

THE DEVELOPMENT OF AN INSTRUMENT TO MEASURE
THE PROFESSIONAL ROLE ATTITUDES OF
DIPLOMA NURSING STUDENTS

By

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B.S.N., The University of British Columbia, 1976

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE IN NURSING

in

THE FACULTY OF GRADUATE STUDIES
(School of Nursing)

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

October 1983

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ABSTRACT

The purpose of this study was to develop and test an instrument that would measure the professional role attitudes of diploma nursing students. A Likert scale was constructed to fulfill the above purpose. Items were designed to address the following six characteristics of professional nursing extracted from the literature: commitment to education, service orientation, autonomy, participation in the professional association, accountability, and expectation of appropriate remuneration. The items were critiqued by a panel of nursing instructors and revised prior to administration.

The original instrument, which consisted of 60 items, was completed by 407 diploma nursing students from 4 schools of nursing in British Columbia. On the basis of the correlation of each item with the total score, 40 items were selected for the final instrument in the study.

Data analysis indicated that the instrument requires revision before it will be suitable for use. Two of the items were found to be ambiguous, and a number of others were found to be insufficiently discriminating.

The reliability index for the final instrument was high enough to be considered acceptable for use in basic research on groups. Although the results of factor analysis were inconclusive, it was found that, with the exception of

education and accountability, items did not cluster in accordance with the six characteristics of professional nursing extracted from the literature. Factor analysis also suggested that the concept of professional attitudes might be too broad to measure in one homogeneous scale. Content validity was considered to be inherent in the methods employed for instrument construction.

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ACKNOWLEDGEMENTS

Sincere appreciation is extended to the members of my thesis committee, Carol Jillings, chairman, and Dr. Margaret Campbell, for the invaluable advice which reflected their knowledge and expertise, for their editorial comments, and for their patience with the trials of long distance communication.

I wish to thank the administration and nursing faculty of British Columbia Institute of Technology, Okanagan College, Selkirk College, and Vancouver Community College, for allowing me access to their nursing students. Gratefully acknowledged is the willing participation of the nursing students who completed my research instrument; without their cooperation this study would not have been possible.

To the following nursing instructors, who devoted considerable time and thought to critiquing the items for my attitude scale, I owe special gratitude: Claire Budgen, Doris Callaghan, Judy McAulay, Leslie McCreary, Carol McFadyen, Margaret Perry, Gail Prowse, and Mohammed Rajabally from Okanagan College; and Sandra Foster, Margaret Nickle, Louiselle Ouellet, and Kathleen Pinckney from Selkirk College.

For the sharing of their computer know-how I am indebted to John Breckenridge and Richard Hallett of Selkirk College.

The time and financial assistance required for this study were granted by Selkirk College in the form of a six-month assisted leave from my position.

CHAPTER I

INTRODUCTION

Rationale for the Study

Nursing is currently embroiled in a drive for professionalization; this commitment stems from the fact that nursing has not yet gained universal recognition and acceptance as a profession. In terms of criteria for professionalism, nursing has been assessed by Schlotfeldt (1981) as weak, directed and controlled by others, and unclear about its fundamental mission (pp. 296-297).

It is crucial that nursing, as an aspiring profession, make a coordinated and concerted effort to change this situation. Such change will come about only if nurses who are truly professional assert their beliefs and values by functioning as agents for change (Schlotfeldt, 1981, p. 296). Professional socialization of nurses is accomplished primarily by formal nursing education programmes (Watson, 1981, p. 19). Watson (1981) and Dalme (1983) hold nursing education accountable for the socialization of nursing students into the values of the profession.

Given that professional socialization constitutes a legitimate and important goal for nurse-educators, it follows that nursing faculty are required to encourage in their

students the development of professional abilities, attitudes, and other characteristics (Jacox, 1978, p. 18). It also seems logical that nursing faculty need some means of assessing student achievement of objectives related to professionalism.

There is virtually unanimous agreement in the literature on professional socialization that attitudes and values comprise a major component of any professional role; therefore, an instrument which measures professional attitudes of nursing students would appear to have significant worth.

Ward and Fetler (1979) include in their anthology of research instruments a number of instruments which measure professional attitudes and which are designed to be administered to nursing students, graduate nurses, and/or other health professionals. For various reasons these instruments are considered by the investigator to be unsuitable for the purpose of this inquiry. Corwin's Nursing Role Conception Scale (Ward & Fetler, 1979, pp. 413-424) was developed in 1960, before the widespread acceptance of two major professionalism-related concepts--namely, the nursing process and the use of a conceptual model for nursing as the basis for nursing practice (Adam, 1980, p. vii; Canadian Nurses Association, 1980). His instrument, therefore, does not address these concepts. A further disadvantage of his tool is that the concept of service is measured separately from that of professionalism, despite the fact that an altruistic, service orientation is widely accepted as a characteristic of

professionalism. This concern is supported by Minehan (1977), who conducted an analysis of Corwin's scale as part of a project for developing a contemporary, corresponding instrument. Significant interitem correlations were found within the professional and service scales. Factor analysis revealed four major dimensions to the scale, rather than the three which the instrument was designed to measure. Minehan's findings, however, must be interpreted with caution because of the very small sample size for her study (48). Pieta's 1976 modification and modernization of Corwin's scale (Ward & Fetler, 1979, pp. 425-439) shares some of the same drawbacks. Vailliot's Professionalization Scales, developed in 1962 (Ward & Fetler, 1979, pp. 592-599), is very complex and also outdated. The Health Care Professional Attitude Inventory, developed by Stone and Knopke in 1976 (Ward & Fetler, 1979, pp. 177-182), requires respondents to make sophisticated, evaluative decisions about broad concepts related to the American health care system in general.

Because of the current drive toward the professionalization of nursing, and the lack of professional attitude instruments deemed suitable for the purpose of this work, the development of an instrument of this nature seems propitious.

Statement of the Problem

Nursing is currently embroiled in a drive for professionalization. A major responsibility of nursing educators is to facilitate the socialization of nursing students into

the professional role. Since values and attitudes constitute a major component of professionalism, some means of assessing the professional role attitudes of nursing students is a necessary component of curriculum evaluation. At present there is a lack of appropriate, reliable instruments for assessing the professional role attitudes of nursing students.

Purpose of the Study

The purpose of the study was to develop and pre-test an instrument which measures the professional role attitudes of diploma nursing students.

The specific objectives were: (a) to develop an instrument for the above purpose that would be easy to administer, (b) to estimate reliability of the instrument, and (c) to develop as valid an instrument as possible within the time and fiscal restraints of the study.

Definition of Terms

The following terms are defined as they are used in this study:

- NORM: A rule or standard which guides behaviour.
(Adapted from Hardy, 1978a, p. 3)
- OPINION: An expressed attitude. (Katz, cited in Hinshaw, 1978, p. 275)
- PROFESSION: An occupational group that: (a) possesses a body of specialized knowledge and skills, and is committed to continuing learning and scholarly, scientific methods of investigation; (b) is

organized internally and is self-regulating; (c) maintains special education centres; (d) is altruistic in orientation; (e) seeks sanction to practice through licensing or certification; (f) emphasizes individual responsibility through internalized norms; and (g) is oriented to autonomous practice, with control of its functions in the work setting. (Adapted from Jacox, 1978, p. 10; Kramer, 1966, p. 4)

PROFESSIONAL SOCIALIZATION: The process of internalizing the values and attitudes, and learning the knowledge and skills required to enact a particular professional role. (Adapted from Hinshaw, 1978, p. 276)

REFERENCE GROUP: Any group to which a person relates his attitudes, or any group that influences his attitudes. (Lum, 1978, p. 138)

ROLE: A set of expectations impinging on an incumbent of a social position. (Thornton & Nardi, 1975, p. 872)

ROLE AMBIGUITY: A condition in which existing role expectations are vague, ill-defined, or unclear. (Hardy, 1978b, p. 81)

ROLE ATTITUDE: The readiness, tendency, or set of a role enactor to act or react to some social object or event in a particular way. Role attitudes are indicators of underlying values. (Adapted from Hinshaw, 1978, p. 277)

ROLE CONFLICT: A condition in which existing role expectations are contradictory or mutually exclusive. (Hardy, 1978b, p. 81)

ROLE ENACTOR: A person who holds a social position.

VALUE: An idea held in common by members of a social structure that guides the identification and prioritizing of goals or objectives. (Scott; cited in Hinshaw, 1978, p. 275)

Limitations

1. The instrument developed for this study is a self-report measure of attitudes; this type of instrument

is "limited to what individuals know about their attitudes and are willing to relate" (Nunnally, 1978, p. 591).

CHAPTER II

REVIEW OF THE LITERATURE

Overview

Because the problem under study relates to the concepts of professionalism and professional socialization, and because professional socialization has been defined in terms of learning the knowledge, skills, attitudes and values necessary to enact a role, the literature on professional socialization from a role perspective was reviewed to provide a basis for understanding the process which leads to the goal of professionalization for nursing.

The literature review is presented in seven sections, the first of which delineates the theoretical framework selected as the basis for examining the process of professional role acquisition. The second section reviews other writings in psychology and sociology about the process of professional socialization from a role perspective.

An overview of studies of professional socialization that focus on the health professions is undertaken in the third section, in order to relate theory from psychology and sociology to the socialization of health professionals. The fourth section summarizes the nursing literature on professional socialization, in order to relate theories of professional socialization specifically to nursing.

In the fifth section, characteristics of professionalism as they relate to nursing are extracted from the literature on professionalism in general and professionalism in nursing, as the basis for development of the instrument for this study.

The sixth section reviews the literature regarding the measurement of attitudes, in order to justify the methodology selected for the study.

Finally, the seventh section summarizes the previous sections and outlines the implications of the literature review for this study.

Theoretical Framework

The theoretical framework selected for this study was developed by two sociologists, Thornton and Nardi (1975). They view professional socialization as a part of the developmental process of acquiring a role; this process is seen as involving interaction between person and role. Individual personality characteristics are heavily emphasized in their theory.

Thornton and Nardi (1975) define role as "a set of expectations impinging on an incumbent of a social position" (p. 872). These expectations arise from a number of sources, which correspond to entities labelled by other writers as reference groups (Lum, 1978; Sarbin & Allen, 1968; pp. 532-533; Turner, 1956, p. 327). Three types of sources are identified: generalized sources, members of the role set, and the role enactor himself (Thornton & Nardi, 1975, p. 872). Generalized

sources come from society at large, for example, the mass media and people in general. Members of the role set constitute a reference group consisting of people enacting similar roles as the focal person (similar-role others), and people enacting reciprocal roles (reciprocal-role others).

The content of role expectations may be behavioural, attitudinal, or cognitive. Role expectations may be presented explicitly or implicitly, and may generate confusion and/or conflict depending upon the degree of inter and intra-reference group consensus perceived by the role enactor. High degrees of "dissensus" can interfere markedly with the process of role acquisition (Thornton & Nardi, 1975, p. 873).

Thornton and Nardi propose three possible reactions to role expectations: social adjustment, psychological adjustment, and adaptation. Social adjustment is "the adequate meeting of role expectations and performance in accordance with them" (Thornton & Nardi, 1975, p. 873). Psychological adjustment is "the achievement of congruity between individual psychological needs and desires and the role" (p. 873). When the role is internalized and assimilated, adaptation has occurred.

Role acquisition is seen as a progression through four stages: anticipatory, formal, informal, and personal stages. The anticipatory stage spans the time period from before the beginning of formal education for a role to the time when the professional role is assumed in the work setting, and consists of two phases. During the pre-education phase of this stage,

the most influential source of role expectations is generalized sources with a high degree of consensus. Thornton and Nardi claim that role conceptions formed in this phase tend to be stereotyped, idealized, hazy, and incomplete (1975, pp. 874-875). The process of professional socialization is viewed as the next phase of this stage, and spans the time period of the formal basic educational preparation for the professional role (1975, p. 875). According to the authors the anticipatory stage may impede adjustment if role expectations of this stage are incongruous with those of subsequent stages (1975, pp. 875-876).

The formal stage of role acquisition begins when the role is assumed in the work setting. Expectations arise mainly from members of the role set, and frequently take the form of organizationally defined rights and duties which emphasize expected abilities and behaviours rather than attitudes. During this stage the neophyte professional postpones his own mode of meeting role expectations; he tends to adjust socially by meeting, rather than modifying, requirements. Psychological adjustment often occurs through playing at roles (or perfunctory role enactment) rather than truly enacting them (Thornton & Nardi, 1975, pp. 876-878).

The informal stage occurs simultaneously with the formal stage and is characterized by unofficial or informal expectations. Occasionally informal expectations contradict formal ones. Role colleagues are seen as the main source of expectations throughout this stage, and dissensus among expectations

may be high. Thornton and Nardi (1975) claim that individuals begin to place greater weight on their own role expectations upon encountering this stage (p. 878), and begin to shape the role to fit themselves (p. 879). Psychological adjustment begins during this stage.

The personal stage provides for the integration of individual personality characteristics with the enactment of the role. During this stage individuals influence the expectations others hold for them, and impose their own style on their role performance (1975, pp. 880-881). Social adjustment takes the form of role modification, rather than the conformity of earlier stages. Psychological adjustment continues, and is thought to be completed when the individual is able to relate his own psychological needs to the requirements of the modified role. Adaptation, or internalization of the role, may now occur.

Thornton and Nardi view the importance of each stage as being variable, depending on the nature of the role. They also allow for variation in the acquisition of the same type of role, depending upon the setting and the personality characteristics of various socializees. Role performance is thought to be more effective in later stages; personal satisfaction from the role is thought to be at its peak with the occurrence of integration of the self with the role.

Thornton and Nardi's theory has been selected as the theoretical framework for this study for a number of reasons. The authors claim that their model can be applied to virtually

any role which may be acquired (Thornton & Nardi, 1975, p. 871). The basic concepts of their theory are representative of concepts of concern in this study. The personal stage of this theory takes it beyond most other works by allowing the focal person to influence others' expectations and thus modify the role which will be enacted. This last idea is representative of what must happen if nursing is to achieve professionalization. Finally, with one exception, the theory is consistent with most of the literature on professional socialization.

The exception referred to above necessitates making one modification to the theory. The authors perceive the process of professional socialization as an extended period of the anticipatory stage of role acquisition (1975, p. 875); the remaining stages of role acquisition are viewed as occurring after completion of the professional education programme and assumption of the professional role in the work setting. In other words, the process of professional socialization is viewed as part of role acquisition, and is seen as being completed at the end of the educational programme. This idea is inconsistent with other writers who view professional socialization as an ongoing process which continues long after graduation (Cotanch, 1981, p. 6; Jacox, 1978, p. 16; Lortie, 1966, pp. 100-101; Lum, 1978, p. 154; Miller & Wager, 1971, p. 161; Olesen & Whittaker, 1970, p. 217; Schein, 1968, p. 37). Furthermore, the structure of most basic nursing education programmes involves varying levels and forms of assumption of the nursing role in the work milieu during the educational

process. The literature on professional socialization points to the belief that the process of professional socialization represents one type of role acquisition (Hinshaw, 1978, p. 276; Sarbin & Allen, 1968, p. 546). Therefore, for the purposes of this study, the process of professional socialization is considered as encompassing all of Thornton and Nardi's stages to varying extents.

The concepts in Thornton and Nardi's model can readily be applied to the professional socialization of nursing students. Lay conceptions of the nursing role are drawn from generalized sources such as television; Cherry Ames novels; acquaintances who may have been patients, nurses, or physicians; and personal experiences as patients. Subsequent reference groups include nursing faculty, peers, staff nurses, patients, physicians, and other health care workers. Because nursing students are required to assume a nursing role in the work setting during their basic nursing education, some form of sortie into the formal, informal, and personal stages can be seen to occur during the educational process. Dissensus among the role expectations of the various stages is common; the nursing literature is replete with discussions of professional-bureaucratic conflict and the education-service dichotomy. The personal stage, including adaptation, is complete when the nurse has achieved a balance among conflicting expectations, a harmony with the demands of other roles, and a modification of the nursing role which is congruent with individual personality characteristics.

Studies of Professional Socialization from the
Fields of Psychology and Sociology

Role Acquisition

Over the past several decades psychologists and sociologists have developed theories of role and role acquisition which vary along three major dimensions. The first of these dimensions is complexity; theories tend to become more complex over the years. Likewise, recent theories tend to depict the role enactor as a more active agent in his own socialization than do earlier theories. "Increasingly, socialization has come to be viewed as an interactional and reciprocal process in which the socializee and socializer are mutually influenced" (Hurley, 1978, p. 31). Finally, theories of role acquisition have traditionally been written from either the micro (individual) or macro (organizational or occupational) perspective; however, the study of role and role acquisition is increasingly addressing the issue of integrating theories of individual human personality and institutional theory (Goode, 1960, p. 246; Sarbin & Allen, 1968, p. 490).

Of the writers of the 1950's, Turner (1956) proposes a theory which is one of the more complex of the period. Written from the micro-perspective, his theory is based on the following definition of role:

a collection of patterns of behavior which are thought to constitute a meaningful unit and deemed appropriate to a person occupying a particular status in society

(e.g., doctor or father), occupying an informally defined position in interpersonal relations (e.g., leader or compromiser), or identified with a particular value in society (e.g., honest man or patriot). (p. 316)

This definition emphasizes the behavioural component of role; attitudinal and cognitive elements are alluded to only implicitly. Role is described as a "normative concept" because the behaviours of the role enactor are measured against standards of criteria for appropriateness (p. 317). Turner views role acquisition as a process of "role-taking," which proceeds in a variable manner in accordance with two criteria--standpoint and reflexiveness. The concept of standpoint refers to the extent to which the role-taker adopts the role expectations of various reference groups (1956, p. 321). Reflexiveness refers to the extent to which "the attention of the role-taker is focused upon the way in which he appears to the other" (1956, p. 322). The type of role-taking adopted by the individual is dependent upon the direction taken from the self-other relationship; six types of role-taking are identified, in accordance with various combinations of the concepts standpoint and reflexiveness (1956, pp. 322-323).

Turner's theory is sufficiently complex to account for a wide variety of human behaviour. Although his theory does allow the individual some discretion in shaping his own role behaviour, it does not provide for modification of the role itself, in the sense of altering others' expectations.

In contrast to Turner's theory, Becker and Carper (1956) have developed a relatively simple concept of role acquisition

from a macro-perspective. They view professional socialization as identification with an occupation--a process which is dependent on four variables: (a) the symbolic meaning associated with an occupational title, (b) commitment to task, (c) commitment to specific organizations or positions within institutions, and (d) significance of the occupation for one's position in the social stratification system of society (1956, p. 341). Their model is based on a study of graduate students in three fields: physiology, mechanical engineering, and philosophy. Their view of professional socialization as an occupationally oriented concept results from the considerable degree of inner consistency found within each of the three groups studied.

During the 1960's the concept of role acquisition gradually came to be viewed as more complex. Whereas previous theories had largely been limited to a consideration of overt role behaviours, individual attitudes, values, skills, and knowledge now became recognized as significant variables which underlie and give meaning to overt conduct. Lortie (1966), who studied the professional socialization of law students, concluded that "the development of a professional self-conception involves a complicated chain of perceptions, skills, values, and interactions" (p. 98). He also found that young lawyers "left law school with a hazy and incomplete conception of what lawyers' work consists of" (p. 100), and concluded that "law school is but a beginning of professional socialization" (p. 101).

Sarbin and Allen assert that little research has been

done on the process of role acquisition (1968, p. 544). Their concept of role is based on a set of complex inter-relationships among variables such as role enactment, role expectations, role location, role demands, role skills, role-self congruence, and complex role phenomena (1968, pp. 489-538). They describe role as an "organized set of behaviours" (p. 545), and stress that the socializee must learn the entire role set, which includes "the interlocking system of rights and obligations of a role and complementary roles" (p. 546). Thier assertion that self-role congruence leads to more effective role enactment (1968, p. 524) is analogous to the beliefs expressed by Thornton and Nardi regarding congruence of self and role in the personal stage.

Olesen and Whittaker, in their critique of sociological studies of professional socialization, deplore the simplicity of most theories and their tendency to view professional role acquisition as a process for producing a "standard product" which fulfills the needs of society (1970, pp. 190-191). They perceive the socializee as an individual "engaged in conscious, choice-making and intentional behaviours" (1970, p. 208)--an individual with a dynamic, proactive character in a drama.

Elliott's concept of professional socialization is consistent with the trend toward increasing complexity; increasing emphasis on norms, attitudes, and values (1972, p. 89); and the increasing proactivity of the individual socializee (1972, p. 92). He also believes that the teaching staff of an educational institution plays an important part

in the process of role acquisition (1972, p. 86)--an argument which supports Watson's opinion that nursing education is accountable for the socialization of nursing students into the values of the profession (Watson, 1981, p. 24).

Lum (1978) studied reference groups in relation to professional socialization and concluded that they play a significant part in the socialization process (p. 137). Like Thornton and Nardi, she maintains that reference groups provide sources of values for the individual which he selects to constitute a frame of reference and provide direction for behaviour (1978, p. 137). Three types of reference groups are identified: normative groups, comparison groups, and audience groups. A normative group sets norms and values, makes its expectations known, and assumes compliance on the part of the socializee (Lum, 1978, pp. 139-140). Comparison groups demonstrate standards of behaviour against which the individual can compare himself (Lum, 1978, pp. 140-141). Audience groups are groups to which the socializee attributes certain values; he attempts to attract the attention of an audience group and behave in accordance with its values (Lum, 1978, p. 141). Lum believes that the various types of reference groups may not be discrete entities, but rather overlapping and blurring frequently occur among reference groups (p. 141).

Lum goes on to identify eight characteristics common to the process of professional socialization: (a) The educational process has both formal and informal aspects. (b) The socializee is exposed to multiple agents of socializa-

tion. Socialization may be either facilitated or hindered, depending on the degree of congruity among the expectations of multiple agents. (c) There frequently exists a simultaneous, additional dimension of developmental socialization--namely, the transition from adolescence to adulthood. (d) Both students and socializing agents are heterogeneous groups. (e) Hazing, ritualism, and monopoly of students' time frequently occur. (f) A technical language must be learned. (g) The profession may be in a state of flux (as she identifies for nursing), a factor which complicates the socialization process. (h) The existence of a student culture can either hinder or facilitate the socialization process (Lum, 1978, pp. 146-152).

Role Conflict

Role conflict is a phenomenon characteristic of virtually all roles, both social and occupational; its existence is the normal state of affairs in society (Elliott, 1972, p. 86; Goode, 1960b, p. 495; Lortie, 1966, p. 99; Merton, 1966, p. 283; Ofshe, 1972, p. 93; Sarbin & Allen, 1968, pp. 534-558; Scott, 1966, p. 269). There is general agreement in the literature about the nature of the problem; however, differences in the terminology associated with this concept lead to some confusion. Labels which have been attached to this concept include role stress, role strain, role ambiguity, role incongruity, and role overload. For the sake of clarity the subject of role conflict will be

considered within the terms of Hardy's definition (1978b, p. 81) provided on page 5.

Sarbin and Allen (1968) identify two types of role conflict: interrole conflict and intrarole conflict (p. 540). The first is generated by the situation of simultaneous occupancy of two roles, each having role expectations which are incompatible with those of the other. The second type of role conflict involves contradictory role expectations held by two or more reference groups regarding the same role.

Four adaptive techniques for resolving role conflict are proposed by Sarbin and Allen (1968, pp. 541-544).

(a) Instrumental acts are behaviours aimed at modifying the external sources of the conflict. Separation of conflicting roles so that only one is enacted at a time is an example. Another instrumental act might involve flight from a conflict situation.

(b) Attention deployment is a technique which does not alter the source of the role conflict, but rather diverts attention from one of the incompatible inputs.

(c) A third technique is for the role enactor to change his beliefs about one or both inputs. In other words, a different interpretation is placed on role expectations, making them compatible. (d) The use of tranquilizers and releasers is a technique which momentarily reduces feelings of distress, anxiety, and tension associated with the conflict.

Tranquilizers usually consist of chemicals, sleep, or food. Releasers usually involve some form of intense motor activity, such as vigorous exercise or scrubbing the floor. Sarbin and Allen suggest that the choice of technique is dependent

upon three factors: past success with a technique, social reinforcement, and availability (1968, p. 544).

Studies of role conflict in organizations have lent support to the belief that such conflict must be considered within the context of individual human personality theory (Wolfe & Snoek, 1962; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1966). Wolfe and Snoek, in their study of role conflict experienced by various levels of management personnel in the oil, automobile, and defense industries, reported that role conflict was highest in individuals at the middle management level, individuals with university education, younger individuals, individuals who test high for the personality characteristic "flexibility", and individuals who tend toward introversion (1962, pp. 112-117). Kahn et al. (1966) found that role conflict in employees leads to low job satisfaction, decreased confidence in the organization, and high degrees of tension related to the job.

Ofshe, in his study of role conflict in relation to reference groups, identifies three types of reference groups: normative, comparative, and informational (1972, pp: 90-92). His description of normative and comparative reference groups corresponds precisely to Lum's descriptions (1978, pp. 139-141); however, Ofshe also points out that a single individual can comprise a reference group (1972, pp. 90-92). Because the role enactor is frequently evaluated by normative referents, Ofshe believes that most role conflict is related to this type of reference group (1972, pp,

92-113). Ondrack, who conducted a comparative study of socialization in professional schools, concluded that a high degree of dissensus among reference groups results in role conflict and inferior professional socialization (Ondrack, 1975).

Much has been written about professional-bureaucratic conflict, which is considered a particular type of role conflict (Corwin, 1960; Kramer, 1974; Miller & Wager, 1971; Sorensen & Sorensen, 1974). Lieberman (1970) and Schein (1968) focus on the education place-work place dichotomy, a variation on this phenomenon. This type of conflict is said to be the result of conflicting values and expectations held by professional reference groups (including professional associations, professional colleagues, and educational institutions) and bureaucratic reference groups (such as employers and management personnel in bureaucratic organizations). Scott (1966) has identified four distinct areas of conflict:

- (1) the professional's resistance to bureaucratic rules;
- (2) the professional's rejection of bureaucratic standards;
- (3) the professional's resistance to bureaucratic supervision; and
- (4) the professional's conditional loyalty to the bureaucracy. (p. 269)

In practice, many professionals compromise their professional ideals in favour of meeting the demands of the organization (Scott, 1966, p. 269). Incompetent job performance, job dissatisfaction, and job migration often accompany professional-bureaucratic conflict.

It has been suggested that even the most established professions are being deprofessionalized by the increasing

bureaucratization of society (Haug, 1973, p. 196; Yarmolinsky, 1978, p. 167). Conway (1978) has identified the achievement of a balance between professional ideals and bureaucratic values as a crucial objective for professionals who wish to maintain their autonomy (p. 135).

Studies of Professional Socialization That Focus on the Health Professions

There is a dearth of research documented in the literature about the actual professional socialization process of health professionals; by far the greatest attention has been paid to the socialization of medical students. Five studies have been identified and will be briefly described.

Jacobson (1980) conducted a study of pre and post-professional education conceptions of the role of physical therapist. The testing instrument, a "physical therapist characteristics Q sort", was administered to 320 physical therapy students at the beginning and at the end of their educational programme (p. 190). The conclusion of the study was that students' role conceptions before and after their programme changed very little (1980, p. 193). This conclusion is in direct conflict with the findings of other researchers (Becker & Geer, 1958, p. 51; Feldman & Newcomb, 1969, p. 71; Lortie, 1966; Olesen & Whittaker, 1968, pp. 91-108; Thornton & Nardi, 1978, p. 874).

Sociologists Sherlock and Morris (1967) developed a paradigm for the professional socialization of dental students;

the paradigm formed the basis of a seven-year longitudinal study which followed dental students from pre-dental courses starting in 1962 into their first year of practice in 1969. They conceptualize the development of a professional identity as occurring in three stages: recruitment, professional socialization, and professional outcomes. The professional socialization stage consists of a series of socialization processes:

select the appropriate recruits (selection); isolate them from competing influences (sequestration); inculcate necessary knowledge (didactic instruction); develop skills, values and role models (apprenticeship instruction); motivate them to attain these goals (sanctioning); certify those individuals who are demonstrably competent (certification); and finally, launch the newly-certified professional colleague upon his career (sponsorship). (pp. 32-33)

Student response to these institutional processes is seen as consisting of two phases: the development of student solidarity (or studentship), and an apprenticeship phase during which students begin to identify with faculty and internalize their values (Sherlock & Morris, 1967, p. 41). These student responses are similar to those observed in medical students by Becker, Greer, Hughes, and Strauss (1961, pp. 70-184), and in nursing students by Olesen and Whittaker (1968, chap. VI).

Feldman (1977) conducted a comparative study of the organizational socialization of five groups of hospital employees: engineers, accounting clerks, radiology technologists, registered nurses, and nursing technicians (orderlies and nurse's aides). He reported that professional nurses had the highest scores on initiation to the task

(becoming competent at required tasks) and initiation to the group (becoming accepted and trusted by co-workers); however, professional nurses had the most difficult time in defining roles for themselves and in coming to agreement with supervisors over suitable criteria for performance evaluation. He also found that the registered nurses had the severest role conflicts.

In a study of medical students conducted at Western Reserve University School of Medicine, University of Pennsylvania School of Medicine, and Cornell University Medical College (Huntington, 1957), medical students at the end of each school year were asked the question:

In the most recent dealings you have had with patients, how have you tended to think of yourself, primarily as a doctor rather than as a student, or primarily as a student rather than as a doctor? (p. 180)

Predictably, the percentage of students who thought of themselves primarily as doctors increased progressively with years of medical school. But Huntington identified factors other than seniority in medical school which influenced the students' professional self-image: (a) Individual students tend to reflect the image which they perceive others have of them. This is especially evident in student-patient relationships. (b) Students in the early years of medical school, who have the opportunity to provide actual service of a medical nature to patients, show a greater tendency to develop a professional self-image than do other students.

Becker et al. (1961) conducted what is now acknowledged as a classic, qualitative study of the development of attitudes

and values in medical school at the University of Kansas. Their major method of investigation was participant observation, which was combined with the use of incidents and interviews; data analysis and data gathering proceeded simultaneously (pp. 4-49).

Their most significant findings are related to the "fate of idealism " (Becker & Geer, 1958). Becker et al. (1961) report that students enter medical school with idealistic, humanitarian, service-oriented attitudes about the practice of medicine; however, they quickly learn that the exigencies of getting through medical school necessitate setting aside these ideals and addressing their attention to matters of immediate concern, such as passing examinations and favourably impressing faculty. Although their attitudes may appear cynical to outsiders, the researchers found that the situation was that of postponement of ideals to a future time. Toward the end of the fourth year, as graduation approaches, the student regains his former idealism, but in a more informed version (Becker et al., chap. 21).

A major dimension of their analysis is the identification and description of "student culture", which occurs in response to the need for mutual support in the development of strategies and short-cuts for discovering "what the faculty wants them to know" and assisting each other to learn it. The class becomes a collective, cohesive group which maintains its solidarity throughout medical school (Becker et al., 1961, pp. 70-196; 435-437).

Professional Socialization in Nursing

Role Acquisition

Although most authors have written theoretical discussions about professional socialization in nursing, a number of studies based on empirical data have generated significant findings. Most of these studies were limited to the examination of fairly narrow aspects of professional socialization, and neither tested nor contributed to the formulation of a conceptual framework for the process as a whole.

Olesen and Whittaker (1968) conducted an intensive qualitative research project on the class of nursing students entering the baccalaureate programme at the University of California School of Nursing (San Francisco) in the fall of 1960. Over a period of three years they used participant observation as their major data collection method, combined with questionnaires, interviews, and psychological measurements (chap. II).

The study did not result in the definition of a model or a sequential process for professional socialization, but rather confined itself to detailed descriptions of phenomena observed during the process. Most of these phenomena were comparable to phenomena previously observed by the authors during the professional socialization of students in law, medicine, theology, teaching, and social work.

Two aspects of the authors' descriptions and insights are different from traditional sociological writings about

professional socialization to that date. First, Olesen and Whittaker (1968) perceive students as individuals who shape their role and are actively involved in their own education (p. 7); this perspective comes close to Thornton and Nardi's concept of role modification during the personal stage (1975). The second point made by Olesen and Whittaker is that, for most students, the developmental process of socialization from the adolescent to the adult role occurs simultaneously with professional socialization; these "lateral life roles" may blend harmoniously, or alternatively quite uncomfortably, with the process of role acquisition (pp, 9-10). Most discussions of professional socialization overlook these mutually influencing types of socialization.

Some of the phenomena perceived by Olesen and Whittaker (1968) as inherent in the process will now be described. Their descriptions of the students' pre-nursing school image of nursing correspond exactly to Thornton and Nardi's description of role conceptions during the anticipatory stage. Questionnaires administered by Olesen and Whittaker indicated that most of the students' entering views of nursing and of themselves as nursing students tended to be non-selective, undifferentiated, and idealistic (1968, p. 106). Furthermore, most students entered nursing school very confident of success and satisfaction--a phenomenon labelled by the authors as "initial bravado". Relatively few students anticipated significant levels of anxiety or stress (pp. 102-106).

A set of strategies and perspectives, adopted by individual

students to varying degrees, and frequently hidden from faculty view, are labelled by Olesen and Whittaker as "studentmanship" (1968, chap. VI). The strategies are very similar to those described by Becker et al. (1961) as student culture in medical school. According to Olesen and Whittaker, studentmanship

functions to suggest answers to a perpetually problematic issue: how to get through school with the greatest comfort and the least effort, preserving oneself as a person, while at the same time being a success and attaining the necessities for one's future life. (p. 150)

Included in the art of studentmanship are strategies such as "psyching out" the instructors in order to arrive at a determination of their exact expectations; "fronting", or projecting an image which the student believes will be favourable in the eyes of faculty, and "cooperation", a collective strategy which involves presenting the appearance of being more unsocialized than one actually is. This last strategy is for the purpose of maintaining an impression of collective mediocrity in order to protect students who cannot, or do not wish to, excel.

Another phenomenon inherent in role acquisition is "legitimation, the process of others sanctioning the students' claims to the roles of nurse, adult, and woman" (Olesen & Whittaker, 1968, p. 201). Legitimation is sought by the student from multiple agents of socialization including faculty, patients, physicians, staff nurses, and unofficial agents such as parents and friends. Olesen and Whittaker

claim that the entire process of professional socialization can be thought of as an "agenda for legitimation" (1968, p. 202). The emergence of self-awareness is another concept deemed significant by the researchers to integration of the self with the identity and role of nurse (1968, chap. VIII)--a belief held in common with Thornton and Nardi.

Jones (1976), a sociologist and a nurse, examined the comparative influence of two sources of student role conceptions: type of nursing programme, and demographic variables of parental income, father's education, mother's education, age, race, marital status, and post-secondary non-nursing education. Bevis' modification of Corwin's Nursing Role Conception Scale was the primary data collection instrument. Although the demographic variables were found to contribute indirectly to student role conceptions, Jones concluded that it was the type of nursing programme which exerted the greatest influence on eventual nursing role conceptions.

A similar study (Warner & Jones, 1981), also using the Bevis modification of Corwin's scale, indicated that, as students progress in the baccalaureate nursing programme, their professional and service orientations increase and bureaucratic orientations decrease. It was also found that students with a health professional in the family never became as professionally oriented as other students, and tested higher for bureaucratic values at graduation.

Way (1981) used Corwin's scale to measure the professional, bureaucratic, and service role conceptions and role deprivation

of the 1980 generic and post-basic graduates from the University of British Columbia School of Nursing. The instrument was administered to 77 students one month prior to graduation, and to 37 of the same individuals six months after employment in a hospital setting. Results indicated that there were no significant differences between the role conception scores of generic and post-basic students at either administration (1981, p. 37), despite major differences in the educational process.

A study of student perceptions of the influence of socializing groups (peers, faculty, and staff nurses) on professional identity development (Dalme, 1983) revealed that first year baccalaureate students appear to have less trust and confidence in faculty members than do second year students. It was also found that, as students progress through the programme, the influence of faculty members becomes more significant.

Cohen (1981) proposes a four-stage model for professional socialization which is conceptually related to Piaget's studies of cognitive development in children. The four stages, which build on each other, involve (a) initial acceptance and reliance on authority, followed by (b) cognitive rebellion, (c) a beginning capacity for evaluative thinking and incorporation of others' ideas, and (d) integration of independence and mutuality. But a number of obstacles inherent in the structure of nursing education and the nature of the nursing profession are perceived by Cohen as impediments to student progression through these stages (1981, chap. 4).

Such obstacles include an authoritative culture, a tradition of obedience and subservience, an obsession with perfection, and a lack of respect for the technical knowledge base of nursing on the part of society.

A description of the formulation of an interprofessional cardiovascular health team by the process of role negotiation (McKenna, 1980) serves as an illustration of Thornton and Nardi's concept of role modification. A group of health professionals, including an occupational therapist, physical therapist, social worker, pharmacologist, nutritionist, registered nurse, and physician, undertook this challenge in order to improve service to cardiovascular patients. Each person entered the situation with particular expectations of himself and of others; role ambiguity, role conflict, and power struggles were very much in evidence during the initial stages of group process. The team, through an official process of role negotiation, was able to come to a consensus about mutual expectations, and implemented an innovative, effective programme.

Gendron (1981) proposes an interesting strategy for the socialization of nursing students. Her argument rests on the premise that many students enter nursing with the perception that certain "symbolic acts" are representative of the nurse's role. Such acts are usually technical procedures such as administering injections and changing dressings. Because most nursing programmes delay giving the students opportunity to perform these functions, students feel disillusioned and frustrated with their educational programme.

Gendron believes that giving students the opportunity to practice tasks with symbolic meaning earlier would help them "feel like a nurse". She goes on to point out that faculty could then build upon student lay conceptions of the nursing role and facilitate socialization to broader nursing role conceptions.

Role Conflict

Benne and Bennis (1959a; 1959b) were among the first to study role conflict in nursing and identify it as an impediment to the growth of the individual professional and of the nursing profession.

Shortly thereafter, Corwin (1960; 1961a, 1961b) developed the Nursing Role Conception Scale, a three-part scale which was designed to measure professional, bureaucratic, and service role conceptions. The instrument consists of 22 hypothetical situations; the respondent is required to respond to each situation from two different perspectives--his perception of the ideal in nursing, and his perception of the actual situation in nursing practice. The difference between the two perspectives is the role deprivation. Studies conducted by Corwin (1960; 1961a; 1961b) and Corwin and Taves (1962) indicate that graduates from baccalaureate nursing programmes (a) have higher professional role conceptions than do diploma graduates, and (b) are more susceptible to role deprivation, and thus to role conflict.

Kramer (1966) used Corwin's instrument to study the

effect of employing bureaucracies on neophyte nurses. She found that nurses indicated a significant increase in bureaucratic role conceptions, and a continuous drop in professional role conceptions during the first six months of employment (pp. 77-78). There was also an increase in role deprivation scores during the first three months of employment. Her finding that subjects with high professional and high bureaucratic scores also had the highest role deprivation scores led her to the conclusion that simultaneous allegiance to both cultures was associated with role conflict (p. 77). Subjects who dropped out of nursing, changed jobs because of dissatisfaction, or undertook more formal education, tended to have higher role deprivation scores than did those who remained on the job for six months (p. 77).

In a study of factors contributing to success in hospital nursing (Kramer, 1970; Kramer & Baker, 1971) Corwin's scale was again used, and resulted in the following findings:

(a) Nurses rated as highly successful had higher bureaucratic role conceptions than did less successful nurses, and (b) less successful nurses had higher role deprivation scores, and thus more severe role conflict. Kramer and Baker (1971) also found that nurses who left nursing tended to have higher professional values.

The term "reality shock" was coined by Kramer (1974) and defined as follows:

the phenomenon and the specific shocklike reactions of new workers when they find themselves in a work situation for which they have spent several years preparing and for which they thought they were going to be prepared, and then suddenly find that they are not. (pp. vii-viii)

Reality shock stems from the fact that many professional ideals and values taught in the educational programme are impossible to practice and go unrewarded in the work setting (Kramer, 1974, p. viii). An "anticipatory socialization program", designed by Kramer as a supplement to the regular nursing programme for the purpose of minimizing reality shock (1974, chap. 3), has realized some success (p. 134).

More recently, Kramer and Schmalenberg (1978) have developed a "bicultural training program" to assist new graduates in the hospital setting to integrate professional and bureaucratic behaviours. New graduates who have participated in this programme have tended to retain higher professional role conceptions (p. 27) and demonstrate more bicultural behaviours (p. 29).

Following the publication of Corwin's Nursing Role Conception Scale, the problem of role conflict in nursing was discussed under the more refined term, "professional-bureaucratic conflict". The problem was described as a conflict between professional values such as autonomy, whole-task orientation, self-evaluation, and collegial relationships with others; and bureaucratic values such as adherence to rules, efficiency, and hierarchical relationships. Many nursing authors began to document the existence of and describe this problem (Johnson, 1971; Malone, 1964; Seward, 1969; Simms, 1977; Watson, 1977).

The problem of professional-bureaucratic conflict is a pressing one for nursing education. The role conflict experienced by nursing students when confronted by conflicting

expectations of nursing instructors and head nurses is described by Smith (1978), who maintains that the conflict distracts the student from learning and interferes with caring for the patient. Stinson (1973a) believes that the much-discussed nursing service-nursing education dichotomy is a smaller part of the larger problem of professional-bureaucratic conflict, and suggests that the key to a resolution lies with both parties fulfilling their commitment to act in the best interests of the patient. Other strategies she suggests (1973b) are trying to gain a better understanding of the other party's perspective, making decisions about student learning experiences at the nursing unit level, encouraging nursing staff to participate in teaching students, joint appointments, and co-authoring of articles by nursing instructors and nursing practitioners.

Another dimension of the service-education dichotomy is illustrated in studies conducted by Krueger (1967) and Brief, VanSell, Aldag, and Melone (1979). Both studies indicated that there is a disparity between the logical use of nurses in the work setting according to their capabilities (as achieved in their educational programmes), and their actual on-the-job activities.

Professionalism and Nursing

Authorities appear to be in general agreement about the nature of and criteria for professionalism. Greenwood (1966, pp. 10-19) describes five distinguishing attributes of a

profession:

1. A systematic body of theory: Acquiring this body of theory involves lengthy, rigorous, formal education, usually in a university setting. Greenwood includes a commitment to research (to expand the body of knowledge), continuous learning, and critical thinking as elements of this attribute.

2. Professional authority: This attribute relates to the autonomy afforded a professional because of the profession's monopoly over the knowledge underlying its unique service.

3. Sanction of the community: The powers and privileges conferred upon the profession by society comprise this attribute. Powers include control of the profession over education and admission to the profession. Privileges include confidentiality and freedom from lay judgment on professional matters. Professionals are judged by their peers.

4. Regulative code of ethics: The purpose of such a code is to prevent the abuse of powers and privileges. Standard elements include an emotional neutrality to the client, a requirement to provide service for whomever asks it, a commitment to maximum caliber service under all circumstances, and provision for internal discipline procedures (usually under the auspices of a professional association).

5. A professional culture: The values of the profession and standards for professional practice are included in this criterion. Also included is the concept of an altruistic, service-oriented motivation for practice.

Moore (1970, pp. 5-16) and Yarmolinsky (1978, pp. 159-160)

define professionalism in essentially the same terms. The criterion of autonomy is identified by Moore (1970, p. 16) as the ultimate goal for an occupational group which aspires to professionalization.

Nursing authors, also in general agreement about the nature of professional nursing, have related criteria for professionalism specifically to the practice of nursing. Watson (1981) identifies four major professional values for nursing: a service orientation; recognition of the dignity and worth of each person, expressed as a commitment to act in the best interest of the patient and family; a commitment to education, including research and continuous learning; and autonomy, including freedom to use knowledge and skills in the service of the patient, and authority to ensure safe, effective delivery of nursing care.

Davis, Kramer, and Strauss (1975, p. vii) identify care of the whole patient, rather than segmented care, as the key value of professional nursing. Schlotfeldt's discussion (1974) is in general agreement with others; however, she also subscribes to the belief that a professional has the expectation of appropriate remuneration (p. 28). Wang and Watson (1977) describe professional nursing in the same terms as authors discussed above. The Canadian Nurses Association (1980) specifies the use of a conceptual model for nursing as the basis for the independent part of nursing practice, and the use of the nursing process as standards for professional nursing practice. Adam (1980) supports the above standards in her argument that the use of a conceptual model for nursing

will strengthen the theoretical knowledge base of the profession (p. vii). An interesting sideline here is that Watson (1981, p. 297) questions the wisdom of using a single conceptual model as the basis for curriculum construction--a practice which is becoming widespread in nursing education. Conway (1983) identifies the principal task for the professionalization of nursing as the development of its knowledge base (p. 30).

Jacox (1978) identifies three major criteria for professionalism in nursing: (a) a long period of specialized education, including a commitment to research and continuous learning; (b) a service orientation, expressed as a commitment to acting in the best interests of the patient; and (c) autonomy, meaning that the profession is self-regulating, members have control over their functions in the work setting, and members are evaluated by their peers. Autonomy is identified as the criterion on which nursing has made the least progress (1978, p. 14).

Because Jacox' analysis (1978) is straightforward, comprehensive, and consistent with other literature, it was selected as the framework for a summary of the characteristics of professional nursing. This summary outlines Jacox' three major criteria; it also elaborates upon and adds to them, using ideas from the other writings reviewed above. The criteria for professionalism in nursing are summarized as follows:

1. Commitment to education: This criterion refers to

a lengthy, rigorous education in an academic setting. It includes the concepts of research to expand the body of knowledge, continuous learning, and critical thinking.

2. Service orientation: Values related to acting in the best interest of the patient are included in this attribute, including altruistic motivation, holistic care, the use of a conceptual model for nursing and the nursing process, patient teaching, patient involvement in nursing care, confidentiality, and a belief in the worth of the service provided. Values antithetical to this characteristic include a task orientation, emphasis on efficiency, emphasis on completing forms and ordering supplies, and impersonality in human relations.

3. Autonomy: This criterion refers to values such as a self-regulating professional association, control over education and entry to practice, individual control of functions in the work setting, acting as a change agent, use of peer and self-evaluation, collegial relationships with other health professionals, assertiveness, use of sound judgment, creativity, and a questioning approach to established routine. Antithetical values include compliance, obedience, hierarchical relationships, and strict adherence to routines and procedures.

4. Participation in the professional association: This attribute includes attendance at meetings, providing input to the association, and participating in the work of the association.

5. Accountability: This value refers to accepting responsibility for one's actions.

6. Expectation of appropriate remuneration: Although secondary to altruistic considerations, this attribute is based on the belief that society will not value a professional's contribution if he himself does not.

The above summary was used to formulate the table of specifications for the initial item pool, which was pre-tested for this study.

The Measurement of Attitudes

Self-report attitude scales have been assessed by numerous authorities (Gorden, 1977, p. 1; Nunnally, 1970, p. 421; 1978, p. 591; Polit & Hungler, 1978, p. 350) as the most valid, direct, and ubiquitous approach for measuring human attitudes. Although they are limited to the extent of individuals' insight into their own attitudes and their willingness to share them, these limitations are not considered severe enough to detract significantly from the usefulness of the scales (Nunnally, 1970, p. 421; 1978, p. 591).

But a word of warning about the above limitations is in order. Researchers using self-report measures to collect data can only assume that, to the best of their ability, respondents will give honest replies; however, there are numerous reasons to falsify responses. Distorted or false

reporting may be deliberate or subconscious (Phillipps, 1971, pp. 25-26). One type of distorted reporting is the response set, defined by Robinson et al. (1974) as follows: "a tendency on the part of individuals to respond to attitude statements for reasons other than the content of the statements" (p. 247). Making the scale as interesting and pleasant as possible for the respondent is recommended as a basic preventive measure (Robinson et al., 1974, p. 247).

One type of response set, termed "acquiescence", occurs when the respondent tends to agree with everything. Varying the item wording from positive to negative has been suggested as a technique to combat this phenomenon, but the literature is conflicting as to the value of this measure (Robinson et al., 1974, pp. 247-248).

A particularly troublesome type of response set is "social desirability", which involves respondents selecting options which they perceive to be more socially acceptable in order to avoid feelings of personal discomfort or apprehension (Phillips, 1971, pp. 25-26; Robinson et al., 1974, pp. 248-249). Although it is felt that this type of bias is impossible to eliminate entirely, guaranteeing respondents anonymity is recommended as a strategy for minimizing this distortion (Fox, 1976, p. 235).

Thurstone scales, Likert scales, Guttman scales, and the semantic differential are the methods of scaling attitudes currently in common use (Nunnally, 1978, pp. 602-604; 607-609; Polit & Hungler, 1978, pp. 360-369).

Thurstone scales have been assessed by Polit and Hungler (1978, p. 360) as less useful than others because of their complexity and methodological shortcomings. A typical study requires the use of 100 judges (Nunnally, 1978, p. 603). Guttman scales are considered by Nunnally (1978, p. 602) to be impractical because only gross discriminations among individuals can be derived. Polit and Hungler (1978) report that semantic differentials are analyzed using specific, sophisticated techniques (p. 368). Likert scales appear more practical than the other types mentioned because they are easier to construct and analyze than the semantic differential, and do not share the disadvantages of Thurstone and Guttman scales identified above.

Likert scales, also called summative scales, have been assessed by Nunnally (1970) as possessing the following advantages over all other methods:

They (1) follow from an appealing model, (2) are rather easy to construct, (3) usually are highly reliable, (4) can be adapted to the measurement of many different kinds of attitudes, and (5) have produced meaningful results in many studies to date. (p. 604)

For the reasons delineated above it was decided to develop a Likert scale to measure professional role attitudes for this study. A Likert scale consists of a pool of positively and negatively worded statements (or items) with which respondents are asked to indicate varying degrees of agreement (Nunnally, 1978, p. 605).

Summary and Implications for the Current Study

It has been established that a major responsibility of nursing education is to facilitate the socialization of nursing students into the attitudes and values of the professional nursing role. Values can be taught (Reilly, 1978b), but a knowledge of professionalism and the professional socialization process is a fundamental prerequisite to such teaching. To provide a basis for understanding the process of professional socialization, writings in psychology and sociology and the nursing literature on professional role acquisition were examined. It was found that, over the past several decades, theories of professional socialization have become progressively more complex, and have portrayed the socializee as an increasingly active agent in his own socialization. Role conflict was found to be an obstacle which can interfere with the process of role acquisition. Thornton and Nardi's theory on role acquisition was examined in detail because it is a comprehensive model which can be readily applied to the professional socialization of nursing students.

Once the appropriate attitudes and values have been taught, the effectiveness of that teaching can and should be evaluated (Reilly, 1978a). A necessary prerequisite for evaluating attitudes and values is an instrument with which to measure them. The literature on the nature of professionalism and professional nursing was reviewed to provide the

knowledge and understanding necessary for the construction of such an instrument.

The decision to construct an instrument necessitates a further decision about what kind of instrument to develop. An examination of the literature on the measurement of attitudes resulted in the conclusion that a Likert scale is an effective, practical, powerful tool for attitude measurement.

CHAPTER III

METHODOLOGY

Overview

An attitude scale based on the Likert technique was developed to measure the professional role attitudes of diploma nursing students. The instrument was developed according to the methodology suggested in the literature on the construction of a Likert scale. Procedures for construction of the instrument were also designed in accordance with the major criteria for validity. The original 60 items were critiqued by a panel of nursing instructors and revised several times prior to administration. The data producing sample consisted of all consenting students enrolled in four diploma nursing programmes located in British Columbia. Completed instruments were scored by hand; data were analyzed by computer. On the basis of the correlation of each item with the total score, 40 items were selected for the final instrument. Reliability was assessed for internal consistency. Factor analysis was attempted for the purpose of identification of item clusters which might constitute appropriate subscales for the instrument.

Development of the Original Item Pool

Nature of the Statements

A Likert scale consists of a collection of statements (or items) with which respondents are asked to indicate varying degrees of agreement or approval. Likert emphasizes the importance of clear, concise statements, and recommends frequent use of the word "should" to indicate expressions of desired behaviour rather than fact (Likert, 1974, p. 234). The item pool should be approximately evenly divided between positively and negatively worded items (Likert, 1974, pp. 234-235; Nunnally, 1978, p. 605). Nunnally (1978, p. 605) cautions that neutral statements and extreme statements in a positive or negative direction should be avoided because they tend to be less discriminating than moderately positive and moderately negative statements. The distribution of positive and negative statements throughout the instrument should be "haphazard" (Likert, 1974, p. 235).

The original item pool for the study was developed in accordance with the above recommendations. An equal number of moderately positive and negative items were distributed in a haphazard manner throughout the pool. Items were critiqued by nursing educators and revised several times to avoid ambiguity.

Number of Items

The number of items appropriate for the initial pool

of statements is not specified in the literature. Most authorities suggest that considerably more items should be developed for the testing stage than are desired for the final instrument.

Nunnally (1978, p. 605) indicates that 40 items are the maximum commonly required in an attitude scale. Since there is general agreement in the literature that longer scales increase reliability, it was decided to generate a pool of 60 items; 20 of these items were later eliminated.

Number of Steps on the Scale

The matter of the appropriate number of steps to indicate degrees of agreement in the scale is controversial. Nunnally (1978) reports the following:

As the number of scale steps is increased from 2 up through 20, the increase in reliability is very rapid at first. It tends to level off at about 7, and after about 11 steps there is little gain in reliability from increasing the number of steps.
(p. 595)

Likert himself (1974) used a 5-point scale.

Another issue regarding the number of steps is whether to use an odd or even number. An odd number allows for an undecided or neutral response, whereas an even number forces the respondent to indicate some degree in the direction of agreement or disagreement.

The decision about the appropriate number of steps is usually left to the judgement of the investigator (Nunnally, 1978, p. 596). On the grounds that respondents might

legitimately have neutral feelings about some items, it was felt that provision for a neutral response would allow respondents to express neutral feelings and thereby reduce problems of nonresponse to items. A 7-point scale was used in order to provide for a neutral response and to maximize the reliability of the instrument.

Validity

"Validity refers to the degree to which an instrument measures what it is supposed to be measuring" (Polit & Hungler, 1978, p. 434). Three types of validity are identified as being of common concern: criterion-related validity, construct validity, and content validity.

Criterion-related validity involves establishing a relationship between the instrument being developed and some other criterion. The American Psychological Association (APA) suggests that this type of validity is most important for instruments developed for predictive purposes (1974, pp. 26-28). Furthermore, an appropriate criterion must be available against which to validate the instrument. "All too often, tests are validated against any available criterion with no corresponding investigation of the criterion itself" (APA, 1974, p. 27). Because the instrument developed for this study was mainly for descriptive purposes, and because no criterion known to be valid for the concept of professional attitudes was identified in the literature, criterion-related

validity was not considered in the assessment of the instrument.

Construct validity is concerned with the adequacy with which the underlying theoretical abstract concept is measured. Evidence of construct validity is not found in a single study, but rather accrues from many studies; a succession of acceptance and rejection of hypotheses about the nature of a construct leads to a better understanding of the attribute being measured by the instrument (APA, 1974, p. 30; Nunnally, 1978, p. 99). The attempt at factor analysis on the 40 items selected for the final instrument could be considered a beginning assessment of construct validity.

Content validity refers to the adequacy with which a domain of content is sampled. If the major interest of a study is "verbalized attitudes for their own sake, content validity ... is the major issue" (Nunnally, 1978, p. 592). Because the study was descriptive in nature, this type of validity was of primary concern. Nunnally identifies two components of content validity--a representative sample of items and "sensible methods of test construction " (1978, p. 92).

It is better to address validity during the process of instrument construction rather than to test a completed instrument for validity (Nunnally, 1978, p. 92). Nunnally's two components of content validity were attended to in the following manner. A Table of Specifications (see Table I)

Table I

Table of Specifications for
Content Sampling

Professional Characteristic	Number of Items	
	Original Item Pool	Final Instrument
Commitment to education	16	11
Service orientation	16	10
Autonomy	16	10
Participation in professional association	4	3
Accountability	4	3
Expectation of appropriate remuneration	<u>4</u>	<u>3</u>
	60	40

was constructed to ensure a representative sample of items. This table was based on the literature about professionalism in nursing; the professional characteristics identified in the table are explained on pages 39-41. Sixty items representative of the identified professional characteristics were developed (see Appendix B); they were evenly divided between positively and negatively worded statements. The

relationship of items to each professional characteristic is illustrated in Table II.

The assurance of "sensible methods of test construction" rests mainly on "appeals to reason regarding ... the adequacy with which the content has been cast in the form of test items" (Nunnally, 1978, p. 93). In order to address this concern, items were critiqued by 12 nursing instructors from 2 British Columbia diploma nursing programmes. Revisions were made, the revised items were reviewed by 4 of the above 12 nursing instructors, and further minor revisions were undertaken. As a further check on item clarity, respondents were requested to indicate directly on the instrument those items which they found difficult to interpret at the time of data collection.

Selection of the Sample

Nunnally (1970, p. 436) suggests a minimum of five times as many subjects as items on a summative rating scale. Since the original instrument consisted of 60 items, a minimum sample size of 300 was required for the study.

The population for the study consisted of all students enrolled in 4 diploma nursing programmes located in British Columbia (N=537). A convenience sample of 407 students was obtained from this population by approaching students in regularly scheduled classes in April and May, 1983.

Table II

Relationship of Items in the Original Instrument
to Professional Characteristics Identified
in the Literature

"Education" Items		"Service" Items		"Autonomy" Items	
Positive ^a	Negative ^a	Positive	Negative	Positive	Negative
1	11	9	3	6	2
5	17	12	20	16	7
14	23	18	30	21	10
19	34	24	35	37	15
29	39	27	40	38	22
41	45	32	48	47	26
54	46	44	55	50	43
59	49	57	56	51	60

"Professional Association" Items		"Accountability" Items		"Remuneration" Items	
Positive	Negative	Positive	Negative	Positive	Negative
4	28	31	13	8	25
52	42	36	58	53	33

Note. The numbers in this table refer to items as they are numbered in the original instrument (see Appendix B).

^aThe designations "positive" and "negative" indicate positively and negatively worded items.

Participation was voluntary and anonymous. In an introduction to the research instrument (see Appendix A), attached to the front of the tool, students were informed of the following: (a) the general nature of the research, (b) that withdrawal from the study was a possibility at any time, (c) that refusal to participate would not prejudice grades or standing in the nursing programme, and (d) that completion of the attitude scale and demographic data questionnaire signified consent to participate in the study.

Procedure for Data Collection

Official consent was obtained from the administration and nursing faculty at each educational institution for conducting the study in the agency. Regularly scheduled class time was reserved in each agency. The agency instructor introduced the investigator, who verbally presented introductory information to the students in attendance; this information was essentially the same as that in the written introduction to the research instrument (Appendix A). The word "professional" was excluded from the information in order to avoid influencing the students' responses. Student participation was requested, and opportunity to leave was provided for those who did not wish to participate; it was observed that only one student chose not to participate. The investigator was available to respond to questions. The instruments were completed and collected in a convenient

location in the classroom.

Statistical Procedures

Data were coded and scored by hand, and then entered into computer files for analysis. The SCSS Conversational System (Nie, Hull, Franklin, Jenkins, Sours, Norusis, & Beadle, 1980) was the statistical computer package used for data analysis. This computer package was selected largely because it was readily available to the investigator.

Scoring

Scores for positively worded items were assigned using a 7-point scale, with a value of 7 for "strongly agree" through 1 for "strongly disagree". Negatively worded items were reversely scored, with a value of 1 for "strongly agree" through 7 for "strongly disagree".

Item Elimination and Retention

Authorities on the construction of Likert scales are in general agreement that items should be selected for retention in the final instrument on the basis of Pearson product-moment correlations of each individual item with the total score (Gorden, 1977, p. 39; Likert, 1974; Nunnally, 1978, pp. 605-606).

Separate rank-orderings of the correlations should be made for both positive and negative statements. Then,

working from the top of the rank-orders downward, one would choose an equal number of positive and negative items for the final scale. (Nunnally, 1978, p. 606)

The above procedure was followed with one modification. Rather than selecting items for the final scale solely on the basis of item-total score correlations, the necessity of retaining a representative sample of items was considered simultaneously so that validity would not be sacrificed to a significant extent. Such a modification is supported by Gorden (1977, p. 40), who cautions against using item-total score correlations as the single basis for the final selection of items; this concern reflects his opinion that the major weakness of the Likert approach rests in the fact that the method of testing internal consistency "does not clearly establish that the items actually belong on a unidimensional continuum" (p. 39). Gorden goes on to explain that:

Under certain circumstances an item which does correlate highly with the total score does not belong on the same dimension with the other items in the set used to obtain that total score. Furthermore, items which do not correlate with the total score may actually belong on the continuum....They may belong to several intercorrelating scales, or each may constitute a one-item scale with a five-point response. (p. 40)

For the reasons explained above, correlation coefficients were rank-ordered separately for positively and negatively worded items, and simultaneously for the professional characteristics identified in the Table of Specifications (Table I). Items with the highest correlation coefficients were selected for each professional characteristic in the proportions indicated in Table I. Approximately equal numbers

of positively and negatively worded items were selected in each category, for a total of 40 items.

Reliability

Reliability refers to the degree of consistency with which an instrument measures the attribute it claims to measure (Polit & Hungler, 1978, p. 424). Coefficient alpha, sometimes called Cronbach's alpha, is said to be the most useful formula for determining reliability (Nunnally, 1978, p. 230). The formula is based on the variance of individual items in comparison with the variance of the total test. Nunnally recommends that coefficient alpha be computed for the items selected on the basis of correlation with the total score; if coefficient alpha is sufficiently high, these items could be accepted as the final scale (Nunnally, 1978, p. 606). It is suggested that a reliability of .70 is sufficient in the early stages of research on measures of a construct, and that, "for basic research, it can be argued that increasing reliabilities much beyond .80 is often wasteful of time and funds" (Nunnally, 1978, p. 245).

Coefficient alpha was computed (by calculator) on the 40 selected items according to the following formula:

$$\alpha_k = \frac{k}{k - 1} \left(1 - \frac{\text{Sum } s^2_{x_i}}{s^2_{x_t}} \right)$$

where s^2x_i is the variance of the part-scores x_i for each part in turn and s^2x_t is the variance of the sum of k part scores. (Cronbach, 1970, p. 161)

Factor Analysis

Factor analysis is a technique for identifying clusters of related variables; the procedure is related to content and construct validity (Nunnally, 1978, pp. 112-113). The role of this technique in the construction of Likert scales is somewhat controversial. Nunnally (1978) reports that factor analysis of the typical item pool yields results which tend to be "messy" (p. 607); however, he goes on to say that factor analysis of item pools for attitude measurement tends to yield more conclusive results because inter-item correlations tend to be greater (p. 607). His recommendation about the use of factor analysis in the construction of a Likert scale is as follows:

If one hypothesizes a number of factors relating to a particular attitude or, lacking hypotheses, one suspects that an item pool harbors a number of strong factors, there is nothing wrong with factor-analyzing the item pool initially rather than proceeding directly to the construction of a homogeneous scale, as was outlined previously. (Nunnally, 1978, p. 607)

Robinson et al. (1974) report that, where interitem correlations range from approximately .15 to .45, the results of factor analysis will likely be undefinitive (pp. 252-253). They go on to argue that "on balance, however, one is further ahead performing such analysis than not doing so" (p. 253).

Factor analysis on the original 60 items for this study

was found to be impossible because of size limitations inherent in the SCSS computer package. However, the procedure was attempted on the 40 items selected for the final instrument, for the purpose of determining the extent to which identified item clusters correspond to the categories in Table I.

Significance Level

The level of statistical significance accepted for item-total score correlations was .05. This is the level generally accepted for basic scientific research which does not have implications for individual human beings (Gay, 1976, p. 247; Polit & Hungler, 1978, p. 545; Robinson et al., 1974, p. 246).

Demographic Data

Demographic data were obtained through the use of a brief questionnaire (see Appendix E). They were subjected to univariate analysis for the purpose of sample description.

CHAPTER IV

PRESENTATION AND DISCUSSION OF FINDINGS

Description of the Sample

During April and May of 1983 the investigator visited 4 diploma nursing programmes (14 nursing classes) in British Columbia. The number of students attending each class varied from 18 to 53. Data were collected as described in Chapter III (pp. 54-55). Of the 408 instruments returned, 1 was incomplete, leaving a sample size of 407.

The composition of the sample in relation to school of nursing is reported in Table III. British Columbia Institute of Technology (BCIT) and Vancouver Community College (VCC) are located in Burnaby and Vancouver, respectively; both are large urban centres. Okanagan College is located in Kelowna, a smaller interior city, and serves the area of the Okanagan Valley. Selkirk College is located in Castlegar, an even smaller interior city, and serves the West Kootenay area. The majority of nursing students participating in the study were from BCIT and VCC (N=289, or 71% of the sample).

The composition of the sample in relation to age, sex, and pre-nursing school education is reported in Table IV. The 20-24 year age group contains the most students (187); mature students (25 years and over) number 172, or 42.3% of the sample, which is composed almost entirely of females

Table III

Composition of the Sample According to
School of Nursing (N=407)

School of Nursing	Number of Subjects	% of Obtained Sample
British Columbia Institute of Technology	124	30.5
Okanagan College	77	18.9
Selkirk College	41	10.1
Vancouver Community College	165	40.5
	<u>407</u>	<u>100.0</u>

(96.1%).

The majority of students (243, or 59.7% of the sample) had educational qualifications beyond secondary school graduation on entering nursing school. University degrees held by participants are all at the baccalaureate level and include degrees in general arts, history, psychology, economics, political science, English, education, and general sciences. Vocational graduates represent a wide variety of technical and career programmes.

A substantial number of students (see Table V) were employed by health care agencies prior to entering nursing school. Almost half of these students (72, or 48%) were

Table IV

Composition of the Sample According to Age, Sex,
and Pre-Nursing School Education
(N=407)

	Number of Subjects	% of Obtained Sample
<u>Age</u>		
19 years or under	48	11.8
20-24 years	187	45.9
25-29 years	94	23.1
30-39 years	55	13.5
40-49 years	20	4.9
50 years or over	3	.7
	<u>407</u>	<u>100.0</u>
<u>Sex</u>		
Female	391	96.1
Male	<u>15</u>	<u>3.7</u>
	406 ^a	99.8 ^a
<u>Pre-Nursing School Education</u>		
High school graduation or equivalent	164	40.3
Some university, but did not graduate	151	37.1
University degree	21	5.2
Graduation from a community college or technical school	58	14.3
Other	<u>13</u>	<u>3.2</u>
	407	100.0

^aThese discrepancies result from the fact that one student failed to indicate his or her sex on the Demographic Data Questionnaire.

Table V

Composition of the Sample According to
Pre-Nursing School Employment in
Health Care Agencies (N=407)

	Number of Subjects	% of Obtained Sample
<u>Pre-Nursing School Employment in a Health Care Agency</u>		
Employed	150	36.9
Not employed	257	63.1
	407	100.0
<u>Type of Employment in Health Care Agency</u>		
Nurse-aide	43	10.6
Licensed Practical Nurse	27	6.6
Orderly	2	.5
Other	77	18.9
	149 ^a	36.6 ^a

^aThese discrepancies result from the fact that one student failed to indicate type of employment on the Demographic Data Questionnaire.

employed in patient care positions of nurse-aide, licensed practical nurse, and orderly. The remainder, in the "other" category, were employed mostly as clerical workers of various types, and as housekeeping staff.

Item Analysis

The procedures described below were used to assess the value of individual items and make decisions regarding which items should be eliminated from the final instrument. The item numbers used in this chapter refer to items as they are numbered in the original instrument (see Appendix B).

Interpretation Difficulty

The number of students who had difficulty interpreting each item is reported in Table VI. Five items are associated with difficulty rates of greater than 2% (9 students or more). Of these five items, only two (items 10 and 21) were retained in the final instrument. These items are considered ambiguous and should be rephrased or replaced in any future revision of the instrument.

Variance

The variance of each item in the original instrument is reported in Table VII. This statistic is an indication of the degree of variation in the data from the mean score for each

Table VI

Number of Students Indicating Interpretation Difficulty for
Items in the Original Instrument (N=407)

Item Number ^a	Number of Students	% of Sample	Item Number ^a	Number of Students	% of Sample
1	0	0	(31)	2	.5
(2)	6	1.5	32	0	0
3	3	.7	33	4	1.0
(4)	27	6.6	34	7	1.7
5	2	.5	(35)	0	0
(6)	1	.2	36	1	.2
7	4	1.0	37	3	.7
(8)	7	1.7	38	4	1.0
(9)	0	0	(39)	3	.7
10	11	2.7	40	6	1.5
(11)	6	1.5	(41)	3	.7
12	8	2.0	42	4	1.0
13	3	.7	43	4	1.0
14	4	1.0	(44)	26	6.4
(15)	6	1.5	45	2	.5
(16)	5	1.2	46	1	.2
(17)	20	4.9	(47)	3	.7
18	1	.2	48	1	.2
19	1	.2	49	3	.7
20	6	1.5	50	2	.5
21	22	5.4	51	0	0
22	8	2.0	52	2	.5
23	4	1.0	53	5	1.2
24	5	1.2	54	7	1.7
25	0	0	(55)	2	.5
26	2	.5	(56)	2	.5
(27)	4	1.0	57	1	.2
28	6	1.5	58	2	.5
(29)	3	.7	59	1	.2
30	1	.2	(60)	1	.2

^aItem numbers in parentheses indicate items which were eliminated from the final instrument.

Table VII

Variance of Items in the Original
Instrument. (N=407)

Item Number ^a	Variance	Item Number ^a	Variance	Item Number ^a	Variance
1	.765	21	1.374	(41)	3.402
(2)	1.462	22	2.384	42	2.178
3	2.573	23	1.620	43	1.941
(4)	2.921	24	2.449	(44)	1.139
5	3.476	25	2.313	45	2.039
(6)	4.115	26	1.970	46	2.822
7	2.892	(27)	3.280	(47)	1.564
(8)	2.308	28	1.330	48	1.533
(9)	.282	(29)	1.447	49	2.024
10	2.677	30	2.493	50	.803
(11)	2.822	(31)	.739	51	.649
12	1.940	32	1.171	52	.703
13	1.834	33	1.813	53	4.229
14	1.349	34	2.576	54	.796
(15)	3.178	(35)	2.006	(55)	3.542
(16)	2.542	36	2.172	(56)	2.503
(17)	2.076	37	1.017	57	.530
18	1.784	38	1.256	58	1.338
19	2.059	(39)	3.110	59	1.563
20	1.093	40	2.410	(60)	2.664

^aItem numbers in parentheses indicate items which were eliminated from the final instrument.

item (Nie et al., 1980, p.215). Eight items have a variance below 1; of these eight items, six were retained in the final instrument (items 1, 50, 51, 52, 54, and 57). Seventeen other items in the final instrument have a variance between 1 and 2. A possible contributing factor to these low variances could be the wording of items; they may be too extremely positive or negative, or too neutral. The items with the lowest variances should be revised or replaced with items yielding a higher variance. When using Cronbach's formula for calculating reliability, increases in the variance of individual items result in a higher reliability coefficient (Cronbach, 1970, p. 161).

Correlation of Individual Items with the Total Score

The Pearson product-moment correlation coefficients of individual items with the total score of the original instrument are reported in Table VIII. All coefficients except five (items 6, 27, 39, 41, and 60) are significant at the .001 level or higher. Correlations for items 6 and 39 are significant at the .01 level. The correlation coefficient for item 27 is significant at the .05 level.

All items retained in the final instrument have correlations with the total score which are significant at the .001 level. Correlation coefficients for these items range from .174 to .428.

Table VIII

Correlation of Individual Items with the Total
Score of the Original Instrument (N=407)

Item Number ^a	Correlation Coefficient	p	Item Number ^a	Correlation Coefficient	p
1	.336	.000	(31)	.185	.000
(2)	.146	.000	32	.277	.000
3	.236	.000	33	.228	.000
(4)	.235	.000	34	.187	.000
5	.267	.000	(35)	.203	.000
(6)	.125	.006	36	.193	.000
7	.209	.000	37	.325	.000
(8)	.183	.000	38	.256	.000
(9)	.163	.000	(39)	.141	.002
10	.321	.000	40	.312	.000
(11)	.177	.000	(41)	.081	.053
12	.205	.000	42	.356	.000
13	.286	.000	43	.405	.000
14	.341	.000	(44)	.198	.000
(15)	.182	.000	45	.301	.000
(16)	.195	.000	46	.300	.000
(17)	.136	.000	(47)	.166	.000
18	.237	.000	48	.247	.000
19	.174	.000	49	.384	.000
20	.221	.000	50	.323	.000
21	.350	.000	51	.322	.000
22	.305	.000	52	.403	.000
23	.331	.000	53	.215	.000
24	.249	.000	54	.397	.000
25	.308	.000	(55)	.162	.001
26	.270	.000	(56)	.171	.000
(27)	.094	.029	57	.401	.000
28	.428	.000	58	.313	.000
(29)	.170	.000	59	.373	.000
30	.217	.000	(60)	-.046	.180

^aItem numbers in parentheses indicate items which were eliminated from the final instrument.

Standards for correlations of items with the total score are not indicated in the literature; however, these coefficients appear to be low. Low coefficients frequently indicate that an individual item is measuring something different from what the rest of the items are measuring (Likert, 1974, p. 237). The concept of professional attitudes appears to be broad, and may actually consist of a number of subconcepts. When this situation exists, the development of a homogeneous group of items is more difficult. Division of the instrument into a number of subscales might be indicated.

Item Elimination

Twenty items (items 2,4,6,8,9,11,15,16,17,27,29,31,35, 39,41,44,47,55,56, and 60) were eliminated from the final instrument. These items were eliminated on the basis of correlations of individual items with the total score. Rank-orderings of coefficients for positively and negatively worded items were made under the categories in the Table of Specifications (Table I). Items were eliminated proportionally from the bottom of each category.

The 40 items selected for the final instrument are renumbered and presented in Appendix C. The relationship of renumbered items to professional characteristics in the Table of Specifications is reported in Appendix D (Table X).

Reliability

Coefficient alpha (or Cronbach's alpha) for the 40 selected items is .80; this degree of reliability is considered by Nunnally (1978, p. 245) to be acceptable for basic research on groups. In fact, he suggests that increasing reliabilities much beyond this level might be "wasteful of time and funds" (p. 245).

Factor Analysis

Initial factor analysis of the 40 selected items using the principal components method extracted 13 factors, all with eigenvalues greater than 1. The determination of the number of factors to retain was made by the Scree-Test (Nie et al., 1980, p. 492), which indicated a levelling point following factor 7.

As indicated by the eigenvalues, the factors extracted are rather weak. Because interitem correlations are low, this result was anticipated. Most interitem correlation coefficients are between .100 and .300; many are below .100, and a few are above .300, with the highest value being .489. Because the results of factor analysis are undefinitive, only tentative suggestions can be made regarding the interpretation of item clusters.

Table IX illustrates item clusters as identified by factor analysis using the principal components method of extraction, and the varimax method of rotation with Kaisar

Table IX

Item Clusters Identified by
Factor Analysis (N=407)

Factor 1	Factor 2 ^a	Factor 3 ^a	Factor 4
54	42	(19) neg ^b	30
59	49	38	46
52	45	43	7
14	34	53 neg ^b	22
21	23	(5) neg ^b	
50	(19)	20	
1	(5)		
57			
12			
51			
Factor 5	Factor 6	Factor 7	
26	13	24	
10	36	3	
25	37	18	
33	58		
28	32		
40	48		

Note. The numbers in this table represent items as they are numbered in the original instrument (see Appendix B). Items are listed in descending order of the extent to which they load on the factor.

^aNumbers in parentheses indicate items which load negatively on one factor and positively on another.

^bThe designation "neg" beside an item indicates that the item is associated with the others in the cluster in a negative or opposite manner.

normalization (Nie et al., pp. 475-494). Factors were restricted to seven in number.

Factor analysis is a technique which identifies clusters of related variables on the basis of mathematical manipulation of numbers in a correlation matrix. The computer identifies the clusters, but it is up to the investigator to identify subjectively the conceptual element common to the variables within the cluster. Often the patterns are uninterpretable (Nie et al., 1980, p. 490); this fact as well as the overall weakness of the factors should be kept in mind when considering the following attempt at interpretation.

Factor 1 does not appear to be interpretable in conceptual terms related to professional attitudes. Because this is the strongest factor identified, the lack of interpretability is disappointing. The factor contains ten items from four of the six categories in the Table of Specifications (Table I); these four categories are education, autonomy, service, and professional association. It is interesting to note that all items in the scale with a variance below 1 are included in this factor, and 1.940 is the largest item variance in the cluster. This result suggests that the items in this factor might be "motherhood" statements which were responded to in a similar manner by most nursing students in the sample. Also of interest is the fact that all items in this cluster are positively worded.

Factor 2 contains seven items, six of which are from the education category; the factor could therefore be considered to represent a fairly clear education component. An element of continuing education or professional development is present in many of these items. All items in this cluster except item 5 are negatively worded.

Although factor 3 includes items from the education, autonomy, service, and salary categories, all except item 20 can be seen to have an education component. All items which make reference to a baccalaureate degree in nursing are included in this factor; furthermore, these are the items which load negatively on the factor. The only other common element identified is that these items, again with the exception of item 20, refer to concepts which may be relatively unfamiliar to most diploma level nursing students.

Factor 4 includes items from the service, education, and autonomy categories. One commonality identified is that in some manner they all address the matter of who should make health care decisions. Another common element is that the items could all be seen to address matters of efficiency and routine. All items in this cluster are negatively worded.

Factor 5 includes items from the autonomy, service, salary, and professional association categories. All of these items involve situations which require some measure of assertiveness to demonstrate professional attitudes. They all deal with professional behaviours which frequently

are unrewarded or even discouraged in the hospital setting. "Bucking the system" might be an appropriate label for this cluster. All items are negatively worded.

Factor 6 consists of items originally placed in the accountability, service, and autonomy categories. All three accountability items are included in this cluster; furthermore, the other three items in the cluster contain an accountability element. Delivery of the best possible nursing care to the patient is another element in this cluster. This factor is evenly divided between positively and negatively worded items.

Factor 7 consists of three items, all from the service category. They appear to address the uniqueness of the patient. An element of conflict between the patient's needs and the needs of the hospital bureaucracy is common to these items. Two positively worded items and one negatively worded item comprise this factor.

In summary, of the original six categories in the Table of Specifications (Table I), only education and accountability were confirmed by factor analysis. Although tentative suggestions for other categories evolved in the interpretation of the analysis, the factors extracted are considered by the investigator to be too weak to justify division of the scale into corresponding subscales. An interesting observation is that positively worded items and negatively worded items frequently tended to group together.

Validity

The instrument is considered to possess content validity to the extent that Nunnally's (1978, p. 92) major criteria of a representative sample of items and sensible methods of test construction were attended to during development of the instrument. Both the original instrument and the final instrument are based on a Table of Specifications derived from the literature. Items were critiqued and revised to address the matters of clarity and adequacy with which the content was cast in the form of items. As an additional check on clarity, students were asked to indicate items which they found to be ambiguous.

An initial attempt to demonstrate evidence of construct validity was made through factor analysis; however, the results of this procedure were inconclusive.

Summary

The data-producing sample for the study consisted of 407 diploma nursing students enrolled in 4 British Columbia schools of nursing. Analysis of demographic data provided the information fundamental to the description of the sample. Students in the two largest nursing schools constituted 71% of the obtained sample. The under-25 age group included 57.7% of the total; 96.1% were females. Students who had educational qualifications beyond secondary school graduation

prior to entering nursing school constituted 59.7%. Those students who were employed by a health care agency prior to nursing school entry numbered 36.8%.

The findings summarized below are the outcomes of the various procedures employed for data analysis. Item numbers refer to items as they are numbered in the original instrument (Appendix B).

1. Items 10 and 21 are associated with interpretation difficulty rates greater than 2%. These items are considered ambiguous and should be revised.

2. Items 1, 50, 51, 52, 54, and 57 have a variance of less than 1. These items are considered to discriminate insufficiently; correction of this situation would result in a scale with a wider dispersion and a higher reliability coefficient for internal consistency.

3. The correlation coefficients of individual items with the total score of the original instrument are generally low. This result suggests that the concept of professional attitudes might consist of several different dimensions or subconcepts, each of which were responded to in a different manner.

4. The coefficient alpha (or Cronbach's alpha) is .80; this figure represents a fairly high index for reliability in terms of internal consistency.

5. Of the six dimensions of professionalism extracted from the literature, only education and accountability were confirmed by factor analysis. The factors extracted

are too weak to justify division of the instrument into corresponding subscales.

6. Content validity of the instrument can be assumed because of the methods employed for instrument construction.

CHAPTER V

SUMMARY AND CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary and Conclusions

The purpose of this study was to develop and test an instrument that would reliably assess the professional role attitudes of diploma nursing students, and would be easy to administer.

A Likert scale was developed and employed for the above purpose. The instrument was designed to address the following six characteristics of professional nursing extracted from the literature: commitment to education, service orientation, autonomy, participation in the professional association, accountability, and expectation of appropriate remuneration. The sixty items in the original item pool were critiqued by a panel of nursing instructors and revised prior to administration.

The original instrument was tested with a sample of 407 diploma nursing students from 4 schools of nursing in British Columbia. It was found that the instrument was easy to administer, and no problems regarding comprehension of the instructions were identified. The time period required for completion of the original instrument was 30 minutes or less.

On the basis of item-total score correlations, 40 items from the original instrument were selected for the final instrument. The following conclusions are derived from the results of data analysis. Item numbers refer to items as they were renumbered for the final instrument (see Appendix C).

1. The final instrument is considered unsuitable for use in its present form. Items 5 and 12 are ambiguous, and items 1, 33, 34, 35, 37, and 38 do not discriminate sufficiently. Many of the other items are borderline in terms of discrimination. The instrument could be revised to correct these deficiencies.

2. The low correlation coefficients for individual items with the total score suggest that the concept of professional attitudes may be too broad to measure in one homogeneous scale. With the exception of education and accountability, items did not tend to cluster in accordance with the characteristics of professional nursing extracted from the literature. Factor analysis did not result in the identification of appropriate subscales for the instrument.

3. The reliability of the instrument is at a level considered sufficiently high for the purpose of basic research on groups.

4. Content validity of the instrument is inherent in the methods employed for its construction.

Implications for Nursing Education

Nursing has not yet gained universal recognition and acceptance as a profession; for this reason, it is currently embroiled in a drive for professionalization. One of the most important ways for this to occur is through the inculcation of professional attitudes and abilities in neophyte nurses entering practice. Nursing educators are accountable for the socialization of nursing students into the abilities, values, and attitudes of the profession.

Attitudes comprise an important component of any professional role. If nursing educators assume the responsibility for facilitating the professional socialization process, they need some means of evaluating their effort. Although the instrument developed and tested in this study has flaws, further refinement could result in an instrument which would satisfy the need for assessing the attitude component of the professional socialization process in nursing programmes.

The revised instrument could be administered to nursing students at intervals during the nursing programme, as part of the process of curriculum evaluation. Changes in group attitudes from one interval to the next could be assessed, and diagnoses made with respect to the curriculum. Such a process might provide direction for meaningful change in the curriculum, and for evaluation of the effectiveness of such change.

Recommendations for Further Research

Proposals for further research described below fall into two categories: recommendations for development of the instrument, and recommendations for future studies using a refined version of the instrument.

Recommendations for development of the instrument include the following:

1. The items identified on page 79 as being ambiguous and insufficiently discriminating should be revised.
2. The revised instrument should be tested and the reliability estimated using coefficient alpha.
3. Construct validity should be investigated further. Other measures of professional attitudes could be identified or developed, and correlation of these measures with the revised instrument determined. Another attempt at factor analysis should be made to identify appropriate subscales.

If the instrument were sufficiently refined it could be used for the following purposes:

1. A longitudinal study involving administration of the instrument at intervals during a nursing programme might assist in assessing the need for change in aspects of the curriculum related to professionalism.
2. The effects of differences in methods of professional role socialization (or of different types of learning experiences) on professional attitudes could be studied using the instrument.

3. The instrument could be used as part of a study comparing the professional role attitudes of nursing students at the baccalaureate and diploma levels.

4. The instrument could be administered to students immediately prior to graduation, and again following a period of employment in a hospital setting, in order to assess the constancy of the attitudes measured on graduation.

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APPENDIX A

Introduction to the Research Instrument

NURSING STUDENT ATTITUDE SURVEY

Introduction

My name is Jill Peregrym. As a graduate student at the University of British Columbia, I am studying the attitudes of nursing students toward certain aspects of nursing. It is hoped that the findings of this study will assist nursing faculty to make constructive decisions about the curriculum of the nursing programme.

In order to obtain this information, I am asking for your participation, which will consist of completing the attached attitude scale and brief questionnaire--a task which should require approximately 30 minutes of your time. Since the attitude scale is in the process of development, you are also being asked to comment on any difficulties you encounter in interpreting the items. Space is provided on the instrument for this purpose.

Although there may be no direct benefits to you yourselves, students who follow you through the programme should derive benefits from improved learning experiences.

Participation in this study is entirely voluntary, and refusal to participate will not prejudice your grades or your status in the nursing programme. If you choose to complete the attached attitude scale and questionnaire, it will be assumed that your consent to participate in the study has been given. You may withdraw from the study at any time.

Your responses on these forms will be totally anonymous. You are asked not to write your name on the instrument, or identify yourself in any other way. Please try to be completely honest in your responses. There are no right or wrong answers.

Thank you in advance for your participation.

APPENDIX B

Original Instrument

NURSING STUDENT ATTITUDE SURVEY

Instructions

This survey consists of 60 items. Some of the items are general statements; other items describe situations in which a nurse might find herself and include a statement indicating the action which the nurse should take.

You are asked to indicate the extent to which you agree or disagree with each statement by checking one of the columns with the following headings:

<u>Strongly Agree</u>	indicates that you agree with the statement with <u>almost no exceptions</u> .
<u>Agree</u>	indicates that you agree with the statement with <u>some exceptions</u> .
<u>Slightly Agree</u>	indicates that you agree with the statement, but with <u>quite a few exceptions</u> .
<u>Neutral</u>	indicates that you could either agree or disagree with the statement with about an equal number of exceptions in either case.
<u>Slightly Disagree</u>	indicates that you disagree with the statement, but with <u>quite a few exceptions</u> .
<u>Disagree</u>	indicates that you disagree with the statement with <u>some exceptions</u> .
<u>Strongly Disagree</u>	indicates that you disagree with the statement with <u>almost no exceptions</u> .

You are also asked to check the far right column, headed "Interpretation Difficulty," if you have difficulty understanding or interpreting the item. It would be very much appreciated if you would briefly explain the nature of your difficulty on the reverse side of the page.

Here is an example:

2. While alone at the nurses' station a nurse becomes aware that a patient's call light is on. The nurse should put aside her paperwork and answer the patient's call light immediately.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree
✓						

Interpretation
Difficulty

☐

Suppose that, almost without exception, you agree that the nurse should answer the call light immediately. Then check the first column (Strongly Agree) for that question. The absence of a check mark in the column headed "Interpretation Difficulty" indicates that you have no difficulty understanding or interpreting the item.

Unless specified otherwise, the word "nurse," or any form of that word, is used to denote a registered nurse working in a professional capacity. All items refer to hospital settings, unless otherwise indicated.

1. Nurses should read professional journals and other professional material on a regular basis.
2. A nurse disagrees with a physician's order; however, she feels hesitant about questioning the physician. She should comply with the order as written.
3. Mr. P. has been keeping his anxieties to himself for some time. He finally "opens up" to the nurse 5 minutes before change of shift. The nurse has planned an exciting social engagement after work. She should leave work on time.
4. Participation in the professional association should be considered a component of a nurse's job performance.
5. If all practicing nurses held bachelor's degrees in nursing, the status of nursing as a profession would be enhanced.
6. A hospital's routine procedure is that patients are transported within the hospital by wheelchair or stretcher. Mrs. F. has been up and about for some time and is proud of her progress. She wishes to walk to radiology for her chest X-Ray. The nurse, who agrees that Mrs. F. is fully capable of this activity, should make an exception in this case.
7. The physician is the best authority on matters related to the health of the public in general.
8. A nurse with 5 years experience, who has been unemployed for 8 months, is offered a position. The salary offered corresponds to that which should be offered for 3 years experience. The director of nursing explains that this discrepancy is the result of the 8-month interruption in work experience. The nurse should insist upon the 5-year salary, to which she is entitled by contract.
9. Patient teaching is an important component of nursing care.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree

Code _____
 Interpretation
 Difficulty

10. A new graduate nurse is disliked by many of her co-workers because she frequently suggests improvements to established routines and procedures. She is criticized for this behaviour by the head nurse during her first evaluation. The new nurse should make every effort to change this behaviour.
11. Two nurses are being considered for promotion to head nurse; both have been assessed as excellent nurses. Nurse A graduated from a diploma nursing program and has 6 years experience. Nurse B has a bachelor's degree in nursing and 3 years experience. The position should be given to Nurse A.
12. Talking with an anxious, ambulatory patient should take priority over his daily bath.
13. A physician orders an unsafe dose of a medication which is subsequently administered by a nurse. The nurse, who accurately followed the physician's order, bears no responsibility for the error.
14. Attendance at inservice education offerings should be considered an important part of a nurse's job performance.
15. An 11-year old boy is admitted to hospital on night shift with a painful foot injury following an automobile accident. His father is dead on arrival. The physician's instructions are to withhold all information about the father, however, the boy continually asks the nurse about his father's condition. Even though the nurse believes it is not in the boy's best interest, she should comply with the physician's instructions.
16. Evaluation by a nurse's peers should be included as a component of the nurse's performance appraisal.
17. The general duty nurse does not require a knowledge of basic research principles and methods.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree

Interpretation
Difficulty

18. Mrs. H. had difficulty sleeping during the night and is resting quietly at 1100 hours. Established hospital procedure dictates that patients must be bathed and their beds made by 1130. The nurse should allow Mrs. H. to sleep, even though her bed looks messy.
19. The minimum educational qualification which should be required to become a registered nurse is a bachelor's degree in nursing.
20. A nurse in a small town hospital is approached by a visitor who wishes to see the list of patients. He wants to determine if any friends whom he might visit are patients. The nurse should comply with the visitor's request.
21. Nurses should actively seek representation on health-related government decision-making bodies.
22. Mr. C. is a new patient on a medical unit. On taking a nursing history the nurse is informed that part of Mr. C.'s bedtime ritual at home is a warm bath; he wishes to continue this practice. The nurse should politely explain to Mr. C. that, because fewer nurses are scheduled for night shift, all patients must have their bath in the morning.
23. A general duty nurse does not need a knowledge of basic scientific principles, such as those learned in chemistry, biology, and social science courses.
24. While completing a report for the supervisor, a nurse is made aware that Mrs. B. is very anxious about her surgery, which is scheduled for the following day. Time does not permit the nurse to complete the report and talk to the patient. The nurse should set aside the report and talk to Mrs. B.
25. A nurse is being interviewed for a general duty position. The interview is coming to a close, and the matter of salary has not been discussed. The nurse should not initiate a discussion about salary.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree

Interpretation
Difficulty

	Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree	Interpretation Difficulty
26. A new graduate nurse on a medical unit feels that the system in use for disinfecting the thermometers is inadequate. The nurse should wait until she has more experience before bringing the matter to the attention of the head nurse.								
27. Completing requisitions and ordering supplies are tasks which should be assigned to non-nursing personnel.								
28. A nurse wishes to run for election as an executive officer of the professional association. The administrator has discouraged this action on the grounds that it will disrupt hospital staffing schedules if the nurse should win the election. The nurse should let the matter drop.								
29. A nurse wishes to pursue a bachelor's degree on a part-time basis. The hospital should allow the nurse to reduce to part-time and be flexible with the shift rotation.								
30. The delivery of nursing care on a functional basis (i.e., one nurse to pass medications, one to do treatments, one to bathe patients, etc.) results in high quality nursing care.								
31. Nurse Y observes that a colleague has been reporting to work under the influence of alcohol. Several instances of impaired judgement have been documented. Nurse Y is responsible for taking some kind of action.								
32. Patient problems are effectively resolved by using the nursing process.								
33. Nurse D., an experienced, well-qualified nurse, has applied for a senior nursing administrative position in a large hospital. It is well known that competition for the position has been stiff. The position has been offered to Nurse D. at a salary significantly below that which is appropriate for the responsibilities of the position. Nurse D. should accept the position at the salary offered.								

	Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree	Interpretation Difficulty
34. The nature of a nurse's educational preparation should be regarded as of minimal importance when considering her for promotion.								
35. About an hour after administering a daily medication to Mr. Y, a nurse realizes that she gave the medication at the wrong time. No adverse effects are observed. It is not necessary for her to report this occurrence.								
36. Mrs. L. is to be ambulated every 4 hours. The registered nurse delegates this task to a practical nurse, who forgets to carry it out. Some responsibility for the omission rests with the registered nurse.								
37. A new graduate nurse is instructed by the team leader to take an action which the nurse believes will jeopardize the welfare of a patient. The new graduate should refuse to follow the instructions until the matter is discussed further.								
38. Decisions regarding the curriculum of a college nursing programme should be made by the nursing faculty rather than the college administration.								
39. Nurses should not be expected to attend continuing education activities unless they are reimbursed by the hospital for their expenses.								
40. A nurse should maintain an impersonal distance in her relationship with patients.								
41. A director of nursing (or equivalent) position should have a master's degree as the minimal educational requirement.								
42. Attendance at meetings of the professional association is too much to expect of a general duty nurse who must work rotating shifts.								
43. Approval of basic nursing education programmes should be in the hands of the Ministry of Education rather than the professional association.								

55. A major reason for pursuing a career in nursing is the potential for a financially secure position.
56. Most patient care problems can be resolved by adhering to regular hospital nursing routines and procedures.
57. The delivery of high quality nursing care constitutes an important contribution to the health of the patient.
58. Nurse P. observes that a co-worker has been making a habit of recording vital signs which have not, in fact, been measured. Nurse P. bears no responsibility for taking action on this matter.
59. Nurses should be encouraged to participate in nursing research projects.
60. Basic nursing education programmes should include more classroom presentations delivered by physicians than is the current practice.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree

Interpretation
Difficulty

APPENDIX C

Final Instrument

NURSING STUDENT ATTITUDE SURVEY

Instructions

This survey consists of 40 items. Some of the items are general statements; other items describe situations in which a nurse might find herself and include a statement indicating the action which the nurse should take.

You are asked to indicate the extent to which you agree or disagree with each statement by checking one of the columns with the following headings:

<u>Strongly Agree</u>	indicates that you agree with the statement with <u>almost no exceptions</u> .
<u>Agree</u>	indicates that you agree with the statement with <u>some exceptions</u> .
<u>Slightly Agree</u>	indicates that you agree with the statement, but with <u>quite a few exceptions</u> .
<u>Neutral</u>	indicates that you could either agree or disagree with the statement with about an equal number of exceptions in either case.
<u>Slightly Disagree</u>	indicates that you disagree with the statement, but with <u>quite a few exceptions</u> .
<u>Disagree</u>	indicates that you disagree with the statement with <u>some exceptions</u> .
<u>Strongly Disagree</u>	indicates that you disagree with the statement with <u>almost no exceptions</u> .

Here is an example:

2. While alone at the nurses' station a nurse becomes aware that a patient's call light is on. The nurse should put aside her paperwork and answer the patient's call light immediately.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree
✓						

Suppose that, almost without exception, you agree that the nurse should answer the call light immediately. Then check the first column (Strongly Agree) for that question.

Unless specified otherwise, the word "nurse," or any form of that word, is used to denote a registered nurse working in a professional capacity. All items refer to hospital settings, unless otherwise indicated.

1. Nurses should read professional journals and other professional material on a regular basis.
2. Mr. P. has been keeping his anxieties to himself for some time. He finally "opens up" to the nurse 5 minutes before change of shift. The nurse has planned an exciting social engagement after work. She should leave work on time.
3. If all practicing nurses held bachelor's degrees in nursing, the status of nursing as a profession would be enhanced.
4. The physician is the best authority on matters related to the health of the public in general.
5. A new graduate nurse is disliked by many of her co-workers because she frequently suggests improvements to established routines and procedures. She is criticized for this behaviour by the head nurse during her first evaluation. The new nurse should make every effort to change this behaviour.
6. Talking with an anxious, ambulatory patient should take priority over his daily bath.
7. A physician orders an unsafe dose of a medication which is subsequently administered by a nurse. The nurse, who accurately followed the physician's order, bears no responsibility for the error.
8. Attendance at inservice education offerings should be considered an important part of a nurse's job performance.
9. Mrs. H. had difficulty sleeping during the night and is resting quietly at 1100 hours. Established hospital procedure dictates that patients must be bathed and their beds made by 1130. The nurse should allow Mrs. H. to sleep, even though her bed looks messy.
10. The minimum educational qualification which should be required to become a registered nurse is a bachelor's degree in nursing.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree

11. A nurse in a small town hospital is approached by a visitor who wishes to see the list of patients. He wants to determine if any friends whom he might visit are patients. The nurse should comply with the visitor's request.
12. Nurses should actively seek representation on health-related government decision-making bodies.
13. Mr. C. is a new patient on a medical unit. On taking a nursing history the nurse is informed that part of Mr. C.'s bedtime ritual at home is a warm bath; he wishes to continue this practice. The nurse should politely explain to Mr. C. that, because fewer nurses are scheduled for night shift, all patients must have their bath in the morning.
14. A general duty nurse does not need a knowledge of basic scientific principles such as those learned in chemistry, biology, and social science courses.
15. While completing a report for the supervisor, a nurse is made aware that Mrs. B. is very anxious about her surgery, which is scheduled for the following day. Time does not permit the nurse to complete the report and talk to the patient. The nurse should set aside the report and talk to Mrs. B.
16. A nurse is being interviewed for a general duty position. The interview is coming to a close, and the matter of salary has not been discussed. The nurse should not initiate a discussion about salary.
17. A new graduate nurse on a medical unit feels that the system in use for disinfecting the thermometers is inadequate. The nurse should wait until she has more experience before bringing the matter to the attention of the head nurse.
18. A nurse wishes to run for election as an executive officer of the professional association. The administrator has discouraged this action on the grounds that it will disrupt hospital staffing schedules if the nurse should win the election. The nurse should let the matter drop.
19. The delivery of nursing care on a functional basis (i.e., one nurse to pass medications, one to do treatments, one to bathe patients, etc.) results in high quality nursing care.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree

20. Patient problems are effectively resolved by using the nursing process.
21. Nurse D., an experienced, well-qualified nurse, has applied for a senior nursing administrative position in a large hospital. It is well known that competition for the position has been stiff. The position has been offered to Nurse D. at a salary significantly below that which is appropriate for the responsibilities of the position. Nurse D. should accept the position at the salary offered.
22. The nature of a nurse's educational preparation should be regarded as of minimal importance when considering her for promotion.
23. Mrs. L. is to be ambulated every 4 hours. The registered nurse delegates this task to a practical nurse, who forgets to carry it out. Some responsibility for the omission rests with the registered nurse.
24. A new graduate nurse is instructed by the team leader to take an action which the nurse believes will jeopardize the welfare of a patient. The new graduate should refuse to follow the instructions until the matter is discussed further.
25. Decisions regarding the curriculum of a college nursing programme should be made by the nursing faculty rather than the college administration.
26. A nurse should maintain an impersonal distance in her relationship with patients.
27. Attendance at meetings of the professional association is too much to expect of a general duty nurse who must work rotating shifts.
28. Approval of basic nursing education programmes should be in the hands of the Ministry of Education rather than the professional association.
29. A registered nurse, recently graduated from a basic nursing programme, has no more exams to write. It is now reasonable for her to consider selling her textbooks.
30. Most routine bedside nursing care should be delivered by practical nurses rather than by registered nurses.

31. The development of an individualized kardex nursing care plan for every patient is innecessary in the hospital setting.
32. Attendance at continuing education activities outside of working hours is too much to expect of a general duty nurse.
33. Senior nurse-administrators in hospitals should consult with general duty nurses before developing policies which might affect nursing care activities.
34. A physician writes an order for Mrs. K. to be discharged, and then leaves the hospital for his office. The nurse has good reason to believe that Mrs. K. is not ready for discharge. The nurse should telephone the physician at his office to discuss the matter.
35. Participation in the professional association is an effective way for a nurse to voice input about the directions which should be taken by the nursing profession.
36. A beginning general duty nurse who holds a bachelor's degree in nursing should receive a higher salary than a beginning general duty nurse with diploma preparation.
37. Research conducted by nurses constitutes an important avenue for expanding the body of nursing knowledge.
38. The delivery of high quality nursing care constitutes an important contribution to the health of the patient.
39. Nurse P. observes that a co-worker has been making a habit of recording vital signs which have not, in fact, been measured. Nurse P. bears no responsibility for taking action on this matter.
40. Nurses should be encouraged to participate in nursing research projects.

Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree

APPENDIX D

Table X

Relationship of Items in the Final Instrument
to Professional Characteristics Identified
in the Literature

Table X

Relationship of Items in the Final Instrument
to Professional Characteristics Identified
in the Literature

"Education" Items		"Service" Items		"Autonomy" Items	
Positive ^a	Negative ^a	Positive	Negative	Positive	Negative
1	14	6	2	12	4
3	22	9	11	24	5
8	29	15	19	25	13
10	30	20	26	33	17
37	32	38	31	34	28
40					
"Professional Association" Items		"Accountability" Items		"Remuneration" Items	
Positive	Negative	Positive	Negative	Positive	Negative
35	18	23	7	36	16
	27		39		21

Note. The numbers in this table refer to items as they are numbered in the final instrument (see Appendix C).

^aThe designations "positive" and "negative" indicate positively and negatively worded items.

APPENDIX E

Demographic Data Questionnaire

DEMOGRAPHIC DATA QUESTIONNAIRE

Code _____

1. In which educational institution are you currently registered as a nursing student?

_____ British Columbia Institute of Technology
 _____ Okanagan College
 _____ Selkirk College
 _____ Vancouver Community College

2. In which semester (or term) of the nursing programme are you currently registered?

_____ 1st semester _____ 4th semester
 _____ 2nd semester _____ 5th semester
 _____ 3rd semester _____ 6th semester

3. Age

_____ 19 years or under _____ 30-39 years
 _____ 20-24 years _____ 40-49 years
 _____ 25-29 years _____ 50 years or over

4. Sex

_____ female _____ male

5. What is the highest level of education which you attained prior to entering the nursing programme?

_____ high school graduation or equivalent
 _____ some university education, but did not graduate
 _____ university degree(s)
 _____ (please specify degree)

_____ graduation from a community college or technical school
 _____ (please specify type of programme)

_____ other (please specify)

6. Were you employed by a health care institution prior to entering the nursing programme?

_____ yes _____ no

7. If you answered "yes" to question 6, please indicate type of employment.

_____ nurse-aide _____ orderly
 _____ licensed practical nurse _____ other
 _____ nurse _____ (please specify)