reliability for the total test would be compromised,

and (b) the number of items approximated Rizzo's original construction of the instrument.

Spielberger State-Trait Anxiety Inventory. The third part of the questionnaire packet consisted of the Spielberger State-Trait Anxiety Inventory. Spielberger's concepts of trait anxiety (anxiety proneness) and state anxiety (apprehension at the moment) have been reviewed in some detail in Chapter one.

Spielberger, Gorsuch and Lushene (1970) developed a tool which measures levels of state anxiety and trait anxiety in adults. This tool consists of 20 items for state anxiety and 20 items for trait anxiety. Each item is a statement such as "I feel calm" to which the respondent indicates on a Likert-type scale one of the following: 1= "not at all", 2= "somewhat", 3= "moderately so", and 4= "very much so" for the state anxiety scale and 1= "almost never", 2= "sometimes", 3= "often", and 4= "almost always" for the trait anxiety scale. Consistent with the concepts of anxiety advanced by Spielberger, for the "state" items, the respondents are instructed to answer how they feel "right now", whereas the trait items require a response based on how the subjects "generally feel".

The Spielberger A-trait scale correlates .75 with the Institute for Personality and Ability Testing Anxiety Scale, .80 with the Taylor Manifest Anxiety Scale, and .52 with the Affect Adjective Checklist (Spielberger, 1970). The A-state scale was validated by its developers with undergraduates in

four experimental conditions: stressful movie, examination, normal, and relaxed. The mean scores respectively were 60.94, 43.69, 37.24, and 10.27 with alpha reliabilities of .93, .93, .91, and .83 respectively. These scores showed an appropriate decrease in magnitude with progressively less stressful situations.

Spielberger established reliabilities for the instrument based on test-retest correlations obtained from 1466 undergraduate students (Spielberger, 1970). The test-retest reliabilities range from .73 to .86 for the trait anxiety section. The test-retest reliabilities for the state anxiety section are desirably low, ranging from .16 to .54. Since the concept of state anxiety requires that the condition be of the moment, there should be variability under repeated testing conditions which likely expose respondents to different levels of stress.

However, in the present study internal consistency for both STAI scales as measured by Cronbach alpha coefficients ranged from .83 to .92 for the state anxiety portion and similarly .83 to .92 for the trait anxiety portion. For each respondent a single score for trait anxiety (A-trait) and for state anxiety (A-state) are computed. The responses on items 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20 are scored by reversal for the A-State scale. The response in items 21, 26, 27, 30, 33, 36, and 39 are scored by reversal for the A-Trait scale.

Sobol (1978) used the Spielberger Inventory in a study

of baccalaureate nursing student's response to stress and found changes in test scores in state anxiety with different situations. Although RN students were not included in her study, Sobol used the instrument to measure state and trait anxiety in low stress and high stress situations. In low stress situations, the mean A-State score was 35.68, S.D. = 9.45, and the mean A-Trait score was 39.13, S.D. = 7.85. When the students were in a high stress situation, the mean A-Trait score was 38.55, S.D. = 7.69, virtually unchanged. The mean A-State score however rose to 44.53, S.D. = 12.76, one hour prior to the students' final examination. This demonstrates that the A-Trait portion of the instrument reflects little variation from situation to situation, but the A-State scale can measure the day to day changes in anxiety of the students. Sobol's data indicate that generic nursing students experience anxiety in a manner similar to their undergraduate counterparts: A-trait levels remain constant while A-state levels vary with the testing situation. Findings of the Sobol study support the use of the Spielberger Inventory to measure anxiety in baccalaureate nursing students and may well prove to be useful in measuring anxiety in RN generic students enrolled in baccalaureate nursing programs.

Chapter Four

Presentation of Findings

This chapter reports the descriptive findings and the analyses related to the hypotheses. Of the 530 questionnaires distributed, 254 were returned by mail before the designated deadline which represents a response rate of 47.9 %. Four questionnaires were received after the deadline. The 254 respondents represent 7.4 % of all junior and senior nursing students enrolled in baccalaureate four-year programs in California (n = 3,421). Of the 254 rspondents, three were from licensed vocational nurses (LVNs) enrolled in the baccalaureate program. These three were not included in the sample because of the difficulty in assignment of the LVN to either the generic or RN student group.

The frequency distributions and percentages for 18 demographic variables of the RN students, generic students, and the total sample are presented in Table 5. For six variables pertaining only to RN students, tabulations are omitted for the generic and total columns.

The majority (81.7 %) of generic student respondents were full-time senior students, whereas only 39.6 % of RN students were full-time seniors. This difference may reflect the previously reported (Hillsmith, 1978) preference of RN students for part-time study because of family committments and work schedules. A total of 48.9 % of the RN respondents were engaged in baccalaureate study on a

Table 5

Frequency Distribution for Demographic Variables

Variable	Generics n=110		R.N.s n=141		Total n=251	
Sex						
Male	5	4.5 %	6	4.3 %	11	4.4 %
Female	105	95.5	135	95.7	240	95.6
Year in program						
Junior fulltime	6	5.5	16	11.5	22	8.9
Junior parttime	2	1.8	31	22.3	33	13.3
Senior fulltime	89	81.7	55	39.6	144	58.1
Senior parttime	12	11.0	37	26.6	49	19.8
no answer					3	
Semester begun						
Junior - fall	18	16.4	55	39.0	73	29.1
Junior - spring	6	5.5	23	16.3	29	11.6
Senior - fall	25	22.7	32	22.7	57	22.7
Senior - spring	43	39.1	21	14.9	64	25.5
Other	18	16.4	10	7.1	28	11.2
Financial aid						
None	54	49.5	123	87.2	177	70.8
Loans < 1/2 cost	16	14.7	6	4.3	22	8.8
Loans > 1/2 cost	6	5.5	2	1.4	8	3.2
Grants < 1/2 cost	9	8.3	3	2.1	12	4.8
Grants > 1/2 cost	3	2.8	3	2.1	6	2.4
Loans+grants < 1/2	9	8.3	2	1.4	11	4.4
Loan<1/2,grant>1/2	5	4.6	0	0.0	5	2.0
Loan>1/2,grant<1/2	7	6.4	2	1.4	9	3.6
Type of school						
Public	79	71.8	96	68.1	175	72.5
Private	29	26.4	40	28.4	69	27.5
No answer	2		5		7	
Marital status						
Single	70	65.4	58	41.7	128	52.0
Married	33	30.8	56	40.3	89	36.2
Divorced/separated	4	3.7	23	16.5	27	11.0
Widowed	0	0.0	2	1.4	2	0.8
No answer					5	

Table 5 (continued)

Variable	Generics n=110		R.N.s n=141		Total n=251	
Major life events						
Marriage-engagement	25	22.7	16	11.3	41	16.3
Loss of spouse	18	16.4	29	20.6	47	18.7
Change in job	30	27.3	31	22.0	61	24.3
Birth of child	1	0.9	13	9.2	14	5.6
Change residence	24	21.8	37	26.2	61	24.3
Illness	8	7.3	20	14.2	28	11.2
Change in income	1	0.9	2	1.4	3	1.2
Other	13	11.8	15	10.6	28	11.2
Health status						
Excellent	61	55.5	86	61.0	147	58.6
Minor illness	40	36.4	45	31.9	85	33.9
Serious illness	3	2.7	3	2.1	6	2.4
Chronic illness	6	5.5	7	5.0	13	5.2
Student status						
Generic student	110	100.0			110	43.8
RN student			141	100.0	141	56.2
Years as RN						
One year			21	14.9		
Two years			9	6.4		
Three to five years			36	25.5		
Six to ten years			43	30.5		
Over ten years			29	20.6		
RN training						
Diploma school			44	31.2		
Associate degree			94	66.7		
Foreign degree			2	1.4		
Other			1	0.7		
Last position as RN						
Staff nurse			78	55.3		
Assistant head nurse			22	15.6		
Head nurse			22	15.6		
Supervisor			10	7.1		
Asst. director/director			1	0.7		
Other			8	5.6		

Table 5 (continued)

Variable	Generics n=110		R.N.s n=141		Total n=251	
Practice setting						
Ambulatory care			6	4.3		
Public/community			7	5.0		
Acute inpatient			115	81.6		
Chronic care			3	2.1		
Industrial			0	0.0		
No answer			6			
Clinical area						
Medical/surgical			87	61.7		
Pediatrics			17	12.2		
Obstetric/gynecologic			11	7.8		
Psychiatric			2	1.4		
Community			3	2.1		
Other			16	11.3		
Motivation						
Career mobility			70	49.6		
Job security			2	1.4		
Economic advancement			2	1.4		
Personal growth			35	24.8		
For graduate school			8	5.7		
Something to do			0	0.0		
Bored with job			1	0.7		
No answer			20			
Income (monthly)						
Less than $1000	53	48.2	18	12.8	71	28.3
Less than $1500	15	13.6	33	23.4	48	19.1
Less than $2000	9	8.2	27	19.1	36	14.3
Less than $2500	11	10.0	31	22.0	42	16.7
Less than $3000	9	8.2	12	8.5	21	8.4
Over $3000	8	7.3	19	13.5	27	10.8
No answer					6	

Table 5 (continued)

Variable	Generics n=110		R.N.s n=141		Total n=251	
Mother's education						
Elementary school	9	8.7	31	23.0	40	16.7
High school	39	37.5	59	43.7	98	41.0
College no degree	27	26.0	17	12.6	44	18.4
Associate degree	10	9.6	14	10.4	24	10.0
Bachelor's degree	17	16.3	11	8.1	28	11.7
Master's degree	1	1.0	3	2.2	4	1.7
Doctoral/profess.	0	0.0	0	0.0	0	0.0
Other					12	
Other degrees						
None	99	90.0	129	92.1	228	90.8
Bachelor science	3	2.7	7	5.0	10	4.0
Bachelor art	7	6.4	4	2.9	11	4.4
No answer					1	

part-time basis.

Besides a difference in time allocated to BSN studies, the two groups of students differed in class standing. One-third of the RN students responding were of junior class status whereas only eight generic students (7.3 %) were of junior rank. This discrepancy may result from the fact that many baccalaureate programs reserve the majority of the clinical courses for the senior level student. The questionnaires were distributed to all students during clinical rotations where there may be a mixture of both junior and senior students. It may be that many RN students are admitted to the senior clinical courses in nursing while retaining university status as juniors because of incomplete

non-nursing prerequisites. It may not be unlikely for RN students to be taking senior clinical rotations while technically classified as university juniors. This may be relected in the RN responses to question 16 regarding prior RN training.

One-third of the RNs responding were graduated from Diploma Schools of nursing, and two-thirds of the respondents were graduates of Associate Degree programs. Associate Degree RNs would automatically enter a baccalaureate nursing program with junior level rank, but most diploma students would have at least one and one-half to two years of university lower level prerequisites to complete before attaining junior level status. The diploma RNs are likely to account for the discrepancy between the relative distribution of senior vs. junior students in the two subgroups (RN vs. generic), reflecting the academic heterogeneity of the RN group of students.

When compared to the generic students, RNs were more likely to have been married or divorced (56.8 % vs. 34.5 %), less likely to have received any financial aid (13.8 % vs. 41.5 %), and tended to come from families where the mother's education did not continue beyond the high school level (66.7 % vs. 46.2 %). As an interesting footnote, none of the respondents had a mother who had achieved a doctoral degree or professional degree.

A comparison of recent major life events also suggests differences in the life histories of the two groups. The

generic students showed a higher percentage of recent engagements or marriage (22.7 % vs. 11.3 %); the RN students had a higher percentage of recent childbirth (9.2 % vs. 0.9 %) and a slightly higher incidence of family illness (14.2 % vs. 7.3 %). Income levels were very different for the two groups and will be examined with data on the continuous variables later in the chapter. Most RNs (87.2 %) had monthly household incomes in excess of $1000, and 44 % had incomes greater than $2000 a month. By contrast among the generic students only 51.8 % had incomes above $1000 and 25.5 % were above $2000.

In some ways the two groups were comparable. Public schools outnumbered private programs about three to one for both groups of students. Both groups reported excellent general health (58.6 %) or at the most only minor illnesses (33.9 %). And only a small fraction of both groups (8.4 %) had achieved any previous baccalaureate or other higher degree in any field other than nursing.

RN Specific Responses

Six questions on the demographic questionnaire were directed only to the RN groups. Over 51 % of the RNs had been an RN for six or more years, and 25% had been an RN for three to five years. In addition, roughly 15 % of the RNs had held their credential for only one year before entering the baccalaureate program.

The RN students tended to reflect the national distributions in clinical areas recently reported by a

professional nursing organization (NLN, 1982). The majority of RNs worked in acute care settings (81.6 %). Most were employed on medical-surgical areas (61.7 %), and the majority worked as staff nurses (55.3 %). Approximately one-third of the RNs had held positions as assistant head nurse or head nurse in their most recent professional position. Approximately half of the RNs gave career mobility as the major reason for seeking the BSN. One quarter of the nurses indicated that personal growth was their major motivation. Fourteen percent of the RNs did not respond to the question about motivation. This question must have been the most troublesome for the respondents since it had the highest proportion (14 %) of answers left blank of any question in the entire questionnaire.

The descriptive statistics for the continuous demographic variables for both groups are reported in Table 6. The RNs were older than the generic students (mean 31.92 vs. 23.11 years). The RN students were employed in nursing capacities a mean of 27.07 hours per week compared to generic students mean of 11.49 hours. However, generic students were employed in non-nursing functions only slightly more than RNs (mean 2.60 vs. 0.09 hours) and for very little time, which may reflect the differences in financial aid status and the differences in household incomes reported. Despite the higher number of employment hours and slightly higher incidence of minor illness, the RN

Table 6

Descriptive Statistics for Demographic Variables

Means, Standard Deviations, and Low-High Scores

	Generics n=110			R.N.s n=141			Total n=251		
	$\bar{X}$	S.D.	range	$\bar{X}$	S.D.	range	$\bar{X}$	S.D.	range
Age	23.11	5.84	20-41	31.92	8.94	21-65	28.0	8.88	20-65
Nursing[a] work	11.49	11.91	0-40	27.07	13.34	0-52	20.22	14.89	0-52
Non-[b] nursing	2.60	7.20	0-30	0.09	1.01	0-12	1.19	4.99	0-30
Depen-dents	1.20	0.54	0- 3	1.70	1.06	1->4	1.48	0.91	0->4
Days missed	2.22	8.47	0-88	1.09	1.82	0-10	1.59	5.79	0-88
Income[c] Monthly	1.63	0.87	0->3	2.15	0.75	0->3	1.95	1.37	0->3
Grade average	3.32	0.37	2.4-4.0	3.16	0.49	2-4	3.23	0.44	2-4

[a] hours per week employed as R.N.

[b] hours per week employed other than R.N.

[c] combined household income in thousands of dollars

group reported fewer missed days of schooling (mean 1.09) than the generic students (mean 2.22).

The household incomes were extrapolated from the discrete categories reported. The mean monthly income for the RN households was $2150 and for generic students was $1630. RNs also had a higher number of dependents, though somewhat surprisingly not much higher (mean of 1.7 vs. 1.2). And the difference in general grade point average was negligible. Generic students had a mean GPA of 3.32 vs. 3.16 for RNs.

In summary, a profile of the RN student emerges. The RN student group appeared somewhat older, more advanced financially, more likely to have a spouse and dependents, less likely to receive financial aid than the generic students, and working in acute care settings as medical surgical staff nurses approximately 30 hours per week while attending school.

Generic students, on the other hand tended to be younger, single, not working, receiving financial aid, earning lower incomes, attending school full-time. Both groups of students maintained a B average, and the majority of them were enrolled in state schools about 3:1 over private programs.

Tests Relating to Hypotheses 1 and 2

Scores for role conflict and role ambiguity were obtained for each respondent according to the method for scoring the 18-item Rizzo scale outlined in Chapter 3. Mean

scores, standard deviations, and range of low and high scores for conflict, ambiguity, and a total score for role stress were computed for both student groups, RN and generic. These results are displayed in Table 7

The responses for the Spielberger State-Trait Anxiety Inventory portion of the questionnaire were scored according to the specification of the test's author described in Chapter 3 (Spielberger, 1970). Means, standard deviations, and low and high scores for both State Anxiety and Trait Anxiety are presented for both RN and generic student groups in Table 8. Mean scores for both groups of students were very similar.

The first null hypothesis of the study was that there is no difference in levels of role stress (role conflict / ambiguity) experienced by RN baccalaureate students as compared to their generic student colleagues. The second null hypothesis was that there is no difference in levels of role strain (state / trait anxiety) experienced by RN baccalaureate students as compared to their generic student colleagues.

To test the first two hypotheses, students *t*-tests were performed with the Rizzo scores (conflict, ambiguity, and total scores) and Spielberger scores (state anxiety and trait anxiety), with student status as the independent variable (RN vs. generic). The results are presented in Table 9. Comparing RN vs. generic groups, the *t* values for conflict, ambiguity, combined stress scores, state

Table 7

Descriptive Statistics for Rizzo Instrument Scores

Means, Standard Deviations, and Low-High Scores

	Generics n=110			R.N.s n=141			Total n=251		
	$\bar{X}$	S.D.	range	$\bar{X}$	S.D.	range	$\bar{X}$	S.D.	range
Conflict Score	27.45	8.14	10-52	28.83	9.90	9-55	28.22	9.18	9-55
Ambiguity Score	28.82	7.89	13-50	28.54	9.35	9-53	28.66	8.72	9-53
Combined Score	56.26	13.14	31-97	57.37	16.56	18-105	56.88	15.13	18-105

Table 8

Descriptive Statistics for Spielberger Inventory Scores

Means, Standard Deviations, and Low-High Scores

	Generics n=110			R.N.s n=141			Total n=251		
	$\bar{X}$	S.D.	range	$\bar{X}$	S.D.	range	$\bar{X}$	S.D.	range
State Anxiety Score	41.35	11.35	21-74	39.29	10.29	20-66	40.19	10.79	20-74
Trait Anxiety Score	39.73	9.23	17-65	38.30	8.80	20-65	38.93	9.00	17-65

Table 9

t-Tests Comparing Two Student Groups Scores for Conflict and Ambiguity & State and Trait Anxiety

	n	*M*	*SD*	*t*	*df*	*p*
Conflict						
RNs	141	28.830	9.906	1.22	248.31	0.226
Generics	110	27.446	8.138			
Ambiguity						
RNs	141	28.539	9.348	-0.26	247.45	0.798
Generics	110	28.818	7.886			
Total Score						
RNs	141	57.369	16.557	0.59	248.92	0.556
Generics	110	56.264	13.135			
State Score						
RNs	141	39.294	10.285	1.48	222.36	0.140
Generics	110	41.346	11.349			
Trait Score						
RNs	141	38.305	8.803	1.24	228.83	0.218
Generics	110	39.727	9.232			

anxiety, and trait anxiety were not significant at the .01 level. Therefore the first and second null hypotheses were accepted.

Tests Relating to Hypothesis 3

The third null hypothesis stated that there is no correlation between levels of role stress (role conflict / role ambiguity) and levels of role strain (state anxiety / trait anxiety) in RN baccalaureate students or their generic student colleagues. An initial examination was made of the relationship between the variables of role stress and role strain by calculating Pearson correlation coefficients for conflict/ambiguity and state/trait scores and selected demographic continuous variables reported in Table 10. Significant r values were obtained for several variables. The most striking were the cross-correlations between the four test scores for conflict and ambiguity on the one hand, and state anxiety and trait anxiety on the other. Of these correlations, state anxiety correlated with ambiguity scores at $r = .48$ ($p < .01$) which represented the highest correlation between different factors of the two testing instruments. A similar though somewhat lower correlation was found between scores for conflict and state anxiety ($r = .26$, $p < .01$). The correlations between trait anxiety and conflict and ambiguity were similar to those for state anxiety and also correlated in a positive direction. In fact, for the most part, the two variables of state and trait anxiety, behaved in an almost identical fashion.

Table 10

Pearson Correlation Coefficients for Selected Demographic Variables and Conflict, Ambiguity, State and Trait Anxiety Scores

	Age	Nursing hours	Non-nursing hours	Dependents	Days missed	Years as RN	Income	GPA	Conflict	Ambiguity	Total	State Anxiety	Trait Anxiety
Age	1	27**	-18**	39**	-3	34**	28**	-4	13*	8	12*	-2	2
Nursing hours		1	-29**	13*	2	18*	16**	-22**	-12*	-10*	1	-12*	-11*
Non-nursing hours			1	-6	3	11	-13*	2	-4	-2	-4	9	3
Dependents				1	-6	22*	29**	-2	20**	3	14*	1	2
Days missed					1	15*	-7	2	-12*	-7	-11*	-7	-3
Years as RN						1	21**	1	2	-15*	-8	0	-1
Income							1	4	1	-9	-4	-16**	-18**
GPA								1	-5	-1	-3	1	-6
Conflict									1	43**	85**	26**	24**
Ambiguity										1	84**	48**	46**
Total											1	43**	41**
State Anxiety												1	72**
Trait Anxiety													1

Note. Decimal points not printed.
*$p<.05$.
**$p<.01$.

To further test the relationship between the variables of role stress (conflict/ambiguity), role strain (state/trait anxiety), and student status, discriminant analysis was used to attempt to predict membership in the two groups, RN vs. generic, based on the independent variables provided in Table 11.

Table 11

Standardized Canonical Discriminant Function Coefficients

RN vs Generic Groups

Variables	Function I
State Anxiety Score	0.06552
Trait Anxiety Score	-0.10248
Role Conflict Score	-0.14412
Role Ambiguity Score	0.14928
Age	0.52349
Nursing hours employed	0.62019
Non-nursing hours employed	-0.11627
Dependents	0.11591
Days missed from school	-0.17429
Monthly household income	0.26397
Mother's level of education	-0.09127
General point average	-0.25305

As noted in the table, the values listed indicate the relative value of the variables if used as predictors of

membership in the two groups. The single variable that emerged as a predictive discriminator between RNs and generic student groups was number of nursing hours employed per week (R_c = 0.62).

At this point it appeared that although there was a significant correlation between role stress (conflict/ambiguity) and role strain (state/trait anxiety), there was not a significant difference between the two student groups with regard to these variables. Taking into account the results of the Pearson coefficients and the discriminant analysis, the third hypothesis was partially rejected. There was a predictive relationship between at least one factor of role stress (ambiguity) and role strain (state/trait anxiety), but the relationship was independent of student status (RN vs. generic).

Secondary Descriptive Statistics

Since a statistically significant relationship among role stress (conflict/ambiguity), role strain (state/trait anxiety), and student status (RN vs. generic) could not be demonstrated, secondary analyses were performed to discern possible relationships between other demographic variables and role stress and role strain. Positive correlations were seen between conflict and number of dependents (r = .20) and conflict and nursing hours worked per week (r = .12). Somewhat surprising were the negative correlations identified between state anxiety and income (r = -.16) and state anxiety and number of nursing hours employed per week

(r = -.11). A negative correlation was also seen between ambiguity and number of years as an RN (r = -.15).

Nursing hours per week correlated negatively with ambiguity (r = -.10), but positively with conflict (r = .12). Other positive correlations among the demographic variables were more anticipated on the basis of their frequency distributions between the two groups of students. Age, nursing hours per week, years as RN, number of dependents, and higher income all correlated with each other in a positive direction. (See Table 10 for specific r values). A summary of the direction of significant correlations of the continuous demographic variables with conflict/ambiguity and state/trait anxiety scores is shown in Table 12.

Table 12

Selected Variable Qualitative Correlations

Positive Associations	Negative Associations
State anxiety - Ambiguity	Income - State anxiety
State anxiety - Conflict	Nursing hours - State anxiety
Trait anxiety - Ambiguity	Nursing hours - Ambiguity
Trait anxiety - Conflict	Years as RN - Ambiguity
Nursing hours - Conflict	hours
Dependents - Conflict	
Age - Nursing hours - Dependents - Years as RN - Income	

The Pearson coefficients showed hours of nursing employment to be positively but weakly correlated with conflict (r = .12, $p < .05$), and the discriminant analysis

showed hours of nursing employment to be a reasonably strong predictor of student status. Therefore an analysis of covariance was performed with the Rizzo conflict score as the dependent measure and nursing hours employed as the covariate with student status as the main effect. The results are reported in Table 13.

Table 13

Analysis of Covariance with Conflict Score as Dependent Measure and Hours of Nursing Employment as Covariate

Source of variation	d^2	df	$\bar{d}^2$	F	p
Covariates Nursing hours employed	338.955	1	338.955	4.007	0.046
Main Effects RN vs. generic	1.645	1	1.645	0.019	0.889
Explained	340.602	2	170.301	2.013	0.136
Residual	20723.469	245	84.586		
Total	21064.070	247	85.280		

The analysis of covariance was used to statistically control for the effect of hours of employment differences between the two groups and look for residual variation between the two groups of students. However, the analysis of covariance failed to demonstrate further variation between the two groups in conflict scores when hours of nursing employment per week was controlled ($F = 2.013$, $p > .05$).

A multiple regression analysis was then performed with

state/trait anxiety as the dependent variable and stepwise elimination of 11 independent variables listed in Table 14.

Table 14

Multiple Regression Analysis with State Anxiety as Dependent Variable and 11 Independent Variables (n = 251)

Variables	Multiple R	R^2	Beta
Role Ambiguity	0.4676	0.2186	0.4243
Role Conflict	0.4883	0.2384	0.1468
Monthly Income	0.5075	0.2575	-0.1712
General Point Average	0.5214	0.2720	0.1314
Years as RN	0.5332	0.2843	0.1112
Days missed of school	0.5395	0.2911	0.0832
Age	0.5405	0.2921	-0.0464
Dependents	0.5418	0.2935	0.0404
Mothers education	0.5424	0.2941	-0.0210
Nursing employment	0.5426	0.2944	0.0169
Non-nursing employment	0.5427	0.2945	-0.0092

This analysis was performed in an attempt to identify if any variables could reliably predict state/trait anxiety and by so doing reject the third null hypothesis. Role ambiguity was identified as a variable that would be significantly related to state anxiety (R^2 = 0.218), but no other variables, including student status, seemed to be reliable predictors of state/trait anxiety. With alpha set at .01, no

single or combination of variables significantly increased R^2 after Role Ambiguity. Alpha was set at .01 to guard against an excessively high experiment wise error rate.

Chapter Five

Discussion

This chapter summarizes the findings of the study. Recommendations for further studies and implications for nursing education programs are also presented.

Purpose of the Study

The overall purpose of the study was to investigate: (a) the existence of role stress (conflict/ambiguity) and role strain (state/trait anxiety) in RN and generic baccalaureate students, and (b) examine the correlation between role stress and role strain in these students. A review of the literature suggested that RN students may suffer from higher degrees of role stress and subsequently higher role strain than their generic counterparts.

Findings

Spielberger (1970) published normative values for state and trait anxiety obtained from 231 college undergraduates, male and female. Spielberger validated the state anxiety scale by testing 197 undergraduates, male and female, in varous situations: relaxed, normal, examination, and stressful movie watching. A normative value for state anxiety for 88 undergraduate women tested in a "normal" situation was obtained. These normative values are shown in Table 15 and are compared to the state/trait anxiety scores obtained from the RN and generic BSN students. The values obtained for state and trait anxiety for the RN and generic BSN students are comparable to those Spielberger found for

the undergraduates in his sample population.

Table 15

Comparison of Normative Values for Spielberger State/Trait Anxiety with RN-BSN Students Tested

Group Tested	State Anxiety		Trait Anxiety	
	Mean	SD	Mean	SD
231 College Undergraduates	35.13	9.25	38.25	9.94
88 Female Undergraduates	43.69	10.27	-----	----
110 Generic BSN Undergraduates	41.35	11.35	39.73	9.23
141 RN-BSN Undergraduates	39.29	10.29	38.30	8.80
251 RN and Generic Undergraduates	40.19	10.79	38.93	9.00

There are no published normative values for the Rizzo Conflict/Ambiguity Instrument for populations comparable to the undergraduates tested in the present study. However, the relationship of role stress to role strain appears to have been supported by the data since role ambiguity (role stress) was found to be the most reliable predictor of state/trait anxiety (role strain) among the variables

tested. Although the statistical association was demonstrated, the present study did not attempt to demonstrate causality between the variables of role stress and role strain.

The following inferences can be drawn from the data in the present study:

1. There are no significant differences in measured degrees of role stress and role strain among selected RN and generic baccalaureate student nurses in California.

2. Role ambiguity appears to be the best predictor of increased levels of role strain of both generic and RN students as measured by state/trait anxiety levels in baccalaureate nursing students.

3. Differences in levels of role strain (state/trait anxiety) for generic and RN baccalaureate nursing students, although predicted by level of role ambiguity, cannot be accounted for based on differences in age, income, student status, general grade point average, marital status, dependents, hours employed per week, health status, or recent major life stressors.

Limitations

There are a number of considerations in assessing the findings and limitations of the study. The failure of the study to delineate a clear difference between the RN and generic student groups relative to role stress and role strain may be in part due to these limitations as well as to factors outside of the scope of the study. These limitations

include the validity and specificity of the instruments, errors in selection of the samples, lack of control of influence of the testing site, and improper stratification of the two groups.

Construct Validity of Instruments

The instruments used in the present study measure very selected aspects of role stress and role strain. It may be that significant differences do exist between the two student groups in role stress and role strain but that the specific factors examined in this study (conflict, ambiguity, state and trait anxiety) may not be the most sensitive indicators of these differences. Other types of role stress, such as role incongruity, role overload, role incompetence, and role overqualification may be a source of role stress in RN students and not in generic students and if so, not measured in this study.

The Rizzo instrument lacks established concurrent or predictive validity testing. Also no test-retest reliability testing was performed. The instrument has no demonstrated validity and reliability beyond the construct validity and internal reliability already discussed, which may affect the utility of the instrument in this study.

Anxiety may be too common a part of the student experience to be used as a useful discriminant variable between two subsets of nursing students. Furthermore, anxiety, as an index of role strain, may be too encompassing as an emotional response to be useful. Other behavioral

manifestations of role strain not addressed by this study, such as lowered self-esteem, depression, phobic behavior, or anger might be more indicative of differences between RN and generic students.

Specificity of Instruments

It is possible that the instruments used in this study suffer from a lack of specificity. By being sensitive but not specific enough, they may be too inclusive of positive responses. This would cause a classic Type II error, incorrectly assuming that no differences between means exists when the instruments give uniformly high response scores.

Failure to Control Selection

As a practical aspect in conducting the present study, faculty contact people were relied upon to deliver the questionnaires to the sample population. This resulted in a lack of data relative to the sample selected by the faculty. Perhaps volunteerism on the part of RN student respondents produced the so-called "halo effect" and artificially reduced their corresponding role stress scores. RN students most unhappy with the baccalaureate program may have chosen not to participate through wariness or hostility, artificially reducing the role stress and role strain scores for the RN group. This would tend to create regression of the differences between the two groups to a common mean. No information was obtained on students who declined to participate from either the RN or the generic

student group.

Errors of Stratification

One of the interesting pieces of information that came from the demographic portion of the survey was how very different in rank and background the generic and RN students are. It may be possible that trying to compare or test senior generic students and junior RN students may be illogical and undesireable. On first inspection, the division of the sample into RN and generic may be too shortsighted. It may be that more telling results would appear with more deliberate stratification of the student groups. Perhaps all juniors should be extracted and tested as one group, or all diploma RNs should be clearly separated from associate degree RNs prior to analyzing relationships between the variables. Failure to demonstrate meaningful differences between the groups may simply indicate the heterogeneity of the sample and nothing else.

The Testing Site

The Spielberger Inventory in particular is sensitive to the influence of the testing environment and its influence on the State Anxiety portion of the instrument. Faculty contact people assisting with the survey were specifically instructed to distribute the questionnaires at the conclusion of a day of clinical instruction. Students were requested by their letter of invitation to answer the questionnaires at the end of the clinical day. Clinical experiences have been noted in the literature to be among

the most stressful events encountered by undergraduate (generic) nursing students (MacMasters, 1979). There is a possibility that the state/trait scores of the generic students may have been unduly influenced by the testing setting to a larger degree than the RN students since the RNs might be less likely to find the clinical setting strange and threatening. If so, the setting would raise the anxiety level of the generic students but not because of any influence of role stress. When compared to the elevated anxiety levels of RN students resulting from role stress, this influence of the setting would obscure any real differences between the two student groups on the role strain portion (state/trait anxiety) of the measurements.

In summary, the validity of the instruments, the physical site of the testing, and possible bias in self-selection of subjects may have contributed to the dilution of differences between the test groups, making a statistical distinction impossible.

Implications for Nursing

There are significant issues raised by the study concerning further nursing research and nursing education. The data indicate that significant role ambiguity and role conflict exist for all baccalaureate nursing students. Since one of the findings of the study indicated that role ambiguity is the single best predictor of role strain (state/trait anxiety), then concerted efforts should be made

to eliminate ambiguous situations for nursing students. Instructional strategies such as printed course syllabi with measureable objectives, explicit assignments, contract grading, computerized learning modules, visual aids, and specific course goals are practical ways for nursing faculty to alleviate role ambiguity perceived by nursing students. There is an apparent need for students to know more precisely what role behaviors are expected of them.

Certain process interventions such as inclusion of stress management techniques in curricula for students, stress awareness for faculty, and self-assessment tools to identify stressors for individuals may help lessen the degree of role stress experienced by students. Opportunities for faculty and students to discuss perceived ambiguities and role expectations regarding nursing roles and nursing student roles might be helpful. For example, both faculty and students might share their perceptions of what comprises the RN and student roles.

Furthermore, major findings of this study do not support the need for separate curricula for RN students on the basis of perceived role conflict and role ambiguity. The elements of role stress are beginning to be identified in the RN-BSN student population. Additional studies are needed to identify the differences in role stress between the RN and generic student groups. Once these elements are identified, curricula may be modified with these differences in mind.

Implications for Future Research

The elements of role stress in RN students need further examination. Other types of role stress, such as role overload, role overqualification, role incongruity, and role incompetence (Hardy, 1978) should be examined to determine if any of these variables distinguish RNs from their generic colleagues. Instruments modeled after the Rizzo scale need to be developed for this purpose.

Research may be useful in identifying the actual qualitative and quantitative antecedents of role stress in students. The following questions could be addressed: what elements actually comprise role stress in RN students? What is the role of faculty in student role stress? Is there a correlation between role stress and role change in students? Does role stress vary with different schools, curricula, vocational experience? If role stress is as common a problem as the findings of the present study indicate, what are the coping mechanisms used by the students to handle the stress? Can specific interventions such as stress management make a discernible difference in perceived levels of role stress for RN and generic BSN students? Is there a measureable relationship between role stress and academic performance? How do generic students perceive the role problems of their BSN counterparts? Does mentorship play a useful part in dealing with role stress?

If role strain is really a separate concept from role

stress as Goode postulates (1960), then certain questions can be addressed to problems relative to role strain: does role strain interfere with academic performance? How do faculty perceive the expressions of role strain from the students? What are the social support mechanisms for RN and generic BSN students dealing with role strain? Is role strain always a negative force or can it be a factor for positive personal change?

Beyond suggesting these broader questions for future study, the present data support the utility of the Rizzo instrument. The Conflict/Ambiguity Scale may prove to be an instrument of high reliability which can be used to investigate role stress in other settings and populations. Concurrent and predictive validity testing and test-retest reliability testing should be performed to confirm the applicability of this instrument to the study of role stress. Within academic settings, it should be possible to utilize the instrument to examine the relationship between role stress and academic performance. Within the service setting in nursing, the instrument may be of value in examining role stress in other populations, for example, assessing role stress in "float" nurses who cross clinical specialty areas, the role stress perceived by nurse practitioners, or the role stress encountered by RNs re-entering the work force after years of absence. Rapson (1980) has already extended use of the instrument to nursing faculty with success.

The ultimate goal of future research on role stress should be to examine the impact of role stress on student learning. The continued involvement of nursing in problems of adult education require a more fundamental understanding of the transition process of student to professional nurse. Knowles (1973) has emphasized the special condition of the adult learner. Nursing is a profession in which learning is a process that continues throughout adult professional life. Not only are adults undergoing learning in formal transitions such as from RN to BSN, but in continuing education that is sustained throughout a working career. There are countless examples of RNs who return to some form of education during their career to acquire new knowledge bases and new skills. Thus the transition to professional nurse is one which does not have a defined end, but is more often an ongoing process. To the extent that role stress has a direct effect on the learning process, it is worthwhile to understand and perhaps constructively control the stress. Facilitation of this ability to enhance learning remains a worthy goal of nurse educators and administrators.

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Appendix A

Pamela A. Baj, R.N., M.S.
461 Pacheco St.
San Francisco, Ca. 94116

Dear Dean,

As part of the requirements for the Doctorate of Nursing at the University of California, San Francisco, I am conducting a study to identify and assess the relationship between role strain and ambiguity and stress levels in RN baccalaureate students as compared to generic baccalaureate students.

To carry out this study, I will ask junior and senior RN students and and equal number of their generic colleagues enrolled in baccalaureate programs to complete a 30 minute questionnaire. According to recent NLN publications, your school admits RN students.

Would you be kind enough to provide me with the name and business phone number of a faculty member who can oversee distribution of these questionnaires to students in junior or senior clinical rotations? I can provide a small honorarium to this faculty member for her or his kind assistance, and I can assure this individual that there will be no expense incurred on behalf of the study. They need only distribute the questionnaires and then collect them. Mailing envelopes will be provided pre-paid for them to return the questionnaires to me.

This study has been submitted for approval of the UCSF Human Experimentation and Research Committee. The questionnaires are anonymous and cannot be identified in any way. A copy of the research protocol and instruments is enclosed for your review. Identities of participating schools will not be revealed in publications arising from this research.

I will be happy to share the results of the study with interested faculty members upon request. I would appreciate any assistance that you can give me. I can be reached at (415) 664-3250 (home) or (415) 666-6392 or 666-6681 (office) if there are any questions. Please complete and return the enclosed postcard by <u>March 1st</u> if you can participate.

Thank you for your help in this matter.

Sincerely,

Pamela A. Baj, R.N., M.S.
Assistant Professor, University of San Francisco
Doctoral Student, University of California, San Francisco

Appendix B

Dear Nursing Student,

This study is a survey of attitudes of BSN students about their position as nursing students. If you would care to participate in this study, please read the directions that follow and complete the answer sheet as instructed. If you do not care to participate after reading this letter, simply discard this letter and the attached questionnaire.

The study asks for some information about your student status, tuition costs, age and other similar demographic data. However, as you will see, there is no request for name, number, initials, or any identifying data of any kind. There is no identification of any kind on the answer sheet and your complete anonymity is guaranteed.

In order to insure as much experimental conformity as possible, I have asked your instructors to give this questionnaire to you at or near the end of a day of clinical experience. Many of the questions pertain to your thoughts about your clinical experiences as a BSN student , and they will be fresh in your minds at the end of a clinical day.

If you are like other students who have answered this questionnaire, the total time it takes will be less than thirty minutes. Your particpation is voluntary and has nothing whatsoever to do with any evaluation or grading within your own school. If you wish any questions answered pertaining to this study, I can be reached at (415)664-3250.

When you have completed the questionnaire, please seal it in the preaddressed envelope provided and mail it to me.

There is no financial remuneration for this study. However I will be happy to share the results of the study with any participant who so desires. Please phone or send me your address (anonymously, if desired) and I will send a copy of the reported results to you when they are available.

There are no appreciable risks involved in completing this study except for the amount of time involved. Thank you for you help in completing this survey.

Sincerely,

Pamela A. Baj, R.N., M.S.
Assistant Professor, School of Nursing
University of San Francisco

PLEASE RETURN TO ME ABSOLUTELY NO LATER THAN APRIL 30TH!

Appendix C

Dear _____, (faculty contact person)

Thank you for agreeing to participate in this study. The material is brief and will take less than one hour of your time.

This study attempts to study the relationship between stress as measured by state/trait anxiety levels and role strain as manifested by role conflict and role ambiguity in RN and generic baccalaureate nursing students.

Please distribute these questionnaires to ALL junior and senior RN students and an equal number of generic students enrolled in your program. Since the questionnaire must be administered at the end of a CLINICAL day, you may require the assistance of some of your colleagues in order to distribute and collect the questionnaires to all of these students. It is not necessary for them to complete the questionnaires on the same day. The exact day will be left to your discretion, but it must be a clinical day; a classroom day is not acceptable and will not be an appropriate setting for the administration of the material.

As much as possible, please read the standard instructions included to the students. This is important to eliminate bias introduced by having various persons administer the instruments. It will also help reassure your students that this study is in no way part of your academic evaluation of them.

There is no fixed time limit for completion of the questionnaire, but it should take much less than 30 minutes to complete. The students will be instructed to mail their questionnaires in the envelopes provided, postage prepaid.

The control sheet included with the large envelope should be filled out with your name, address, institution, and the date and number of questionnaires being distributed. I will forward your honorarium to you within 3 days of receipt of your envelope. All questionnaires must be completed and returned to me by April 30, 1983 in order to be counted in the study. Thank you for your help and interest.

Sincerely,

Pamela A. Baj, R.N., M.S.
Assistant Professor of Nursing
University of San Francisco

Appendix D

INSTRUCTIONS FOR ADMINISTRATION OF QUESTIONNAIRE

read the following paragraph to the student(s):

You are being invited to participate in a study of nursing students by answering a brief questionnaire. This study is interested in learning about student stress in baccalaureate programs. Your decision to participate or not in this study has no bearing on your evaluation by this institution. The study is anonymous. Please read the letter of information and instructions on the questionnaire. Because of the nature of the questions involved, it is important that they be answered now, at the end of your clinical day, rather than at some other time. Please seal your questionnaire in the envelope provided and mail them directly to the investigator.

Appendix E

DEMOGRAPHIC SURVEY: PART ONE

Please answer each question. Some questions may have more than one answer, but unless indicated, please select the one best response or write in the requested figure.

1. Sex

____a. female
____b. male

2. Age_____(in years)

3. Year in present program

____a. junior full-time
____b. junior part-time
____c. senior full-time
____d. senior part-time
____e. other

4. Semester admitted to junior year __ fall __ spring
senior year __ fall __ spring

5. Are you employed as an RN, LVN, aide in a nursing role?
____a. yes
____b. no
If yes, how many hours per week do you work?_____

6. Are you employed in a non-nursing role?
____a. yes
____b. no
If yes. how many hours per week do you work?_____

7. Student financial status (check as many as apply)

____a. no financial aid
____b. loans obtained for < 1/2 of school costs
____c. loans obtained for > 1/2 of school costs
____d. grants/scholarship for less than 1/2 of costs
____e. grants/scholarship for more than 1/2 of costs

8. Type of institution

____a. Public
____b. Private

9. Marital status

____a. single
____b. married
____c. divorced or separated
____d. widowed/widower
____e. other

10. Number of dependents

____a. none
____b. one
____c. two
____d. three
____e. four or more

11. Any major life events occuring within past twelve months (check and or fill in all that apply.)

____a. marriage or engagement
____b. loss of spouse or significant other
____c. change in job
____d. birth of child
____e. change of residence
____f. other_____(fill in)
____g. other_____
____h. other_____

12. Health status

____a. excellent health
____b. only minor illness in past year
____c. serious illness in past year
____d. chronic stable illness
____e. other

13. Number of days missed of nursing school from illness since the beginning of the school year_____

14. Student status in the BSN program (Check one)

____a. Generic BSN student (Stop. Skip to item 21.)
____b. RN student (Continue with question 15.)
____c. LVN student enrolled in BSN program (Stop. Skip to question 21.)

15. Years since receiving RN license _____

16. Type of program where RN training obtained

____a. hospital diploma program
____b. associate degree program
____c. graduate of foreign school program
____d. other

17. Highest level as working RN in most recent position (check one)

____a. staff nurse
____b. assistant head nurse
____c. head nurse
____d. supervisor
____e. assistant director
____f. director

18. Clinical practice setting (most recent experience)

____a. doctor's office or ambulatory care setting
____b. public health or community health
____c. acute care in-patient setting
____d. chronic care, convalescent, or rehabilitation
____e. industry
____f. other

19. Clinical practice area (most recent employment)

____a. medical/surgical
____b. pediatric
____c. obstetrical/gynecological
____d. psychiatric
____e. community
____f. other

20. Reasons for returning for BSN (check the <u>one</u> best response)

____a. career mobility and advancement
____b. job security
____c. economic advancement
____d. personal growth/satisfaction
____e. satisfy requirements for graduate school
____f. something to do
____g. bored with my job
____h. other

21. Household income (dollars per month)_____

____a. less than $1000 per month
____b. $1001 to $1500 per month
____c. $1501 to $2000 per month
____d. $2001 to $2500 per month
____e. $2501 to $3000 per month
____f. over $3001 per month

22. Mother's highest level of completed education

____a. elementary school or less
____b. high school diploma or equivalent
____c. college without degree
____d. associate degree
____e. bachelor's degree
____f. master's degree
____g. doctoral degree
____h. other professional degree, MD, JD, etc.

23. Overall college GPA (grade point average) to date based on 4.0 scale _____ (4=A 3=B 2=C 1=D)

24. Do you have a degree in another field? yes_____ no_____
If yes, please indicate
_____BS
_____BA
_____MS
_____MA
_____ field/major

Appendix F

Self Evaluation : Part Two

Instructions: For each of the items. please circle the number of the scale which represents the extent to which the condition exists for you in your student role. The responses can range from "1" always false to "7" always true but circle only one number for each statement.

	F.....T a.....r l.....u s.....e e.....
Sample statement:	
Two plus two equals four.	1 2 3 4 5 6 7

Circle #7 since the statement is always true. Do not spend a great deal of time thinking about the statement since your first impression is the best response.

1. I have enough time to complete my work.	1 2 3 4 5 6 7
2. I feel certain about how much authority I have.	1 2 3 4 5 6 7
3. I perform tasks that are too easy or boring.	1 2 3 4 5 6 7
4. Clear, planned goals and objectives for me exist.	1 2 3 4 5 6 7
5. I have to do things that should be done differently.	1 2 3 4 5 6 7
6. There is a lack of policies and guidelines to help me.	1 2 3 4 5 6 7
7. I am able to act the same regardless of the group I am with.	1 2 3 4 5 6 7
8. I am corrected or rewarded when I really don't expect it.	1 2 3 4 5 6 7
9. I work under incompatible policies and guidelines.	1 2 3 4 5 6 7
10. I know that I have divided my time properly.	1 2 3 4 5 6 7

11. I receive assignments without the manpower to complete it. 1 2 3 4 5 6 7

12. I know what my responsibilities are. 1 2 3 4 5 6 7

13. I have to buck a rule or policy in order to carry out an assignment. 1 2 3 4 5 6 7

14. I have to "feel my way" in performing my duties. 1 2 3 4 5 6 7

15. I receive assignments that are within my training and capabilities. 1 2 3 4 5 6 7

16. I feel certain how I will be evaluated for my grades. 1 2 3 4 5 6 7

17. I have just the right amount of work to do. 1 2 3 4 5 6 7

18. I know that I have organized my work properly. 1 2 3 4 5 6 7

19. I work with two or more groups who operate quite differently. 1 2 3 4 5 6 7

20. I know exactly what is expected of me. 1 2 3 4 5 6 7

21. I receive incompatible requests from two or more people. 1 2 3 4 5 6 7

22. I am uncertain as to how my job is linked. 1 2 3 4 5 6 7

23. I do things that are apt to be accepted by one person and not accepted by others. 1 2 3 4 5 6 7

24. I am told how well I am doing my job. 1 2 3 4 5 6 7

25. I receive an assignment without adequate resources and materials to execute it. 1 2 3 4 5 6 7

26. Explanation is clear of what has to be done. 1 2 3 4 5 6 7

27. I work on unnecessary things. 1 2 3 4 5 6 7

28. I have to work under vague directives or orders. 1 2 3 4 5 6 7

29. I perform work that suits my values. 1 2 3 4 5 6 7

30. I do not know if my work will be acceptable to my superiors. 1 2 3 4 5 6 7

SELF-EVALUATION QUESTIONNAIRE

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

STAI FORM X-1

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *feel* right now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I am regretful	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel rested	①	②	③	④
9. I feel anxious	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel "high strung"	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel over-excited and "rattled"	①	②	③	④
19. I feel joyful	①	②	③	④
20. I feel pleasant	①	②	③	④

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577 College Avenue, Palo Alto, California 94306

SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	①	②	③	④
22. I tire quickly	①	②	③	④
23. I feel like crying	①	②	③	④
24. I wish I could be as happy as others seem to be	①	②	③	④
25. I am losing out on things because I can't make up my mind soon enough	①	②	③	④
26. I feel rested	①	②	③	④
27. I am "calm, cool, and collected"	①	②	③	④
28. I feel that difficulties are piling up so that I cannot overcome them	①	②	③	④
29. I worry too much over something that really doesn't matter	①	②	③	④
30. I am happy	①	②	③	④
31. I am inclined to take things hard	①	②	③	④
32. I lack self-confidence	①	②	③	④
33. I feel secure	①	②	③	④
34. I try to avoid facing a crisis or difficulty	①	②	③	④
35. I feel blue	①	②	③	④
36. I am content	①	②	③	④
37. Some unimportant thought runs through my mind and bothers me	①	②	③	④
38. I take disappointments so keenly that I can't put them out of my mind	①	②	③	④
39. I am a steady person	①	②	③	④
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	①	②	③	④

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