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Aging Content in Nursing Curricula

by

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FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "Aging Content in Nursing Curricula" submitted by Jean L. Miller in partial fulfillment of the requirements for the degree of Master of Arts.

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Abstract

This study in the field of curriculum planning, identified aging content for inclusion in baccalaureate nursing programs and compared the views of nurse educators, nurse administrators, and practicing nurses regarding that content. This was accomplished by involving nurses in Alberta, whose professional focus was gerontological nursing, in a three round modified Delphi study. One hundred and fifty-one (151) nurses completed this study: 56 educators, 43 administrators, and 51 practicing nurses.

Participants rated 143 aging content items as to their individual importance for inclusion in nursing programs. Through the feedback process inherent in Delphi studies, the group moved toward consensus regarding the content considered to be of greatest importance. The median of each content item was used to identify that content.

Participants rated all content items to be in the range of "moderate" to "utmost" in importance. Those considered to be of greatest importance were the 72 items with the highest medians; these falling in the range of "great deal" to "utmost" in importance. This content was deemed to be more comprehensive than that resulting from other research studies and represented three types of aging content: normal aging, dysfunctional aging, and nursing intervention content. Divergent views among the participants were minimal.

In comparing the content items considered to be of greatest importance by each sub-group, there was seen to be a good deal of congruence among the three

groups. Further comparison revealed educators placed more importance on a number of physiological items and less on a number of psychosocial items. In contrast, administrators placed more importance on a number of psychosocial items and less on a number of physiological items. As well as having implications for curriculum development, these items point to the need for continued deliberations in the area.

Findings related to the relative importance of the three types of aging content were found to be contradictory. In ranking the more general categories, participants viewed normal aging to be first in importance, followed by dysfunctional aging and nursing intervention content. In rating the more specific items, they viewed nursing intervention content to be first in importance, followed by dysfunctional aging and normal aging content. Based on observations regarding this discrepancy, the results of the ratings were considered to warrant greater consideration than those of the rankings. Contrarily, based on the strong first place ranking of normal aging content, it is suggested that it not be ignored at this point in time.

As an initial entry into the identification of preferred aging content, this study resulted in a substantial content base for consideration in curriculum development. As well, it advanced, in some measure, a promising methodology for curriculum deliberations in nursing education research. Further efforts ideally need to involve stakeholders beyond the immediate profession, and to confront the challenge of choosing content for ultimate inclusion in a time of "knowledge explosion" and established curriculum structures.

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Chapter 1

Introduction

Responding to a rapidly changing society has become a challenge for all professionals, in particular, those in the health care field. Gelazis and Kemp (1985) emphasize that the largest responsibility for geriatric care is placed on the nursing profession. Gainor and Musser (1985) believe five major trends will strongly impact the nursing profession, both in the near and distant future: the "graying of America," escalating health care costs, an oversupply of physicians, the movement toward health promotion and self-care, and advances in technology. Of these five, they see the increase in the elderly population as "the single most significant influence on health care delivery and on the roles of health practitioners for at least the next fifty years" (p. 47).

In turn, the preparation of nurses to respond to this challenge rests with those responsible for nursing education programs. Rankin and Burggraf (1983) state emphatically that the responsibility for leadership in care of the elderly belongs with the educational institutions. They go on to note that nursing education has not yet accepted this responsibility. As Brower (1980) noted in a letter to the editor of the American Nurse, "the

majority of nursing graduates in the 1980's will continue to be better equipped to care for expectant mothers and children than the majority of their clients . . . the aged" (p. 5). This study addresses this challenge for nursing education to develop programs that will prepare nurses to care for the growing elderly segment of our population.

The Need

The "Canadian Government Report on Aging," Government of Canada (1982), provides demographic information supporting the need for nurses to learn to care for the elderly. In 1980 the proportion of the population that was 65 and over was 9.5%. By the time the baby-boom generation reaches old age (year 2000), that proportion will have grown to approximately 12%. Of the 65 and over population, the age group that is growing in size most rapidly is the 85 and over age group.

In the three areas of prevention, acute and long term care, nurses play a key role in meeting the needs of the elderly. As a result of the normal frailties accompanying increased age plus the consequences of life style, the older population suffers from health impairments, disability, and chronic illnesses more than the young--three out of four persons age 65 and over have at least one chronic illness. The majority of elderly are independent in the community (85%) and cope well in spite of their health problems, many of them benefiting from

community nursing support. Those who are ill utilize a disproportionate percentage of the available beds in health care institutions. In Alberta, the elderly population is approximately 7.5% of the total population, yet they use 33% of patient days in hospitals (Engleman, 1982). In Canada, the estimated annual bed-days per person is 5.3 for the entire population, while the same figure for the 65 and over age group is 13.2 (Government of Canada, 1982).

Meeting the needs of the elderly who are coping with the normal changes that accompany old age, as well as disability and chronic illness, presents a unique challenge to the nursing profession. The physical and psychosocial changes that accompany old age leave the elderly with decreased resources for coping with stress. As a result, their response to illness differs from that of other adults. Considering that many elderly persons also cope with the complexities of one or more chronic disabilities, it becomes evident that care of the elderly requires knowledge and skills that are unique to that population.

The lack of gerontology in nursing curricula is commonly acknowledged. In 1984 Edel (1986) conducted a study to determine the status of gerontology in the curricula in baccalaureate nursing programs in the United States. She noted that, although the need for content specific to aging has been increasing dramatically, there

has been no evidence to demonstrate that curriculum development has kept pace with that need. Her study, an update of a national survey done in 1975, found that, although clinical experiences with the elderly were increasing, aging content in nursing programs was "inconsistent and generally quite meager" (p. 30). The consequences of a deficit in a nurse's knowledge base were acknowledged by Ross (1983): "Observations will be poorly made or inaccurately interpreted, leading to faulty decision making and health risks for the client" (p. 373). She goes on to challenge nurse educators to prepare nurses who are not only interested in working with the elderly but who can do so knowledgeably.

The need for gerontology in nursing programs has been, and continues to be, well documented in the literature. Efforts on the part of educators to respond to this need have been numerous, with the majority of studies having focused on the need to change the attitudes of nurses toward care of the elderly and recruit them to that service. As a result, studies investigating ways of improving the attitudes of nursing students toward the elderly abound in the literature. Studies identifying substantive aging content most often involved the relationship between content and attitude change. Few studies have focused specifically on aging content in

nursing programs, and a review of the literature indicates a lack of clarity regarding what content should be included.

Background

This study is in the planning phase of curriculum development and addresses the need for focusing on aging content in nursing programs. It responds to the question continually faced by educators: What content should be "in" and what should be "out" of the curriculum. Decisions regarding what content should be included can be influenced by a number of sources. Tanner and Tanner (1980) outline three sources of curriculum as identified by Tyler: contemporary life, the learners themselves, and subject-matter specialists. In keeping with contemporary life as a source of curriculum, Unruh (1975) identified the need for a "responsive curriculum," one that responds to human needs and problems. Unruh went on to say that the involvement of individuals and referent groups was necessary in developing such a curriculum, with such individuals or groups being those who can be consulted, but were not directly involved in the development and design of programs. Referent groups or stakeholders (Connelly, Dukacz, & Quinlan, 1980) that can influence decisions related to what content should be "in" and what should be "out" can include such groups as sanctioning bodies that establish curriculum guidelines, professional associations with a stake in the competency of the graduates completing educational programs, the learners

themselves, consumers, and individual practitioners who everyday apply to the real world that which they learned as a result of their education.

As a practice field, nursing does well to consider a number of such referent groups in the process of curriculum decision making. In the field of gerontological nursing a number of nurse researchers have involved one or more of these groups in their studies. In investigating aging content in nursing programs, Tollett and Adamson (1982) involved nursing students, faculty, and practicing nurses, while Sullivan (1984) sought the opinions and recommendations of both baccalaureate nursing graduates and faculty. McPherson, Liss and McLeod (1983), in an interdisciplinary curriculum development project, involved a wider range of referent groups: content experts in academic settings, graduate students, older members of the community and representatives of senior citizens community service agencies.

Zoot (1979) stated that "research data on which to base curriculum decisions is as urgent as the need for the curricula themselves" (p. 203). In her view, content selected for inclusion must be "content-valid"; that is, the content included should answer the question: What content does the health practitioner need in order to care competently for the elderly? Zoot recommended a number of methods that can be used to identify valid curricula.

Among these were consensus methods such as the Delphi research method.

Purposes

This study addressed the challenge for nursing education to develop programs that prepare nurses to meet the needs of the elderly. The first purpose of this study was to identify aging content deemed to be important for inclusion in nursing programs. The second purpose of this study was to compare the views of three different groups of nurses regarding that content. Questions emerging from each of these purposes follow.

1. Related to the first purpose, to identify aging content deemed to be important for inclusion in nursing programs, the following questions emerge: (a) What aging content is considered by the nurses participating in this study to be of greatest importance for inclusion, (b) what aging content is identified about which divergent views are held as to its relative importance for inclusion, and (c) of three types of aging content--normal aging, dysfunctional aging, and nursing intervention--which is considered by the participating nurses to be first, second, and third in importance for inclusion?

2. Related to the second purpose, to compare the views of three different groups of nurses regarding aging content deemed to be important for inclusion in nursing programs, the following questions arise: (a) How do the

views of nurse educators, nurse administrators, and practicing nurses compare as to what aging content is considered to be of greatest importance for inclusion, and (b) of the three types of aging content--normal aging, dysfunctional aging, and nursing intervention--which do each of the three groups consider to be of first, second, and third in importance for inclusion?

To accomplish these purposes a modified Delphi method was used involving nurses in Alberta who were identified as having expertise in the field of gerontological nursing. Given the need to involve referent groups in curriculum planning, the Delphi method was considered appropriate to this study as "it assumes that two or more heads are better than one" (Couper, 1984, p. 72). In this method, individuals identified as having expertise in the area under investigation complete a series of questionnaires. As a result of the feedback process that is built into the questionnaires, it is expected that there will be a movement toward consensus on the issues under investigation. The process results in outcomes that should reflect the majority view pertaining to the subject under investigation.

In identifying aging content deemed by the profession to be important for inclusion in nursing programs, this study would hold promise of providing a substantial information base for planning curricula that would prepare nurses to care for the elderly. The information resulting

from the comparison of views among nurse educators, nurse administrators, and practicing nurses will be useful to nurse educators in planning curricula to meet the needs of the service area.

Delimitations

The following delimitations apply to this study:

1. The primary focus of this study was the identification of substantive aging content for inclusion in nursing programs. As such, this study was in the domain of curriculum planning and not in that of design, implementation, or evaluation.

2. This study identified aging content appropriate to programs offering a baccalaureate degree in nursing; it did not identify content for diploma granting programs. This was considered appropriate as the nursing profession has taken the position that the entry to practice will be a degree by the year 2000.

3. Given that the views of a range of referent groups should be considered in the development of programs preparing practitioners such as nurses, this study discerned the views of both nurses in the field and nurse educators. As the primary professional focus of the nurses participating in this study was gerontological nursing, they were considered to be knowledgeable regarding the needs of the elderly and therefore to be able to offer valuable input into the planning process. This study did

not take into account the views of other referent groups such as professional associations, learners, or consumers. The views of such groups, in particular those of the elderly themselves, would be worthwhile to include in another study.

4. This study was limited to nurses in the province of Alberta. This delimitation was considered appropriate as nursing education is a provincial jurisdiction and potential participants could be identified through provincial organizations. As nurses across the province, in both small and large centers, and representing the range of nursing services and institutions addressing the needs of the elderly were included, it was anticipated that the views obtained would give reasonable representation of the views of the field.

Definition of Terms

In this study the following definitions apply:

Aging: The process of growing old.

Aging content: Substantive content related to care of the elderly appropriate to nursing education.

Consensus: The point at which the majority (over 50%) of participants agree as to the relative importance of a specific aging content item.

Curriculum: The designated intended learning outcomes in a nursing program.

Dysfunctional aging content: content related to changes that result from pathology or disease in the aging process.

Elderly: Persons aged 65 and over.

Experts: Nurses working in the area of gerontological nursing.

Normal aging content: content related to changes that occur as a result of the passage of time.

Nurse administrator: A participant who was employed as a director, assistant director, supervisor, coordinator, or head nurse in a community organization or institution.

Nurse educator: A participant who was employed as educator in an educational or service institution or organization.

Nursing intervention content: content related to actions taken by the nurse to assist a client/patient reach a health related goal either by doing for, doing with, or enabling the person to do so.

Nursing program: A program offered through an educational institution granting a degree in nursing and preparing the graduate to write the licensing examinations.

Old age: The period of human development from age 65 onward.

Practicing nurse: A participant who was employed as a staff nurse or assistant head nurse in a community organization or institution.

Questionnaire: The mailed instrument used to gather data about the views of individual participants. In the Delphi method, participant feedback resulting from the previous questionnaire is included in the subsequent questionnaire.

Questionnaire round (first, second, or third): Each sequential questionnaire submitted to the participant throughout the study.

Sub-group: A distinct group of participants within the total participant group. The total participant group was composed of three sub-groups: nurse educators, nurse administrators, and practicing nurses.

Organization of the Study

This report is organized into five chapters, the first of which has provided the introduction and background to the study. Chapter 2 contains a review of the literature related to aging content in nursing programs. The third chapter describes the methodology involved in this modified Delphi study. Chapter 4 presents the findings of this study. Chapter 5 concludes this report with a summary of the study and a discussion of the findings and their implications as well as suggestions for further study.

Chapter 2

Review of the Literature

An overview of the literature reveals an abundance of articles and studies addressing gerontology in nursing education. The most common themes have been the need for gerontology in the curriculum and the attitudes of nursing students toward the elderly, with less attention given to substantive aging content. This review discusses the literature addressing aging content in nursing programs. In surveying these works, two types relevant to this study were identified: research studies and curriculum development projects. Research studies were those which investigated specific questions or issues related to aging content in nursing programs and, using systematic procedures, arrived at conclusions regarding those questions or issues. Curriculum development projects were undertaken for the purposes of planning, implementing and evaluating gerontology in the curriculum, with the identification of aging content for inclusion being one aspect of those projects.

Research Studies

As nurses have been observed to have the same negative attitudes toward the elderly as does society in general, the majority of research studies have stemmed primarily

from the need to change attitudes and recruit nurses to work with the elderly (Stember, 1984). Many studies have examined the effects of particular learning experiences on attitudes and interest in working with the elderly, with a number having assessed the effects of exposure to aging content on attitudes. As this study focuses on content, and not on the relationship between attitudes and behavior, studies identifying content instrumental to attitude change are summarized briefly.

Gunter (1971) and Kayser and Minnigerode (1975) both found that, after exposure to aging content, students' negative attitudes toward the elderly decreased but their desire to work with them did not increase. Tollett and Thornby (1982) found no correlation between the amount of aging content and students' attitudes toward the elderly. The results of Stafford's study (1980) also demonstrated that there was no significant correlation between information and positive attitudes, but that there was a significant correlation between information and interest in working with the elderly. These mixed results fail to provide clear direction as to the expected effects of aging content on attitudes and its subsequent recommendation for inclusion in nursing programs.

Studies identifying what aging content should be included are less evident, with few focusing exclusively on substantive content. Although, as Etten (1979) argues, it

is important to select the "most relevant theory, content and clinical experiences to be taught within a limited span of time" (p. 32), few investigations have focused exclusively on that content. Instead, the identification of content has occurred most commonly in conjunction with, or secondary to, the identification of specialty preferences, attitudes, or general opinions (Rankin & Burggraf, 1983; Sullivan, 1984; Tollett & Adamson, 1982). Two of these investigations, Sullivan, and Tollett and Adamson, also compared the views of particular groups of nurses regarding aging content. One extensive study, completed by the Association for Gerontology in Higher Education and the Gerontological Society of America, did focus on the specification of aging content (Johnson, Britton, Lang, Seltzer, Stanford, Yancik, Maklan, & Middleswarth, 1980). Using the Delphi research method, this study identified aging content for a number of health care professions, nursing being one of them.

As these studies addressing the specification of aging content are directly related to the purposes of this study, they are presented here in more detail, beginning with Johnson et al. The content identified in each of these studies was examined as to the type of aging content it represented--normal aging content (related to changes that occur as a result of time), dysfunctional aging content

(related to changes that result from pathology or disease in the aging process), or nursing intervention content (related to actions taken by the nurse to assist a client/patient reach a goal). To provide an overview of what the literature reveals regarding substantive aging content, the content resulting from each study is presented in Table 1, pages 22-25, under "Research Studies" and is organized as to the type of content it represents. As a result of this organization the number of content items specified in a given study may differ from the number listed in the Table. Content of a similar substantive nature has been juxtaposed across the studies.

Johnson et al. (1980)

Johnson et al. reported on a Delphi study done by the Association for Gerontology in Higher Education and the Gerontological Society entitled: "Foundations for Establishing Educational Program Standards in Gerontology." The purposes of this extensive study were to identify: (a) basic core knowledge essential for all people working with the elderly, (b) essential knowledge for clusters of professions, and (c) specific knowledge essential for persons working with the elderly in four professional fields--nursing, clinical psychology, nutrition, and social work.

One hundred and forty-one (141) nation-wide "experts" representing the professional fields agreed to participate in the study. Of the 87 persons completing all three rounds of questionnaires (62%), 11 were nurses, primarily representing academic and administrative backgrounds. All participants responded to questions regarding essential knowledge for each of the four professions. In analyzing the data, the knowledge considered important for each profession by the members of <u>that</u> profession, was compared with the knowledge considered important for that profession by the members of the <u>other</u> professions. Seventeen (17) of the 64 rated knowledge topics and 11 of the 37 rated skills were identified as being essential for nursing curricula by the eleven nurses. The 17 topics generally related to biological, health, and psychological matters. The study went on to compare these 28 topics and skills with those considered to be important for nurses, by the non-nurses.

In classifying these knowledge topics under the three types of content identified earlier, content representing each type was ascertained (Table 1). Examples of content dealing with normal aging included "physical functioning," "affective needs and responses," and "family relationships." Content representing dysfunctional aging included such aspects as "age related illness" and "multiple illnesses." Content on nursing interventions included "nutrition," "communication," and "nursing methods."

Tollett and Adamson (1982)

The work of Tollett and Adamson compared the views of nurses regarding the treatment of aging content in nursing programs, their attitudes toward aging, and their clinical specialty preferences. Each nurse received a package of four questionnaires: a Geriatric and Gerontological Curriculum Content Opinionnaire, a Clinical Specialty Preference, a Demographic Data Record, and the Tuckman-Lorge Attitudes Questionnaire. There were 320 subjects in the study: 158 students and 72 faculty from four nursing programs, and 90 practicing nurses from acute care institutions, nursing homes, and home visiting agencies. No mention was made of the original sample size nor of the attrition rate.

Regarding content, the results of the study indicated that all three groups believed aging content was needed and should be compulsory rather than optional. In contrast to the detailed content identified by Johnson et al. (1980), this study identified two general content areas: "normal aging" and "pathological aging" (comparable to "dysfunctional aging" in this study). No content representing nursing interventions was included (see Table 1). Opinions differed regarding the relative importance of these areas. Nurse practitioners felt that the emphasis should be on pathological content, while nurse educators felt that it should be on normal aging content.

Sullivan (1984)

Sullivan studied the opinions and recommendations of faculty and graduates of baccalaureate programs regarding gerontology in nursing programs. The primary purpose of her study was to discover if there was a significant difference of opinion between these two groups. Participants in the study were from both public and private institutions in the greater Kansas area. Faculty representing each of the baccalaureate nursing programs in the area, and baccalaureate graduates representing those employed in both hospital and non-hospital settings were surveyed. Sullivan also compared opinions on the basis of whether participants were employed in either public or private institutions.

Using a modified Delphi procedure, the original questionnaire was submitted to three experts for the purposes of establishing validity of the instrument. The resulting questionnaire was delivered, through administrative channels, to 373 nurses at their places of work. A total of 210 nurses (56%) completed the questionnaire. Participants were asked to respond to the importance, amount, and type of aging content for inclusion in future baccalaureate nursing curricula.

Faculty and graduates both believed that gerontological nursing belongs in the nursing curricula, with graduates ranking it higher and recommending more hours than did the faculty. With respect to the three types of aging content,

two aspects of normal aging content were recommended for inclusion by both groups: "biological content" and "psychosocial content." The faculty were "significantly stronger" than the graduates in making that recommendation. This study did not recommend any dysfunctional aging or nursing intervention content for inclusion.

Rankin and Burggraf (1983)

Rankin and Burggraf asked practicing nurses how aging could be taught more effectively in nursing programs. They considered nurses' views to be valid as they were based on both "positive and negative work experiences" (p. 272). The participants were asked to comment on the aging content that they had been taught in their nursing programs and its effect on their attitudes toward, and perceptions of, the elderly. Two hundred (200) nurses working in four metropolitan hospitals were sent the questionnaire, with 102 (51%) completing the instrument.

The last item in the questionnaire asked the nurses how they thought aging could be addressed more effectively in nursing education. The respondents recommended three content areas be included in nursing programs--"growth and development," "physical needs," and "psychological needs." These three aspects fall in the category of normal aging content and were the only content identified (Table 1). No content representing dysfunctional aging or nursing interventions was included. The authors acknowledged a

limitation of their study in that only nurses who work with the ill elderly were surveyed.

In summary, of the four research studies presented here, only the one by Johnson et al. (1980) focused exclusively on aging content. Hence, content identified for inclusion in their study was the most comprehensive and detailed and represented all three types of aging content--normal, dysfunctional, and nursing intervention. The content identified for inclusion in the remaining three studies was less comprehensive as this was not the major purpose of these studies. All three studies included aspects of normal aging content. Tollett and Adamson's (1982) study was the only one to include content related to dysfunctional aging and none of the three included content related to nursing interventions.

It is noted in reviewing these research studies, that content was identified at varying levels of specificity. Within and across the literature, general content items, such as "theories of aging" or "psychosocial aging" are juxtaposed with more specific items such as "depression" and "bowel and bladder management techniques." In some instances the specific item may be considered to be subsumed under the more general item. For example, in dysfunctional aging content, the more specific item, "confusion," may be included under the more general item "mental illness." These varying levels of specificity were found to complicate the comparison of content in these reports.

Table 1

Aging Content Identified in the Literature

Type of Content	Research Studies			
	Johnson et al.	Tollett & Adamson	Sullivan	Rankin & Burggraf
Normal Aging	health status mental health physical function biology of aging psychology of aging affective needs & responses cognition & learning sensory changes behavioral changes family relations understanding aging is normal aging stress & loss	normal aging	biophysical aging psychosocial aging	physical needs psychological needs/ growth & development
Dysfunctional Aging	pathology age related illness specific diseases mental illness multiple illness chronicity	pathological content		

table continues

Type of Content	Curriculum Development Projects			
	Gunter & Estes	Kolanowski	Tappen & Brower	McPherson et al.
Normal Aging	biological development	biological changes		biological/physiological aspects
	psychological development	psychological changes		psychological norms
			stresses & stress response	
	theories of aging	theories of aging		
		demographics	demography	
	cultural content of aging	cultural attitudes		
		myths of aging		
	sociological development	sociological changes		social & societal aspects
	death & dying	death & dying		
			successful adaptation	
				fundamentals of aging process
	multidisciplinary approaches to aging			
	physical fitness			
	personal needs			
Dysfunctional Aging	diabetes			
	gastrointestinal disorders			
	pulmonary disorders			
	genitourinary disorders			
	functional disorders			
	transient situational reactions			
	organic brain disorders		confusion	
			depression	
			suicide	
			cognitive impairments	
				altered response to disease
		social problems & resources		
		ethical issues		
			unsuccessful adaptation	
	loss of mobility		mobility impairments	
			learned helplessness	
			issues in long term care	
	sensory loss & perceptual impairment			
	pain & illness			

table continues

Type of Content	Research Studies			
	Johnson et al.	Tollett & Adamson	Sullivan	Rankin & Burggraf
Nursing Intervention	nutrition pharmacology personal care health promotion attitude awareness fostering independence communication nursing methods recognize positive attitudes skills needed at work evaluation skills interventions referral skills			

table continues

Type of Content	Curriculum Development Projects			
	Gunter & Estes	Kolanowski	Tappen & Brower	McPherson et al.
Nursing Interventions		nutrition medication management	nutrition pharmacology	pharmacology & altered response to medications
	personal care & safety			
		health promotion	health promotion	
	nursing process			
	community resources	community health services	community resources special assessment tools	
		management of common pathological conditions rehabilitation		
				integration/management of therapeutic modalities interdisciplinary health care team
			nursing care of minor problems bowel & bladder management	

Curriculum Development Projects

In response to the need for nursing education to prepare graduates capable of caring for the growing number of elderly persons, a number of programs have undertaken projects for the purpose of planning, implementing and evaluating gerontology in the curriculum. In documenting these endeavors, the content identified for inclusion has been described by several reports. Four of these are presented here: Gunter and Estes (1979), Kolanowski (1983), Tappen and Brower (1985), and McPherson, Liss and McLeod (1983). As with the research studies, the content identified in each project was assessed in relation to the three types of aging content it represented. This content is presented in Table 1, pages 22-25, under "Curriculum Development Projects."

Gunter and Estes (1979)

The work of Gunter and Estes represented a comprehensive undertaking to identify aging content for nursing education. Their project determined the kinds of materials and learning experiences that were appropriate for five different levels of nursing education, one being at the baccalaureate level.

Gunter and Estes felt the "most crucial and widely applicable elements of gerontic nursing" (p. 71) should be included in baccalaureate education. After identifying

competencies in gerontic nursing they went on to outline specific content. In examining the types of content in this project, all three were seen to be represented (Table 1). Normal aging content included such aspects as: "biological developmental events," "theories of aging," and "death and dying." Examples of dysfunctional aging content included: "functional disorders," "loss of mobility," and "pain and loss." Two aspects of nursing intervention content were identified: "nursing process" and "community resources." Grounds for deciding what constituted the "most crucial and widely applicable" content were not cited.

Kolanowski (1983)

Kolanowski reported on a project completed at the Wilkes College, Pennsylvania, that designed, implemented, and evaluated an expanded gerontological component in a baccalaureate nursing program. Objectives of the project were to sensitize faculty to the needs of the elderly and to prepare students to meet those needs. To achieve these objectives the curriculum development team planned faculty development activities and a course for inclusion in the senior year of the program in addition to administering a student attitude assessment instrument.

Using a developmental conceptual framework, the project staff designed a course consisting of theory and clinical practice. Objectives and content for the course

were developed with the assistance of a consultant and in a two-day workshop. As with Gunter and Estes' work (1979), specified content was representative of all three types of aging content (Table 1). Normal aging content included such aspects as: "psychological changes," "demographics," and "death and dying." Only two aspects representing dysfunctional aging were identified: "social problems and resources" and "ethical issues." Nursing intervention content included such aspects as: "nutrition" and "rehabilitation." No information was provided in the report regarding the justification for the selection of this content.

Tappen and Brower (1985)

Tappen and Brower undertook a three-year project to incorporate aging content into the undergraduate nursing curriculum at the University of Miami. The objective of the project was to integrate aging content, "thoroughly and permanently" (p. 80) into the curriculum. The first step was to identify the aging content already existing in the curriculum. Then, based on their own experiences as well as a review of the literature and consultation with selected experts, "desirable content" was identified. The new content was then integrated into existing courses. The aging content thus incorporated into their program is presented in Table 1. Once again, the mandated content included in this project was representative of all three

types: normal aging (e.g., "demography" and "successful adaptation"), dysfunctional aging (e.g., "confusion" and "learned helplessness"), and nursing intervention (e.g., "health promotion" and "bowel and bladder management").

McPherson, Liss, and McLeod (1983)

McPherson et al. described an interdisciplinary curriculum development project in which nursing was one of the professions. This three year project was undertaken jointly by the Colleges of Dentistry, Medicine, and Pharmacy and the School of Nursing at Ohio State University. The objectives of the "Interdisciplinary Health Care for the Aged Project" were to develop a model curriculum for students in the health care professions and to identify and develop a "flexible and exportable" (p. 11) curriculum for adaptation by others. A core curriculum committee representing each profession managed the project. Three groups, comparable to those "traditionally defined as being basic contributors" (p. 12) to the curriculum decision making process, were approached for input: (a) "Content experts" were represented by scholars in academic settings, (b) "learners" by graduate students in health care programs, and (c) "society" by older members of the community or members from service agencies for the elderly.

Content was identified and selected through a structured interactive group method. Through this process, eight "content areas" were recommended for inclusion in the education programs of each of the four health profession groups (Table 1). Normal aging content was similar to that already identified in the other projects: "biological and physiological aspects," "psychological norms," "social and societal aspects," and "fundamentals of the aging process." One aspect of dysfunctional aging content was identified: "altered response to disease." Content on nursing interventions was: "pharmacology and altered response to medications," "integration/management of therapeutic modalities," and "interdisciplinary health care team."

In summary, aging content identified in these four curriculum development projects was seen to be more extensive than that resulting from the examination of the research studies. In addition, aging content was seen to represent each of the three types.

Summary

The review of the literature reveals that there is a scarcity of research studies addressing aging content for inclusion in nursing programs. Of those studies that did address content, few did so exclusively. With the exception of the study reported by Johnson et al. (1980), content identified for inclusion in research studies was limited in scope and did not include aspects of

all three types of aging content. A number of curriculum development projects reported in the literature have disclosed more comprehensive and detailed aging content, with each project including content representative of all three types.

In examining the content across the research studies and curriculum development projects presented in Table 1, it is observed that content of a similar nature is not found in all of these endeavors. In relation to normal aging content, six of the eight reports--Johnson et al., Rankin and Burggraf, Sullivan, Gunter and Estes, Kolanowski, and McPherson et al.--included content related to "psychological aging" and only two of the eight--Kolanowski, and Tappen and Brower--included "demographics." With respect to dysfunctional aging, three reports included content related to "mental illness"--Johnson et al., Gunter and Estes, and Tappen and Brower--and only one--Kolanowski--included "ethical issues." In connection with nursing intervention content, three of the eight--Johnson et al., Kolanowski, and Tappen and Brower--included "nutrition" while only one--McPherson et al.--included the "interdisciplinary health care team." Therefore, although there is some commonality in the content identified across this literature, to a larger extent there is limited consistency and unanimity regarding preferred aging content. Hence, the need for greater clarity and consistency calls

for further investigations in the designing of curriculum for aging content in nursing programs.

Chapter 3

Methodology

The purposes of this study were to: (a) identify aging content deemed to be important for inclusion in nursing programs, and (b) to compare the views of three different groups of nurses (nurse educators, nurse administrators, and practicing nurses) regarding that content. To that end a modified Delphi study was completed. This methodology was chosen based on the limited consistency and unanimity regarding content for inclusion in nursing programs as revealed in the literature. As a result of the feedback process involved in the Delphi method, it was expected that greater clarity regarding the aging content to be included in nursing programs would result. This chapter details the use of the Delphi method in curriculum development research, and the procedures and data analysis involved in this study.

The Delphi Research Method in Curriculum Development

The Delphi method has been defined as "a group decision making process based on the search for areas of general agreement or consensus" (Johnson et al., 1980, p. 8). The original Delphi method, developed by the Rand Corporation in 1948, was used for forecasting events in the

technical world and has been described as "exploratory" in nature (Weaver, 1972). Its goal was to predict what would happen in the future. Experts were questioned as to the chronology and timing of probable scientific technological events. Since it's origination, the Delphi method has been modified for use in a number of different contexts such as health and medical education, business applications, social sciences, gerontological research, and education (Yancik & Maklan, 1981).

Weaver (1972) described the Delphi method used in education investigations to be "normative," rather than "exploratory." Instead of predicting what would happen in the future, the normative Delphi method ascertained what should happen in relation to educational goals and priorities. Judd (1972) specified three uses of the Delphi method in education: (a) the identification of educational goals and objectives, (b) curriculum and campus planning, and (c) the development of evaluation criteria.

A number of studies have used the normative Delphi method in curriculum development. The work of Cyphert and Gant (1970) addressed the wishes, aspirations, and opinions of both on and off campus "clientele" regarding the objectives of the University of Virginia's School of Education. Rossman and Bunning (1976) used the Delphi method to identify the knowledge and skills needed by adult educators of the future. A similar study by Rossman and

Eldredge (1982) identified the functions, knowledge and skills needed by hospital education directors in the 1980's. Reeves and Jauch (1978) asked business managers what was useful and practical to include in business curricula and what kinds of knowledge current business graduates were found to be lacking. In 1984, Billingsley used the Delphi method to plan the development of an interdisciplinary program based on programs already in existence.

Although the Delphi method has been advocated as a research tool in nursing education research (Couper, 1984; Stead, 1975; Zoot, 1979) its use has been limited. In keeping with the dictum that curriculum change be an "ongoing, planned process and not a response to crisis" (p. 187), Sullivan and Brye (1983) completed a Delphi study of nurse educators and practicing nurses to envision the future role of the nurse. The work of Stead (1975) used the Delphi method to facilitate planning in nursing education in Virginia, and to develop a "Time/ Impact/ Desirability Scenario" with the generated events. Sawatzky, Dyck, Innes, and Rae (1985), recognizing the need for education to be responsive to practice needs, futuristic trends, and concerns of the profession, surveyed a group of senior nursing service personnel across the province to identify general core content for a baccalaureate nursing program at the University of Saskatchewan.

The Delphi method is by no means static, but rather is continually being adapted to meet the needs of a variety of situations. As noted by Weaver (1972), all Delphi method studies are a modification of the original forecasting studies. Linstone and Turoff (1975) stated that the Delphi method is not "a neatly wrapped package sitting on the shelf and ready to use" (p. 3). Although there have been many variations on the original Delphi method, three characteristics have remained constant: (a) anonymity of the participants, (b) iteration with controlled feedback, and (c) statistical group response (Couper, 1984). In adapting the Delphi method to suit their particular needs, researchers have made a number of modifications with respect to such aspects as the type and number of questionnaires, the number of participants, the "expertise" used, and the feedback given. In this study the three constant characteristics were maintained. Modifications made for the study are discussed throughout this chapter.

Procedures

This section discusses the procedures used in the current study as to participant identification and selection, the design and development of the questionnaire, the management of the feedback process, procedures specific to each questionnaire, and those tactics used to ensure a maximum response rate.

Participant Identification and Selection

Participants in Delphi studies were traditionally persons identified as being "experts" in the field under investigation. In the early forecasting studies, such persons were usually members of a small group, identified as possessing eminent sophistication, such that their predictions for the future were considered to be correct, while those of all "non-experts" were considered to be incorrect. In more recent studies, the definition of "expert" has been less restrictive. McGraw Browne, and Rees (1976) note that the range of groups involved in education Delphi studies has been continually broadening and diversifying. Participants have represented a wider range of stakeholders related to the subject under investigation, with up to several hundred individuals taking part in some studies (Billingsley, 1984; Bond & Bond, 1982; Cyphert & Gant, 1970).

The literature reveals that little in the way of procedures regarding the actual identification and selection of "experts" is available. Uhl (1983) recommends that the selection of participants should be "done with care" and in keeping with the purposes of the study. Martino (1983) states that peer judgment and referral is an effective way to identify potential participants. Fink, Kosecoff, Chassin, and Brook (1984) offer some guidelines in selecting participants. They recommend that "experts"

meet at least one of three criteria: (a) that they be representative of their profession, (b) be unlikely to be challenged as having expertise in their field, or (c) that they have the power to implement decisions.

"Expert" in this education Delphi study was defined in the broader sense, being less restrictive and representing a wider range of stakeholders--nurse administrators and practicing nurses, as well as nurse educators. Prospective participants were identified from directories, through peer referral, as members of organizations in the field of aging, and were representative of the full range of community services and institutions involved in care of the elderly.

Participants in this study met the following three criteria: (a) were members of the nursing profession, (b) were employed either as a nurse educator, nurse administrator, inservice coordinator, practicing nurse, or nursing consultant, in an education or service institution/ organization or in private practice in the province of Alberta, and (c) were nurses whose primary professional focus was gerontological nursing. In the first questionnaire, participants were asked to provide information related to their work experiences in aging, educational background, and professional activities in the field. Hence, the resulting data, presented in Chapter 4, provides additional information regarding the nurses who took part in this study.

Two hundred and six (206) nurses were invited to participate in the study. Approximately one-third of these were identified as representing each of the three sub-groups: nurse educators, nurse administrators, and practicing nurses. As the usual return rate on mailed questionnaires is between 50% to 60% (Dillman, 1978), it was anticipated that approximately 100 participants would complete the study and that each of the three sub-groups would be relatively equal in size, thus making their responses reasonably amenable to comparison.

Design and Development of the Questionnaire

The majority of Delphi studies have involved three or four rounds of questionnaires, with the number of rounds dependent on the purposes of the study and the nature of the first questionnaire. The design of this study was based on a three round Delphi procedure and a structured initial questionnaire. The questionnaires used in this study were developed by the researcher, the second and third being modifications of the first. This section discusses the number of rounds and the nature of the initial questionnaire, the generation and organization of the aging content, the format used, and the development of the initial questionnaire. The unique aspects of each questionnaire are presented later in this chapter. The questionnaires resulting from this design and development process are found in Appendixes A, B and C.

Number of Rounds and Nature of the Initial Questionnaire. The original forecasting Delphi studies typically involved four rounds of questionnaires, with the initial questionnaire being completely unstructured. Participants were asked to respond to two or three general questions regarding the topic. Their responses were compiled and became the basis of a structured second questionnaire. Since participants were often confused with the unstructured situation, with the result that the information was often unusable, more recent studies have begun with a structured questionnaire (Martino, 1983). Given that aging content recommended for nursing programs was already documented in the literature (Table 1), and the purpose of this study was to provide clarification regarding preferred content, a structured initial questionnaire was considered more expeditious. Furthermore, this format was judged to be more manageable for the participants and was expected to maintain a higher response rate throughout the three rounds.

Generation and Organization of the Aging Content. In keeping with this judgment, a comprehensive representation of substantive aging content was presented in the initial questionnaire. The aging content identified in the review of the literature was supplemented by content obtained through a survey of selected gerontological nursing texts

and consultation with two nurse educators with expertise in gerontological nursing. Content items were thus grouped under one of three types of aging content: normal aging content (related to the changes that occur as a natural result of the passage of time), dysfunctional aging content (related to the changes that result from pathology or disease in the aging process), and nursing intervention content (related to actions taken by the nurse to assist a client/patient reach a goal).

Questionnaire Format. A similar format was used for all three questionnaires. Each began with a statement of the purpose of the study, a set of definitions, and instructions. The first three sections of each questionnaire presented the aging content items under headings corresponding to the above content types: Normal Aging, Dysfunctional Aging, and Interventions. In order to ascertain which content was deemed to be of greatest importance, participants were asked to rate how importantly they viewed each item on a five point Likert scale: very little (1), somewhat (2), moderate (3), great deal (4), or utmost (5). Opportunities for comments were provided throughout each questionnaire. Participants were encouraged to suggest additional content items that they thought should be included. The last page of each questionnaire invited the participants to make general comments regarding aging in nursing education.

Initial Questionnaire Development. The initial questionnaire was reviewed by the two nurse educators with expertise in the field, one peer, and a nursing research consultant. It was then submitted to 13 full- and part-time nurse educators from one institution for two sequential completions. Several of the educators were monitored during the first completion of the initial questionnaire. Individual comments were encouraged and noted. Five to seven days later the 13 educators completed the same instrument independently. For each educator, average mean scores of the aging content items for the two completions were compared in each of the three sections--Normal Aging, Dysfunctional Aging, and Interventions. Five of the 13 had differences in mean scores of 0.5 or less between completions. The remaining eight had mean score differences of between 0.5 and 0.9. In addition to the average mean score differences, individual items on which the educators changed their rating by two or more points on the five point scale were examined. Seven of the 13 changed their ratings by two or three points on the scale on 28 of the 94 items. These seven individuals were interviewed and difficulties regarding those items, as well as the questionnaire in general, were noted. Based on the information obtained from these procedures, a number of questions were revised and one question, deemed to be unduly sensitive, was removed.

Management of the Feedback Process

One major feature of the Delphi method is the movement toward consensus that occurs as a result of the feedback process. This process is indigenous to this particular research method. Data from an initial questionnaire, in the form of statistical computations and a summary of comments, is incorporated into subsequent questionnaires. Statistical computations, representing the distribution of responses, is presented in one of several ways: the mode, mean, median, range, or interquartile range. In subsequent questionnaires, participants are asked to rerate questionnaire items after considering the views of others, as well as their own initial views. This stimulates participants to take into account considerations they might otherwise have missed. In rerating items, participants are asked to join the majority view, or if they chose not to, to state their reasons. Through this process, the group moves toward consensus on the topic under investigation. McGaw, Browne and Rees (1976) noted that a number of studies of the Delphi methodology have demonstrated that it does mould opinion with each successive questionnaire, resulting in a convergence of views.

In this study, percentage responses to each point on the Likert scale for individual items were generated for each questionnaire by the SPSS package. Each item was judged to have either reached or not reached consensus

according to the standard of consensus used in this study. Those items that had not reached consensus were re-presented for rating in the subsequent questionnaire. The percentage of responses to each point on the scale, representing the portion of the group choosing each point, were inserted above each item presented for rerating. This manner of presenting feedback was chosen as it was considered to provide the participants with information in a way that would be most readily understood. Comments pertaining to individual items were summarized and inserted below each item (see the second questionnaire in Appendix B).

Participants in this study, upon receiving a photocopy of their previous questionnaire, were instructed to compare their original rating with those of the other participants. They were then asked to join one of the larger percentage groups if their original rating was not already in one of those groups. If they chose not to join one of the larger percentage groups, they were asked to state their reasons. General comments were compiled, summarized, and incorporated in the appropriate section of the subsequent questionnaire--either at the beginning of each of the sections on Normal Aging, Dysfunctional Aging, or Interventions, or at the end of the questionnaire in a summary of additional comments. As there is always the possibility of "losing" the views of individual participants in the summarizing process, participants,

in reviewing the copy of their previous questionnaire, were encouraged to restate their views if they felt these had been left out.

Consensus Determination

The purpose of this feedback process in the Delphi method is to facilitate the achievement of consensus: the arrival at a point at which there is general agreement regarding the topic under investigation. In the early forecasting Delphi studies consensus indicated the "accuracy" of a particular prediction. At a predetermined point of consensus, a prediction became an "accurate goal."

Weaver (1972), in discussing consensus in nonforecasting studies, encourages researchers not to make consensus the "accurate goal," but rather to use the movement toward consensus, resulting from the feedback process, as an aid in clarifying assumptions and arguments. Billingsley (1984) notes that in curriculum Delphi studies participants are not expected to arrive at a final decision but rather to give input on a subject for curriculum planners, who, in the end, are responsible for the decisions.

Consensus in this study was based on the nonforecasting Delphi view described above. It was not considered essential to arrive at an "absolute goal." Rather, the feedback process, resulting in a movement toward consensus,

was seen to aid in the clarification of views regarding aging content for inclusion in nursing programs. This movement toward consensus was considered to be instrumental to the identification of preferred content. The outcome of this feedback process would assist nurse educators in the selection of aging content.

Dajani, Sincoff, and Talley (1979) observe that specific guidelines and strategies for establishing standards of consensus were not available at that time. Uhl (1983) notes that the mode or median was frequently used. Fink et al. (1984) outline a number of alternatives for identifying consensus: (a) the percentage of participants supporting an item, (b) the number of votes an item received, (c) items with a mean = > 3.00, or (d) when one point on a rating scale was selected by at least 51% of the respondents. Most Delphi studies using a five point Likert scale base consensus on a majority of respondents agreeing on the relative value of the matter being investigated.

The standard of consensus identified for this study was in keeping with that most commonly used in Delphi studies: the majority (over 50%) of participants agreeing on the assigned importance of an item. It was anticipated that this standard would be applied throughout this study. However, in examining the percentage distribution of responses on each item in the first questionnaire, the

following observations were made. First, 80% or more of the participants' ratings fell within the last three points of the Likert scale on all items: between 3 (moderate) and 5 (utmost). Second, as noted by Best (1981), the points on a Likert scale are not considered to be equally spaced. In this study, the interval between "moderate" importance and "great deal" of importance was viewed as being greater than the interval between "great deal" of importance and "utmost" importance. These two facts resulted in items generally being rated at the top end of an unevenly spaced five point scale.

Based on these observations, consensus in the first questionnaire was deemed present when the percentage of responses falling on 4 (great deal) and 5 (utmost) <u>together</u> was 80% or more. Such a combined rating, agreed upon by such a large percentage of the participant group, at an early stage in the Delphi process, was considered indicative of strong consensus as to the importance of an item. This standard resulted in 32 items being judged to have consensus at the end of this questionnaire.

In the second questionnaire, the percentage distribution of responses was similar to that found in the first. However, in this questionnaire a more exacting standard of consensus was applied. This decision was made as the Delphi feedback process has the effect of compelling participants to move toward a convergence of views. Thus,

less variation in responses can be expected. In this second questionnaire then, consensus was identified for items which met one of the following conditions:

1. The percentage of responses falling on 4 (great deal) and 5 (utmost) together was 80% or more, with the percentage on one point being greater than 51%.

2. The percentage of responses falling on 4 (great deal) was greater than 51% and on 3 (moderate) was less than 30% and on 3 (moderate) and 5 (utmost) together was less than 40%.

3. The percentage of responses falling on 3 (moderate) was greater than 51% and on 4 (great deal) and 5 (utmost) together was less than 40%.

This standard resulted in 54 items being judged to have consensus at the end of the second questionnaire.

The standard of consensus in the third questionnaire was the same as in the second. This decision was based on two observations. A further refinement was not considered necessary as the greatest movement toward consensus in Delphi studies had been generally found to occur after the initial feedback. In addition, experience with the data from the first two questionnaires supported the continued use of this standard. This standard, applied to the third questionnaire, resulted in 46 items being judged to have consensus. The matter of consensus will be further addressed in the last chapter of this study.

Procedures Specific to Each Questionnaire

First Round Questionnaire. The first questionnaire consisted of five sections (Appendix A). The first three sections, Normal Aging, Dysfunctional Aging, and Interventions, contained 96 content items for rating: 33 normal aging, 28 dysfunctional aging, and 34 nursing intervention items. Section Four, Supplemental Considerations, contained 12 questions regarding the participants' perceptions of the elderly and their view as to the relative importance to nurses of various aspects of aging. Section Five, Background Information, contained questions related to the participants' work experiences in gerontological nursing, their educational background, and their professional activities in the field of aging. The participant demographic data in this section was used to check on the appropriateness of participant assignment to one of the three sub-groups.

Second Round Questionnaire. The second questionnaire followed the same general format as the first. However, as it contained feedback information from the first questionnaire, it required some modifications (see Appendix B). This questionnaire consisted of four sections: Sections One to Three presented 108 aging content items for rating and Section Four contained a summary of the participants' general comments. A list

of the "consensus" items arising out of the first questionnaire was presented at the beginning of each of the three sections--Normal Aging, Dysfunctional Aging, and Interventions. Items from the first questionnaire which had not attained consensus were re-presented as "non-consensus" items for rerating, with the summary of comments and the percentage distributions included with each. Each of the three sections ended with additional items for rating suggested by the participants in the first questionnaire. To ensure clarity of these modifications this questionnaire was reviewed and examined by two peers.

Third Round Questionnaire. The format of the third questionnaire was the same as for the second. This last questionnaire consisted of five sections (see Appendix C). Sections One to Three were the same as in the second questionnaire, presenting 57 items for rating. In section Four participants were also asked to consider strategies for teaching nursing students care of the elderly. Throughout the first two questionnaires a number of participants had volunteered suggestions on how to teach students to care for the elderly. These comments were summarized and presented along with seven questions which asked them to select preferred teaching strategies. The last section of this questionnaire, Section Five, again presented a summary of other comments made by the participants regarding aging in nursing education.

Procedures to Maximize Response

A number of procedures to maximize participant retention were employed in this study. These procedures were considered important as the response rate to mailed questionnaires is often relatively low and this study involved the completion of three such instruments. Two sources were used in developing these strategies: Mail and Telephone Surveys, The Total Design Method by Don A. Dillman (1978) and Making Effective Use of Mailed Questionnaires edited by Daniel C. Lockhart (1984).

First, every effort was made to make the questionnaire manageable and attractive. Each was typeset into a booklet form with attention given to the appearance and format of each page. Questions were structured and ordered using some of the guidelines provided by Dillman (1978). For example, questions were typed in lower case and their answers in upper case, and demographic questions were placed at the end of the questionnaire.

Second, communications with the participants were made as engaging as possible. Each questionnaire was accompanied by a personal letter which was individually printed and hand signed (see Appendixes A, B, and C). The letter accompanying the initial questionnaire was an invitation to each potential participant to take part in the study. The letter with each subsequent questionnaire emphasized the

importance of the individual's contribution to the outcomes of the study.

Thirdly, participants were not expected to make any financial expenditures by virtue of their participation. A stamped self-addressed return envelope was included with each questionnaire. Equally important, a collect phone number was provided, should participants have any questions.

The fourth procedure employed was careful consideration as to the timing of the questionnaires. The first questionnaire was sent to potential participants in November, 1986. In order to avoid the Christmas season, the second was not sent until January, 1987. The third followed in February. Participants were given approximately two weeks to complete each questionnaire.

Fifth, a number of follow-up procedures were employed. Approximately one week after the mailing of each questionnaire, a thank-you/reminder post card was sent to each participant (see Appendixes A, B, and C). This postcard included the collect phone number, should the participant have any questions or not have received the questionnaire. These postcards were also hand signed. Follow-up phone calls were made to those who had not responded by the deadline.

Sixth, confidentiality was ensured. Participants completed an informed consent form, returning one copy

of the form along with their first questionnaire (see Appendix A). Completed questionnaires were treated in confidence; a list of participant names and numbers was held exclusively by the researcher to facilitate follow-up and questionnaire distribution.

Finally, those participants completing all three questionnaires were assured of receiving a copy of the study outcomes, in addition to obtaining feedback from other participants throughout the study.

Analysis of the Data

The statistical computations used in this study were frequencies, percentages, and medians, which were generated by the SPSS package. Participant comments were compiled and summarized by the researcher.

In this study the median of the ratings of the content items was used to identify that content deemed to be important for inclusion. This measure was considered appropriate as participant responses were skewed to the upper end of the five point scale, with a minimal number falling at the lower end. Phillips (1973) noted that these two conditions--a skewed distribution and the presence of very few extremes--makes the median the appropriate mode of representation.

Following the calculation of the median, the items were then listed in order, from the highest to the lowest, with those in the top 50% of the items being considered

those of greatest importance by the total participant group. The items were similarly calculated and scaled for each of the three subgroups--nurse educators, nurse administrators, and practicing nurses.

To ascertain which of the three types of aging content (normal aging, dysfunctional aging, or nursing intervention) was considered to be most important, two sets of data, for the total participant group and each of the subgroups, were used; the rankings assigned to each type of content in the first round questionnaire and the percentage of the total number of items of each type appearing in the top 72 items after all rounds were completed.

Chapter 4

Findings

The first section of this chapter presents the return rates of the three questionnaires, followed by the profile of the participants in the second section. In the third section the findings related to the purposes of the study are presented. An overview of other findings completes this chapter.

Mailing Results of the Study

Table 2 presents the mailing results (absolutes and percentages) of each of the three rounds of questionnaires for the total participant group. For each round, the percentage return for that round, and the percentage return of the original number sent, are presented. The percentage return of the original number at the end of the third questionnaire is the final return rate for that group. The participants represented in that percentage were those completing all rounds.

Table 2

Questionnaire Returns - Total Participant Group

Questionnaire	No. sent	No. returned	% returned per round	% returned of original
1	206	160	78%	78%
2	160	151	94%	73%
3	151	150	99%	73%

The final return rate for the total participant group of this three round Delphi study was 73%. The greatest loss in numbers of participants (46) occurred with the first questionnaire, with considerably fewer losses occurring with the second (11) and third (1).

Table 3 presents corresponding information for each of the three sub-groups: educators, administrators, and practicing nurses.

Table 3

Questionnaire Returns - Sub-groups

Round	Educators				Administrators				Practicing Nurses			
	No. sent	No. returned	% per round	% of original	No. sent	No. returned	% per round	% of original	No. sent	No. returned	% per round	% of original
1	67	58	87%	87%	62	45	73%	73%	77	57	74%	74%
2	58	57	98%	85%	45	43	96%	69%	57	51	90%	66%
3	57	56	98%	84%	43	43	100%	69%	51	51	100%	66%

The final return rate for each of the sub-groups was 84% for educators, 69% for administrators, and 66% for practicing nurses. The greatest loss in numbers of participants in all three groups was again in the first round, with minimal losses occurring with the second and third. At the end of round one, nine participants were reassigned to the appropriate sub-groups. In relation

to comparing the views of each of the three sub-groups, it is noted that there were more or less comparable numbers in each throughout the study, with 56 educators, 43 administrators, and 51 practicing nurses completing all three rounds.

Profile of the Participants

In the first questionnaire each participant provided information about his or her work experiences in the field of aging, educational background, and professional activities in the field. This information, presented in Tables 4 through 8, describes the total group of nurses involved in this study. The data is based on the 160 participants who completed the first questionnaire. This was considered preferable to restricting the profile to the 150 completing all three questionnaires, as the 10 participants who did not complete all three still had input into the first and second rounds, and therefore did influence the findings of this study.

As discussed in Chapter 3, participants were selected from the full range of community, institutional, and educational settings involved in the care of the elderly. Table 4 presents the number of participants working in each setting.

Table 4

Number of Participants Representing Each Employment Setting

	General Hospital	Auxiliary Hospital	Nursing Home	Community Health	Home Care	University Program	College Program	Hospital Program	Other	No Response
Number	25	31	30	15	20	4	15	5	8	7

Eighty-six (54%) of the participants were employed in institutions caring for the elderly: general hospitals, auxiliary hospitals, and nursing homes. Thirty-five (22%) were employed by community services such as community health and home care and 24 participants (15%) were from educational institutions offering nursing programs. The eight individuals who answered "Other" to this question were: one independent consultant, two researchers, three graduate students, and two professionals who were recently retired. Seven people did not answer this question.

Related to participants' work experiences in the field, Table 5 presents the number of years participants had (a) been involved in the care of the elderly, (b) worked in their present place of employment, and (c) worked in their present position.

Table 5

Participants' Work Experiences in the Field of Aging in Percentage of the Total Participant Group

Experience	< 1 year	1-3 years	4-7 years	8-12 years	> 12 years
Years involved in care of the elderly	2%	11%	27%	27%	33%
Years in present place of employment	7%	29%	31%	14%	19%
Year in present position	12%	41%	31%	8%	8%

The majority of participants (60%) had been involved in the field of aging for eight or more years, with one in three having been in the field for 12 or more years. As well, the majority of participants (64%) had been at their present place of employment for four or more years, with less than half (47%) being in their present position for that length of time. These figures would indicate that participants generally had worked with the elderly for a good number of years, and also would suggest that those experiences had likely been in more than one capacity or area of service.

Tables 6 and 7 contain data related to the educational background of the participants. The highest attained level of education is presented in Table 6.

Table 6

Highest Attained Level of Education in Percentage of the Total Participant Group

	Diploma Nursing	Baccalaureate Nursing	Baccalaureate Other	Masters Nursing	Masters Other	Ph.D. Nursing	Ph.D. Other
% of group	45%	39%	3%	2%	10%	0%	1%

Approximately equal proportions of the group were prepared at the diploma and baccalaureate level (45% & 42%). Thirteen percent (13%) held degrees beyond the baccalaureate level.

Table 7 presents participants' educational preparation specifically in the field of aging, in the form of completion of programs in gerontology, credit and non-credit courses, as well as workshops.

Table 7

Participation in Educational Activities in the Field of Aging in Percentage of the Total Participant Group

	Program	Credit courses	Non-credit courses	Educational workshops	Other
% of group	23%	20%	26%	83%	11%

Although only a small percentage of the participants had formal preparation in the field (23% had completed a program and 20% had credit courses in aging), participation in educational workshops was extensive, with a strong majority (83%) having engaged in such endeavors.

Participation in professional activities in the field of aging, including membership in organizations, subscriptions to publications, and publishing in the field, are presented in Table 8.

Table 8

Participation in Professional Activities in Percentage of the Total Participation Group

	Organization member	Subscriber	Author/ Co-author	Other
% of group	56%	67%	9%	9%

The majority of participants had memberships in professional organizations in the field (56%) and subscriptions to publications on aging (67%). Few (9%) had published in the field.

In summary, participants in this study represented a wide range of service areas caring for the elderly, including institutional and community settings. As well,

the range of educational institutions preparing nurses was represented--universities, community colleges, and hospitals. Participants had fairly extensive and likely varied experiences in working with the elderly. The majority were educated at either the diploma or baccalaureate level, with a small proportion being prepared beyond that level. Although few had formal preparation specifically in the field of aging, participants were reported to be actively involved in the field, with the majority taking part in educational workshops, holding memberships in organizations and subscribing to publications.

Aging Content for Inclusion in Nursing Programs

This section presents the findings of this study. In the first part of this section, the content considered to be of greatest importance for inclusion in nursing programs by the total participant group is discussed. This is followed by that content on which divergent views are held and the findings related to the relative importance of the three types of aging content according to the total participant group. In the second part, the aging content considered to be of greatest importance by each of the sub-groups is compared, followed by the relative importance of each type of aging content according to each sub-group.

Aging Content of Greatest Importance - Total Participant Group

As discussed in Chapter Three, the medians of the content items resulting from the ratings assigned by the total participant group were used to identify that content considered to be of greatest importance. A total of 143 content items were rated in this study. In ordering these items, the range of medians was found to be 3.029 to 4.890 (see Appendix D). In other words, all items were considered to be in the range of "moderate" to "utmost" in importance. The content items in the top 50% of the 143 items were identified as being those of greatest importance for inclusion. These 72 items, with medians ranging from 4.018 to 4.890, therefore fell in the range of "great deal" to "utmost" in importance.

It may be of interest to note that the range of medians of the remaining 71 items was 3.029 to 4.016. Though comparatively less importance was ascribed to these items, they were, nonetheless, in the range of "moderate" to a "great deal" in importance. They should therefore not be dismissed entirely from view when considering aging content for nursing programs.

The 72 items identified as having greatest importance for inclusion are presented in Table 9. They have been grouped, as they were in the questionnaires, under their respective type: normal aging, dysfunctional aging, and nursing intervention. Within each of these types there is a further breakdown of items according to whether they refer to content that is primarily physiological or psychosocial in nature or to, what is referred to here as, "other" aspects of working with the elderly.

Table 9

Aging Content of Greatest Importance - Total Participant Group

Normal Aging	Dysfunctional Aging	Nursing Intervention
physiological	**physiological**	**physiological**
sensory changes	sensory problems	
gastrointestinal changes	nutritional problems	nutritional interventions
urinary changes	elimination problems	elimination interventions
musculoskeletal changes	musculoskeletal problems	
		mobility interventions
cardiovascular changes	cardiovascular problems	
respiratory changes	respiratory problems	
	fluid & electrolyte problems	fluid & electrolyte interventions
		infection interventions
		skin care interventions
integumentary changes		
endocrine changes		
neurological changes	neurological problems	
	reversible & irreversible dementia	
	pain problems	pain management
	sleep problems	sleep promotion interventions
		safety interventions
psychosocial	**psychosocial**	**psychosocial**
cognition in old age	cognitive problems	
		interventions for the confused
		orientation interventions
memory in old age	memory problems	
	depression	
stress in old age		stress management interventions
losses in old age	coping problems associated with loss	
	emotional problems	emotional support
	self care problems	self care interventions
	impact of physical & mental problems	prevention of physical & mental problems
death & dying in old age		death & dying interventions
self-concept & aging	self-concept problems	self-concept interventions
family relationships in old age		family interviewing skills
		communication interventions
independence in old age	independence problems	
	medication problems	medication interventions
	substance abuse problems	
	institutionalization	
	relocation problems	relocation interventions
other	**other**	**other**
		assessment of the elderly
wellness model of aging		
		advocacy interventions
community resources		referral to community resources
		discharge planning
		work as member of interdisciplinary team
		locate & use information on aging
		recognition of research areas

In examining Table 9, it is observed that all three types of aging content were represented in the top 50% of items. For example, normal aging content included physiological aspects such as "cardiovascular changes" and "neurological changes," and psychosocial aspects such as "memory in old age" and "self-concept and aging." Two "other" aspects of working with the elderly--"wellness model of aging" and "community resources"--were identified under normal aging content. Related to dysfunctional aging, content included physiological aspects such as "fluid and electrolyte problems" and "pain problems," as well as psychosocial aspects such as "cognitive problems" and the "impact of physical and mental problems." Content representative of nursing interventions included such physiological aspects as "infection interventions" and "sleep promotion interventions," and psychosocial aspects such as "emotional support" and "relocation interventions." Nursing intervention content also contained a number of "other" aspects of caring for the elderly, for example, "discharge planning" and "recognition of research areas."

Aging Content on Which Divergent Views Are Held

Those content items on which divergent views are considered to be held are those for which consensus was not identified by the end of the study. By the end of round three, only 11 (8%) of the total 143 items were judged not to have consensus. That, together with the fact that the

ratings of all items fell between three points on a five point scale, in which the top two were considered to be relatively close together in interval, indicates that the presence of divergence among the views of the participants in this study was minimal.

Each of the 11 items that was judged not to have consensus has been identified with an asterisk (*) in the total list of items in Appendix D. For purposes of reporting, a brief description of these items is presented. Three of these content items were related to normal aging: "myths of aging," "ethnicity in old age," and "special needs of men in old age." Five were dysfunctional aging: "sexual response problems in old age," ethical problems of the elderly," "relocation problems in old age," "problems related to the elderly as an untapped resource," and "endocrine problems in old age." Three items were nursing interventions: "interventions to deal with infections in old age," "hearing aid care in old age," and "principles related to group work with the elderly."

Relative Importance of the Three Types of Aging Content - Total Participant Group

To ascertain the relative importance of each of the three types of aging content (normal aging, dysfunctional aging, and nursing intervention) according to the total participant group, two sets of data were examined: first,

the order of importance assigned by the total participant group to these three types of aging content, and second, the percentage of the total number of items of each type appearing in the top 72 items.

In the first questionnaire participants were asked to rank the three types of aging content. Table 10 presents the percentage of participants ranking each of the three types as first, second, and third in importance.

Table 10

Percentage of Total Participant Group Ranking Each of the Three Types of Aging Content to be First, Second, and Third in Importance

Order of Importance	Normal Aging	Dysfunctional Aging	Nursing Intervention
First in importance	80%	10%	11% *
Second in importance	5%	58%	36% *
Third in importance	15%	32%	53%

* Due to the rounding of percentages, this line does not total exactly 100%.

Normal aging content was ranked first in importance by 80% of the total participant group. Dysfunctional aging content was ranked second by 58% of the group and nursing intervention content third by 53% of the group. Normal aging content was clearly considered to be of greatest importance with four out of five participants ranking it first. There was less agreement with respect to the second and third place rankings of dysfunctional aging and nursing intervention content, as just over half the group ranked each as such.

Comments made by the participants throughout the questionnaires regarding these three types of aging content also add strength to this view:

> (Normal aging) "is essential as we must be knowledgeable about biopsychological aging before understanding abnormal aging."
>
> (Normal aging) "is of utmost importance."
>
> (Normal aging) "is the cornerstone of nursing education."

and:

> "Greater emphasis should be on normal aging than on dysfunctional."
>
> "Focus on prevention and coping skills, not on pathology."
>
> "Focus on wellness, not disability."

The relative importance of each of the three types of aging content is further indicated by examining the percentage of the total number of items of each type appearing in the top 72 items. Items in the questionnaires were classified as belonging to one of the three types of aging content. However, as participants were asked to rate individual items as to their relative importance, in theory, each item had equal opportunity to become one of the top 72. In the total 143 content items rated by the participants there were 50 normal aging items, 45 dysfunctional aging items and 48 nursing intervention items. Table 11 presents the proportion of the total number of items of each type that were rated as to place in the top 72 items.

Table 11

Proportion of the Total Number of Each Type of Content Item in the Top 72 Items - Total Participant Group

	Normal aging items	Dysfunctional aging items	Nursing intervention items
Proportion	19 (38%)	24 (53%)	29 (60%)

The ratings assigned by the participants to the items in this study resulted in the nursing intervention items being those most frequently represented in the top 72 items (60%), followed by dysfunctional aging items (53%), and normal aging items (38%). Based on this information, participants in this study can be said to view nursing intervention content to be first in importance, dysfunctional aging to be second, and normal aging to be third.

In comparing these two sets of data--the rank order of importance assigned by the total participant group to the three types of content and the percentage of the total number of each type of item appearing in the top 72--a disparity is clearly evident. In ranking the importance of each type of aging content, participants ranked normal aging to be first, dysfunctional aging to be second, and nursing intervention to be third in importance. Normal aging content was clearly considered to be of greatest importance, with four out of five participants ranking it first. However, when the percentage of the total number of each type of item in the top 72 was examined, the reverse was found: participants were seen to view nursing intervention content to be first in importance, dysfunctional aging to be second, and normal aging content to be third.

Aging Content of Greatest Importance - Sub-group Comparisons

The content items considered to be of greatest importance by each of the three sub-groups (educators, administrators, and practicing nurses) were identified using the same procedure as for the total participant group. For each group, the 143 content items were similarly ordered by their medians, from highest to lowest, and the top 50% of the items identified as being those of greatest importance (see Appendix E for the 143 items ordered by median for each sub-group). Table 12 thus presents the 72 items identified as being of greatest importance for each sub-group. The content has been organized, as it was for the total participant group, under the headings of Normal Aging Content, Dysfunctional Aging Content, and Nursing Intervention Content, and as to whether each refers to content that is primarily physiological, psychosocial, or "other" in nature. In comparing the items across the three groups, it was found that 48 of the 72 items (68%) were present in all three lists. This suggests a high degree of congruence among all three sub-groups as to the content items considered to be of greatest importance.

Table 12

Aging Content of Greatest Importance - Sub-groups

Type of content	Educators	Administrators	Practicing Nurses
Normal aging	**physiological**	**physiological**	**physiological**
	sensory changes	sensory changes	sensory changes
	gastrointestinal changes		gastrointestinal changes
	urinary changes	urinary changes	urinary changes
	musculoskeletal changes	musculoskeletal changes	musculoskeletal changes
	cardiovascular changes		cardiovascular changes
	respiratory changes	respiratory changes	respiratory changes
	integumentary changes	integumentary changes	integumentary changes
	endocrine changes		endocrine changes
	neurological changes	neurological changes	neurological changes
	sexual response changes		
	sleep changes		
	psychosocial	**psychosocial**	**psychosocial**
	cognition in old age	cognition in old age	cognition in old age
	memory changes	memory changes	memory changes
	stress in old age	stress in old age	stress in old age
	losses in old age	losses in old age	losses in old age
	death & dying in old age	death & dying in old age	death & dying in old age
	self-concept & aging	self-concept & aging	self-concept & aging
	family relationships in old age	family relationships in old age	family relationships in old age
	independence in old age	independence in old age	independence in old age
		role changes in old age	
	other	**other**	**other**
	wellness model of aging	wellness model of aging	wellness model of aging
	community resources	community resources	community resources

table continues

Type of content	Educators	Administrators	Practicing Nurses
Dysfunctional aging	**physiological**	**physiological**	**physiological**
	sensory problems	sensory problems	sensory problems
	nutritional problems	nutritional problems	nutritional problems
	elimination problems	elimination problems	elimination problems
	musculoskeletal problems		
	cardiovascular problems	cardiovascular problems	cardiovascular problems
	respiratory problems		respiratory problems
	fluid & electrolyte problems	fluid & electrolyte problems	fluid & electrolyte problems
	integumentary problems		
	neurological problems	neurological problems	neurological problems
	reversible & irreversible dementia	reversible & irreversible dementia	reversible & irreversible dementia
	pain problems	pain problems	pain problems
	sleep problems	sleep problems	sleep problems
		disease process in old age	
	psychosocial	**psychosocial**	**psychosocial**
		cognitive problems	cognitive problems
		memory problems	memory problems
	depression	depression	depression
	coping problems associated with loss	coping problems associated with loss	coping problems associated with loss
		emotional problems	emotional problems
	self care problems	self care problems	self care problems
	impact of physical & mental problems	impact of physical & mental problems	impact of physical & mental problems
	self-concept problems	self-concept problems	self-concept problems
		grieving problems	grieving problems
		independence problems	
	medication problems	medication problems	medication problems
	substance abuse problems	substance abuse problems	substance abuse problems
	institutionalization	institutionalization	institutionalization
	relocation problems	relocation problems	relocation problems
		ethical issues regarding consent/refusal of treatment	
	other	**other**	**other**

table continues

Type of content	Educators	Administrators	Practicing Nurses
Nursing Intervention	**physiological**	**physiological**	**physiological**
	nutritional interventions	nutritional interventions	nutritional interventions
	elimination interventions	elimination interventions	elimination interventions
	mobility interventions	mobility interventions	
	cardiovascular interventions		
	respiratory interventions		
	fluid & electrolyte interventions	fluid & electrolyte interventions	fluid & electrolyte interventions
	infection interventions	infection interventions	infection interventions
	skin care interventions	skin care interventions	skin care interventions
	sleep promotion interventions	sleep promotion interventions	sleep promotion interventions
	pain management interventions	pain management interventions	pain management interventions
	safety interventions	safety interventions	safety interventions
	psychosocial	**psychosocial**	**psychosocial**
	interventions for the confused	interventions for the confused	interventions for the confused
	orientation interventions	orientation interventions	orientation interventions
		stress management interventions	
	emotional support	emotional support	emotional support
	self care interventions	self care interventions	self care interventions
	prevention of physical & mental problems	prevention of physical & mental problems	prevention of physical & mental problems
	death & dying interventions	death & dying interventions	death & dying interventions
	self-concept interventions	self-concept interventions	self-concept interventions
		family interviewing skills	family interviewing skills
	communication interventions	communication interventions	communication interventions
		interventions to deal with the family	interventions to deal with the family
	medication interventions	medication interventions	medication interventions
	relocation interventions	relocation interventions	relocation interventions
		intimacy need interventions	
	other	**other**	**other**
	assessment of the elderly	assessment of the elderly	assessment of the elderly
	advocacy interventions	advocacy interventions	advocacy interventions
	referral to community resources	referral to community resources	referral to community resources
	discharge planning	discharge planning	discharge planning
	work as a member of the interdisciplinary team	work as a member of the interdisciplinary team	work as a member of the interdisciplinary team
	locate & use information on aging	locate & use information on aging	locate & use information on aging
	communicate information on aging	communicate information on aging	communicate information on aging
	recognition of research areas	recognition of research areas	recognition of research areas
			participate in research
	rehabilitation		

Of the items not appearing in all three sub-group lists, two kinds were identified. First, were those "exclusively included" in one group's list. For example, administrators were the only sub-group in which the item "stress management interventions" was found in the top 72 items. Second, were those "exclusively excluded" from one group's list. For example, the practicing nurses were the only sub-group in which the item "mobility interventions" was not found in the top 72 items. Table 13 represents a summary of these "exclusively included" and "exclusively excluded" items. These items have again been presented under their respective type of content (normal aging, dysfunctional aging, and nursing intervention) and according to whether they are primarily physiological or psychosocial in nature, or referring to "other" aspects of working with the elderly.

Reading across Table 13, educators had 13 items on which they held differing views from the two other groups. Those items which were "exclusively included" in the educator's top 72 items were primarily physiological in nature, (e.g., "sleep changes," "musculoskeletal problems," "respiratory interventions"), while those items which were "exlusively excluded" were primarily psychosocial in nature (e.g., "cognitive problems," "memory problems," and "interventions to deal with families").

Table 13

"Exclusively Included" and "Exclusively Excluded" Content Items for Each Sub-group

Sub-group	"Exclusively included" items			"Exclusively excluded" items		
	Normal	Dysfunctional	Interventions	Normal	Dysfunctional	Interventions
Educators	physiol. sleep changes	physiol. integumentary problems	physiol. respiratory interventions		psychosoc. cognitive problems	psychosoc. interventions to deal with families
	sexual response changes	musculoskeletal problems	cardiovascular interventions		memory problems	family interviewing skills
					emotional problems	
			other rehabilitation			
					grieving problems	
Administrators	psychosoc. role changes	psychosoc. ethical issues regarding consent/refusal of treatment	psychosoc. intimacy need interventions	physiol. endocrine changes	physiol. respiratory problems	
			stress management interventions	cardiovascular changes		
		independence problems		gastrointestinal changes		
Practicing		physiol. disease process	other participate in research			physiol. mobility interventions

The administrators had nine items on which they held views differing from the other two groups. Those items which were "exclusively included" in their list were primarily psychosocial in nature (e.g., "role changes," "independence problems," and "stress management interventions") while those items which were "exclusively excluded" were physiological in nature (e.g., "endocrine changes" and "respiratory problems").

Practicing nurses had only three items on which they can be said to hold differing views. Those items "exclusively included" in their list were one physiological item ("disease processes") and one "other" item ("participate in research"). The one item "exclusively excluded" in their list was physiological in nature ("mobility interventions").

Relative Importance of the Three Types of Aging Content - Sub-groups

To ascertain which of the three types of aging content (normal aging, dysfunctional aging, and nursing intervention) was considered of greatest importance by each of the sub-groups, the same two types of data used for the total participant group were examined for each sub-group: the rank order of importance assigned by each sub-group to the three types of aging content and the percentage of the total number of items of each type appearing in the top 72 items of each group. Table 14 presents the percentage of participants in each sub-group ranking each of the three types to be first, second, and third in importance.

Table 14

Percentage of Each Sub-group Ranking Each of the Three Types of Aging Content to be First, Second, and Third in Importance

Sub-group	Ranking	Normal Aging	Dysfunctional Aging	Nursing Intervention
Educators	First in importance	77%	14%	9%
	Second in importance	5%	49%	44% *
	Third in importance	18%	37%	47% *
Administrators	First in importance	83%	4%	17% *
	Second in importance	6%	57%	35% *
	Third in importance	11%	39%	48% *
Practicing Nurses	First in importance	80%	11%	9%
	Second in importance	4%	68%	29% *
	Third in importance	16%	21%	62% *

* Due to the rounding of percentages, this line does not total exactly 100%.

Normal aging content was ranked first in importance by a large majority of each sub-group, with 77% of the educators, 83% of the administrators and 80% of the practicing nurses ranking it as first. Dysfunctional aging content was ranked second in importance by 49% of the educators, 57% of the administrators and 68% of the practicing nurses. Nursing intervention content was ranked third in importance by 47% of the educators, 48% of the administrators, and 62% of the practicing nurses. Normal aging content was clearly considered to be first in importance as at least three out of four participants in each sub-group ranked it as such. Within the practicing nurse group there was greater agreement as to the second and third rankings of dysfunctional aging and nursing intervention content than there was in either the educator or administrator groups.

The relative importance of the three types of aging content according to each sub-group is further indicated by the percentage of the total number of items of each type appearing in the top 72 items of each group. Table 15 presents the proportion of each type of item in the top 72 of each group.

Table 15

Proportion of the Total Number of Each Type of Content Item in the Top 72 Items by Sub-group

Educators			Administrators			Practicing Nurses		
Normal aging items	Dysfunctional aging items	Nursing intervention items	Normal aging items	Dysfunctional aging items	Nursing intervention items	Normal aging items	Dysfunctional aging items	Nursing intervention items
21(42%)	21(47%)	30(63%)	17(34%)	25(56%)	30(63%)	19(38%)	23(51%)	30(63%)

The ratings assigned by each of the sub-groups to the items in this study resulted in nursing intervention items being those most frequently represented in the top 72 items for all three groups (63%), followed by dysfunctional aging items (educators 47%, administrators 56%, and practicing nurses 51%) and normal aging items (educators 42%, administrators 34%, and practicing nurses 38%). Based on this information, it can be said that all three sub-groups viewed nursing intervention content to be first in importance, dysfunctional aging to be second and normal aging to be third.

In comparing these two sets of data for the sub-groups, a disparity is again noted. In ranking the importance of each type of aging content, all three sub-groups ranked normal aging content to be first,

dysfunctional aging content to be second, and nursing intervention content to be last in importance. At least three out of four participants in each sub-group clearly considered normal aging content to be first. In examining the percentage of the total number of each type of item in the top 72 items, the reverse was found: all three sub-groups were seen to view nursing intervention content to be first, dysfunctional aging content to be second, and normal aging content to be last in importance.

Summary

In summary, all 143 aging content items rated by the participants in this study were in the range of "moderate" to "utmost" in importance for inclusion in nursing programs. The content items in the top 50% of the 143 items were identified as being those of greatest importance. The ratings of these 72 items with the highest medians were in the range of "great deal" to "utmost" in importance and represented all three types of aging content.

With respect to the identification of divergent views, the analysis of the data revealed that the presence of such views was minimal. This decision was grounded on two observations: (a) only 11 of the 143 items had been judged not to have consensus by the end of the study, and (b) the range of medians for all items fell within the top three points on the five point scale.

The findings related to the relative importance of normal aging, dysfunctional aging, and nursing intervention content were found to be contradictory. In ranking the three types of aging content, the total participant group and all three sub-groups ranked normal aging, dysfunctional aging, and nursing intervention content to be first, second, and third respectively. All groups clearly considered normal aging to be first in importance. This assessment was also reflected in the comments made about normal aging throughout the questionnaires. However, based on the percentage of the total number of each type of item appearing in the top 72, the total participant group and all three sub-groups viewed nursing intervention content, dysfunctional aging content, and normal aging content to be first, second, and third respectively.

In comparing the top 72 items of each sub-group, those items not found in all three lists were identified as those on which differing views were held. Educators had the most items (13) on which they held differing views. They were seen to place more importance on a number of physiological items, and less importance on a number of psychosocial items than did the other two groups. Administrators had nine items on which they held differing views, placing more importance on a number of psychosocial items, and less on a number of physiological items than did the other two groups. Practicing nurses were seen to have relatively few

items (3) on which they placed more or less importance than did the other two groups.

Other Findings

This last section presents findings in addition to those already included in this report. These findings resulted from questions included in the first and third questionnaire. In the first questionnaire participants were asked a number of questions regarding their perceptions of the elderly and the relative importance of three aspects of normal aging. The third and last questionnaire included a number of questions related to strategies for teaching aging in nursing programs. These supplementary findings are briefly examined here.

The following data resulted from questions regarding the participants' perceptions of the elderly and the relative importance of three aspects of normal aging.

1. Participants were asked whether, in rating the content items, they were thinking primarily of "ideal" or "actual" circumstances. Approximately half of the total participant group said they were thinking of "ideal" (51%) and half said they were thinking of "actual" circumstances (49%). A cursory assessment of the ratings assigned to content items by those thinking "ideal" and those thinking "actual" was undertaken. As the findings for each of the three sub-groups were similar to that of the total participant group, the average mean on the 33 normal aging

content items in the first questionnaire for practicing nurses thinking "ideal" was compared with the mean of those thinking "actual". The average mean for those practicing nurses who said they were thinking of "ideal" circumstances was 4.0 and for those who said they were thinking of "actual" circumstances was 3.9.

2. Participants were asked what age group they thought of when thinking about nursing the elderly. Forty-nine percent of the participants said they thought of those 65 and over, 2% thought of those between 65 and 75 and 49% thought of those age 75 and over.

3. Participants were asked, when thinking about nursing of the elderly, if they thought mainly of those who were well or ill. Thirteen percent said they thought of the ill elderly in hospital, 40% thought of the chronically ill in institutions, 13% thought of the chronically ill in the community, and 10% of healthy in the community. The remaining 24% said they thought of a combination of these.

4. When asked which aspect of normal aging they viewed as being first, second, and third in importance for inclusion in nursing programs, participants in this study ranked the physiological aspects first in importance followed by the psychological and sociological.

The following data resulted from questions regarding strategies for teaching aging in nursing programs.

1. When asked if aging in nursing programs should be compulsory study for all students or elective study for those with an interest in the area, almost all (97%) thought aging should be compulsory for all students.

2. Participants were divided in their views when asked whether aging in nursing programs should be "integrated" into already existing nursing courses or in a "separate" nursing course--53% preferring it be "integrated" and 47% preferring it be a "separate" course.

3. When asked if care of the elderly should be addressed near the beginning or the end of the program, 57% thought it should be near the beginning and 43% thought it should be toward the end.

4. Participants were asked whether the knowledge or practice component of this area of study was more important, or if they were of "equal importance." The majority (88%) thought the two were of "equal importance."

5. Participants were asked whether nursing students should care for the well elderly only, ill only, or both in learning to care for the elderly. Again, almost all (99%) thought students should care for both.

6. When asked whether nursing students should initially care for the well or ill elderly, almost all (92%) thought students should care for the well elderly first.

7. Participants were invited to suggest other strategies for teaching aging in nursing programs. Those most commonly cited are summarized here. A number of participants suggested that a variety of experiences covering the range of practice areas in which nurses are involved in caring for the elderly be used: home care, community health, institutions, seniors centers, and day care facilities. Some suggestions were directed to faculty. Educators were encouraged to develop "positive attitudes" toward the elderly and foster those attitudes in their students. It was recommended that faculty have "several years" of experience in the field. Joint appointments in education and practice were encouraged. Other frequently mentioned strategies included: not assigning beginning students to the elderly when teaching basic care skills, stressing communication skills, engaging the elderly as guest speakers, and using aging simulations.

Chapter 5

Summary and Discussion

Summary

Purpose and Need

This study was in the field of curriculum planning and addressed the challenge for nursing education to develop programs that prepare nurses to care knowledgeably for the growing elderly segment of the population. The questions guiding this study were:

1. What aging content is considered by the total group of nurses to be of greatest importance for inclusion in nursing programs?

2. What aging content is identified about which divergent views are held as to its relative importance for inclusion?

3. Of three types of aging content--normal aging, dysfunctional aging, and nursing intervention--which is considered by the total group of nurses to be first, second, and third in importance for inclusion?

4. How do the views of nurse educators, nurse administrators, and practicing nurses compare as to what aging content is considered to be of greatest importance?

5. Of the three types of aging content, which do each of the three sub-groups (nurse educators, nurse administrators, and practicing nurses) consider to be first, second, and third in importance?

The need for gerontology in nursing programs has been, and continues to be, well documented. The literature reviewed in this study included two types which addressed aging content in the curriculum--research studies and curriculum development projects. The majority of research studies have not focused exclusively on the identification of aging content, but, rather, have addressed a number of other issues in conjunction with the consideration of content. As a result, the content identified in these studies was scant. A number of curriculum development projects undertaken for the purposes of planning, implementing, and evaluating gerontology in the curriculum have documented the aging content included in their projects. The content identified for inclusion in these projects was seen to be more comprehensive and detailed than that included in the research studies. On examining these two types of literature, the need for greater focus on substantive content was reinforced. Although there was seen to be some commonality in the content found across the literature, limited consistency and rare unanimity were identified.

Methodology

As the review of the literature revealed a lack of clarity regarding aging content for inclusion in nursing programs, it was decided to conduct a modified Delphi study to determine aging content deemed important for inclusion in nursing programs.

Participants in this study were nurse educators, nurse administrators, and practicing nurses working in the area of gerontological nursing, each of which met a set of selection criteria. Invitations to participate in the study were sent to 206 nurses, with approximately one-third of that number being sent to members of each of three sub-groups--nurse educators, nurse administrators, and practicing nurses.

The design of this modified Delphi study involved three rounds of questionnaires including a structured initial questionnaire. Each questionnaire consisted of aging content items classified as to whether they were normal aging, dysfunctional aging, or nursing intervention content. Participants rated each item on a five point Likert scale as to its relative importance for nursing programs. Participants were encouraged to suggest additional content items and to make comments throughout.

Through the feedback process that is part of the Delphi method, participants in this study were expected to move toward consensus regarding aging content considered

most important for inclusion. The second and third questionnaires contained feedback from the first and second respectively. At the end of each questionnaire each content item was judged to have or have not reached participant consensus. Items were judged to have consensus when the majority (over 50%) of the participants agreed as to the importance of an item.

To identify the content considered of greatest importance for inclusion the median of the rating of each content item was calculated and the items listed in order, from highest to lowest. Those in the top 50% of the items were deemed those of greatest importance. To ascertain which of the three types of aging content was so considered (normal aging, dysfunctional aging, or nursing intervention), two sets of data were examined: (a) the rank order of importance assigned by the participants to the three types of aging content, and (b) the percentage of the total number of items of each type falling in the top 50% of the items.

Findings

Of the original 206 participants, 150 (73%) completed all three rounds of this study: 56 educators, 43 administrators, and 51 practicing nurses. In the first questionnaire participants provided information related to their work experiences in the field of aging, educational background, and professional activities in the field.

The following is a summary of the findings of this study, as they apply to each of the five questions.

1. All 143 aging content items rated in this study were considered to be important for nursing programs as their medians were in the range of 3 (moderate) to 5 (utmost) in importance. Those items that were considered to be of greatest importance were the top 50% of the 143 and represented all three types of aging content: normal aging, dysfunctional aging, and nursing intervention. The medians of these 72 items were in the range of 4 (great deal) to 5 (utmost) in importance.

2. The presence of divergent views among the participants as to what content was important was minimal as (a) only 11 of the 143 content items did not reach consensus, and (b) the ratings of all items fell between three points on the five point scale, in which the top two points, 4 (great deal) and 5 (utmost) were considered to be "relatively close" together in interval size.

3. In ranking the three types of aging content, the total participant group viewed normal aging content to be first, dysfunctional aging content to be second, and nursing intervention content to be third in importance. However, based on the percentage of the total number of each type of content item in the top 72 items, the opposite was found: participants were seen to view nursing

intervention content to be first in importance followed by dysfunctional aging and normal aging content.

4. In examining the content items in the top 50% of each of the three sub-groups, there was found to be a good deal of agreement as to what content was considered of greatest importance as 48 (68%) of the items were present in all sub-group lists. Those items that were not in all three sub-group lists were identified as those items on which differing views were held. Educators had the most of such items (13), placing more importance on six physiological items and one "other" item, and less importance on six psychosocial items than did the other two groups. Administrators had nine items on which they held differing views, placing more importance on five psychosocial items and less on four physiological items. Practicing nurses were seen to have relatively few items (3) on which they placed more or less importance than did the other two groups.

5. In ranking the three types of aging content all of the sub-groups viewed normal aging content to be first, dysfunctional aging to be second, and nursing intervention content to be third in importance. However, based on the percentage of the total number of each type of content in the top 72 items, the opposite was found: all sub-groups were seen to view nursing intervention content to be first in importance followed by dysfunctional aging and normal aging content.

Discussion of Outcomes

A review of the literature revealed that few research studies have focused on substantive aging content for nursing programs, the majority having addressed attitude changes and interest in working with the elderly. Upon further examination there was found to be limited consistency and unanimity regarding preferred aging content. As a result, there remains currently a pressing need to advance the identification of "valid" content for inclusion in nursing programs. This study addressed this need in that its primary focus was the identification of that content. It resulted in a substantial aging content base for consideration, in the first instance by nurse educators who are most directly involved in the curriculum development process. This content base need not be interpreted as exclusive to programs offering a degree in nursing. It may also be appropriate for consideration in other nursing programs.

In using the Delphi technique, this study also advances in some measure a promising methodology for curriculum deliberation in nursing education research. These two aspects merit further discussion.

Aging Content of Greatest Importance--Total Participant Group

The 143 aging content items assessed in this study came from three sources--a review of the literature, consultation with subject matter experts, and suggestions made by the participants. These three sources served to establish a comprehensive base from which to identify

preferred content. By virtue of this base, and the methodology used in this study, the 72 aging content items identified as those of greatest importance are seen to represent a scope of aging content more comprehensive than that resulting from other studies. In addition, the content resulting from this study, contrary to that found in the literature, provided a balanced representation of each of the three types of aging content.

The fact that the ratings of all of the 143 aging content items were in the range of 3 (moderate) to 5 (utmost) in importance for inclusion warrants further comment. Does this mean that all content is indeed considered to be of relatively equal importance? Or does it indicate that in this situation the participants were either unwilling or unable to be more discriminating? Whatever the explanation for such a seemingly uncritical endorsement, the results raise some doubt as to how helpful such findings may be to curriculum planners. From a practical point of view, certainly educators must be discriminating in selecting content to be added to already established and even burgeoning curricula. If an approach which engages a variety of stakeholders from a profession results in everything being judged "important," it may be less beneficial than originally thought. However, decisions regarding what to include and what to exclude are seldom straightforward, and though results such as in this study

do not provide an easy answer, they go some distance in guiding the selection process.

In passing, a number of questions regarding teaching strategies were added to the third questionnaire. These questions appear to have gone beyond the realm of curriculum planning and into the phases of curriculum design and implementation. They were included because a number of participants volunteered such suggestions in the first and second questionnaires, and because consideration of teaching strategies often enters into curriculum planning activity. The issues reflected in these questions, such as whether aging content should be integrated into an already existing curriculum or an autonomous course, and whether, in their clinical experiences, students should have initial contact with the well or ill elderly, warrant focused consideration of their own. Although there is a natural tendency to think of these three aspects of curriculum development together (planning, design, and implementation), the inclusion of implementation strategies as part of a study such as this is not likely to advance effective curriculum decision making at this time.

Aging Content of Greatest Importance--Sub-group Comparisons

In comparing the views of the sub-groups a high degree of congruence appeared between them as to their preferred content, with 68% of the 72 items present in the lists of

all three sub-groups. Further investigation, nevertheless, revealed each group to have a number of items on which they had differing views from the other two groups. Educators and administrators, particularly, were found to have the most items on which differing views were held: 13 items and 9 items respectively. These findings would suggest that at least to some degree, these sub-groups exhibited somewhat different points of view, those points of view most likely grounded in the roles each fulfils in the field of gerontological nursing. Educators were seen to place more importance on six physiological content items and one "other" item, and less importance on six psychosocial items, than did any other group. Conversely, administrators were seen to place more importance on five psychosocial content items and less importance on four physiological items. It is possible that such differences between nurse educators and nurse administrators may eventually contribute to disparities between the acquired knowledge base of the nurse and the needs and expectations of the employment setting.

Further examination of item differences between the educator group and the administrator group prompts another observation. It is interesting to note that the content represented by some of the items on which educators placed more importance may typically be viewed as representing the "fundamental" level of care (e.g., sleep changes, integumentary problems, and respiratory interventions),

while the content included in those items on which they placed less importance may typically be viewed "to go beyond" that level (e.g., cognitive problems and interventions to deal with families). Conversely, the content represented by the items on which administrators placed more importance may well be seen to go beyond the "fundamental" level of care (e.g., ethical issues and stress management interventions), and the content represented by those items on which they placed less importance may well be seen to be at the "fundamental" level (e.g., gastrointestinal changes and respiratory problems). One possible explanation for such differences may be based on the professional context from which each may view care of the elderly. The nurse administrator has to be primarily concerned with the overall well being of the elderly person in his or her care setting. The initial priority of the educator, on the other hand, is the proper preparation of nurses, and thus he or she may view care of the elderly primarily from the perspective of the needs of the learner.

Differing views among the participants were observed from two additional perspectives: within each sub-group and among individual participants. Both the educator and the administrator groups were internally "split" as to the second and third place rankings of dysfunctional aging and normal aging content. In addition, individual differences

were seen in that personal commitment to specific positions remained quite pronounced throughout the study. This is illustrated by the comments made on the following item in the last questionnaire:

Item: Nurses should have knowledge of the myths of aging.

"Important to include because most people fall prey to them without realizing it."

"I don't think it is highly important."

"Very important to know what current, well held myths there are in order to dispel them."

"If students learn the facts this will or should dispel the myths."

These differences (between groups, within groups, and among individuals) illustrate the continuing presence of varying views that will likely continue to emerge whenever a variety of referent groups are involved in curriculum deliberations such as this. In addition, they point to the need for continued reflective enquiry in the curriculum development process.

Relative Importance of the Three Types of Aging Content

In assessing the relative importance of normal aging, dysfunctional aging, and nursing intervention content, a discrepancy emanated from the two sets of data. The rankings of the three types of aging content placed normal aging content first, with particularly high agreement,

followed by dysfunctional aging, and nursing intervention content. However, when the proportion of the total number of each type of content item in the top 72 items was examined, nursing intervention content was rated first, followed by dysfunctional aging and normal aging content. This discrepancy held true for all of the sub-groups as well as the total participant group.

The following explanation for the above discrepancy is offered. In ranking the three types of aging content, participants were asked to consider three general categories, while in rating individual content items they were asked to consider specifics representing each of the general categories. It is possible that in answering a question that asks for the ranking of three general, though distinct, entities, the rank order may be affected by that which appears most "rational" (i.e., defensible) or "acceptable" (i.e., reflecting contemporary idealizations of the profession). In this case, normal aging content may be considered to be "rationally" or "acceptably" judged as first in importance, followed by dysfunctional aging and nursing intervention content. However, when asked to rate individual content items, participants may have been more oriented to the "realities" attached to the meaning each item held for them. This explanation would then suggest that in ranking the three types of aging content, participants were invoking a more abstract "ideal" view of

the way things could feasibly be, while in rating the individual content items they were reflecting the concrete "reality" of the way things need to be. (In the presentation of "Other Findings" in Chapter Four, it was noted that there was very little difference in the ratings assigned to content items based on whether participants were thinking of the "ideal" or "real." However, it should be noted that, as the range of ratings in this questionnaire was relatively narrow, it is possible that any differences may have thus become obscured.)

There is also the matter of how much validity can be ascribed to responses to questions of a general nature compared to those of a specific nature. The general, more abstract, categories can be seen to involve more diverse content of a wider scope, leading to greater variance in interpretation. The more specific items, on the other hand, can be expected to be more definite and clear as to their intended meaning, resulting in less variance in interpretation. Therefore, more validity can be expected to adhere to responses to items in more specific and concrete form. Hence, it may well be that the ratings of items warrant greater consideration by curriculum planners than do the rankings of types of content. Given that the outcomes of this study represent one form of input into a continuing deliberative process in curriculum planning, and recognizing the great majority of participants ranked

normal aging content first in importance, this indication of strong preference for normal aging content ought not to be dismissed as inconsequential to the ultimate selection of aging content.

In this study, the three sub-groups were seen to have similar views as to the relative importance of each of the three types of aging content. This finding differs from those of Tollett and Adamson (1982) and Sullivan (1984). Based on questions regarding the "placement of gerontological content" in nursing programs contained in one of the four questionnaires of Tollett and Adamson's study, the "practitioners indicated a preference for the presentation of pathological content rather than normal content" (p. 578). "Faculty," on the other hand, thought the focus should be on normal aging content. Sullivan found that although both "baccalaureate graduates" and "baccalaureate faculty" recommended the inclusion of two aspects of normal aging ("biological" and "psychosocial"), the faculty were "significantly stronger in their agreement in including these two types of content" (p. 84) than the graduates. The differences in findings between these two studies and the current study may be accounted for in part by one or more of the following factors: (a) (as discussed in Chapter 2), the identification of content was not the major focus of these studies, (b) the educators in both studies and the practicing nurses in Sullivan's study

were limited to those from baccalaureate nursing programs, (c) the study was limited to one contact with the participant group, and (d) the studies took place in different geographical locations.

It was somewhat unexpected to find the educators, administrators and practicing nurses in this study to be so homogeneous in their views related to both the importance of specific aging content and the relative importance of the three types of aging content. It is commonly assumed or intimated that educators and practitioners hold opposing views when it comes to the preparation of nurses. The findings of this study would suggest that there is less divergence among members of the nursing profession than is often assumed. Certainly, it would appear that nurse educators, nurse administrators, and practicing nurses in the field of aging in Alberta are currently quite in accord with each other with respect to aging content in nursing programs. It may also be that, at this time, the sensed urgency for improving nursing preparation for the aged is so prevalent as to induce movement of general opinion in a given, in this case positive, direction.

Methodology in Curriculum Deliberations

This study is an example of an investigation designed to facilitate the curriculum decision making process.

By involving nurses in the field, as well as those in education, the referent groups most acutely in touch with the nursing needs of the elderly were thus engaged. As a complex process, curriculum decision making calls for the consideration of a variety of perspectives of diverse stakeholders (Connelly et al., 1980). The data shows that the nurse educators, administrators, and practicing nurses in this study were seen to have extensive experience and involvement in the field of aging and attests to the success with which their representation was realized.

In order to facilitate informed decisions about what is important for nurses to know in caring for the elderly, it was considered beneficial to facilitate a sharing of views among the concerned and, in the process, to encourage further reflective consideration. Through the feedback process involved in the Delphi method participants were given the opportunity to actively clarify and examine their views. The following participants' comments give evidence of such reflective involvement. Regarding the methodology in general:

> "It (this study) has provided me with thought provoking questions. I am keeping the material and plan to review it at a later date."
>
> "This is an interesting process for curriculum development--I learned from it."

Comments to select items:

Item: Nurses should be able to implement interventions to meet spiritual needs of the elderly. In the third questionnaire one participant commented "that in considering the need for holistic care" she had changed her view regarding the degree of importance of this item.

Item: Nurses should have knowledge of ethical problems of the elderly in old age. In the third questionnaire one participant stated she had "increased her rating of this item to a 3" (moderate importance) because she "realized the elderly are still not speaking loudly enough on those issues and that nurses must."

Given attention to particular methodological concerns, the Delphi method promises to advance the purposes of studies such as this with reasonable effectiveness. Three such concerns are addressed here: (a) the operationalization of consensus identification, (b) the stability of participant opinions or views, and (c) the time and effort required by the participants to complete a series of questionnaires.

Related to the identification of consensus, as noted in Chapter 3, few guidelines for that identification are available. Consensus in this study was based on the majority of participants (over 50%) agreeing as to the importance of an item. For reasons already discussed, the standard of consensus used in the second and third

questionnaires was a more exacting version of that used in the first. In retrospect, this operationalization of consensus determination made the process more complex than would have been preferred. In order to ensure the most effective use of the Delphi methodology, consideration as to the sharpening of techniques for managing consensus identification is warranted.

The second methodological concern has to do with the stability of participant opinions or views, particularly when employing the Delphi technique. In the Delphi method participants are asked to consider the views of others, and indeed to modify their original views to be in line with those of the "majority." The stability or permanency of those modified views was questionned by Uhl (1975). He administered the first round of an earlier Delphi study to the same participants a year following the original study. His results revealed that the ratings in this resubmitted first round resembled more the ratings obtained in the first round of the original study than those from the final round. This apparent reversion to original views may well lead to doubts about the usefulness of the results of such Delphi studies, and indeed the suggestion that one round studies would be equally as serviceable as a number. Nevertheless, the Delphi technique is useful in alerting and stimulating participants to think about their views, facilitating more defensible and informed decisions.

Thirdly, it is evident that the Delphi method demands a good deal of time and effort on the part of the participants, as it involves the completion of a series of mailed questionnaires. Both the final return rate for this study (73%) and the fact that participants made comments throughout (see Appendixes B and C, Second and Third Questionnaires) would suggest that these demands were not found to be excessive. It would appear that given an interest in the subject under investigation, and careful questionnaire design and management strategies, participants will invest the time and effort that such endeavors require.

Future Considerations

This study, in the field of curriculum decision making, is an initial entry into the identification of aging content for nursing programs. It resulted in a substantial content base for consideration in the development of curricula that will prepare graduates to care effectively for the elderly. Two tasks remain for the immediate future: (a) the engagement of other interest groups as stakeholders in the identification of aging content, and (b) the further specification, articulation, and selection of needed content. In involving other stakeholders or referent groups such as the elderly themselves, students, and professional associations, one can expect greater diversity of views, potentially further

complicating the selection process. However, the views of such groups warrant consideration for a number of reasons. Such input would ensure that the scope of content relevant to the needs of the elderly would be represented. As well, support for the inclusion of such content would be garnered. Finally, such an approach may even be politically expedient or necessary. Related to the second task, the outcomes of this study alert the profession and curriculum planners to the fact that difficult decisions lie ahead in connection with the ultimate selection of content in this area. In view of what is commonly referred to as the "knowledge explosion" (Tanner & Tanner, 1980), the endorsement of all content as being important for inclusion presents a real dilemma for the curriculum planner. Burgeoning curricula and established curriculum structures necessitate tough priorizing and decision making in the selection process.

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Appendix A

First Round Questionnaire Materials

Dear :

As an educator whose area of experience and expertise is care of the elderly, I invite you to participate in a study addressing a topic of importance to each of us: the educational preparation of nurses in the care of the elderly.

The purposes of this study are to identify 1) the gerontological knowledge, and skills viewed as important for inclusion in nursing education programs by nurses in Alberta and 2) the varied points of view among nurses in Alberta regarding what is considered important for inclusion in nursing programs.

This study will use a modified Delphi research method: a method of collecting and synthesizing opinions on a particular subject, facilitating the merging of a variety of viewpoints. The Delphi requires the submission of a series of mail-out questionnaires to persons having expertise in the area under investigation. To that end, selected practicing nurses, nurse administrators, and nurse educators whose area of expertise is gerontological nursing are being invited to participate in this study.

In this study you will be involved in three sequential questionnaires sent to you over a period of approximately four months. Each questionnaire will take about forty-five minutes to complete. In the first questionnaire you will rate and comment on the relative importance, in your view, of specific gerontological content for inclusion in nursing education programs. In the second and third questionnaires you will receive feedback in the form of the consensus of your peers regarding what they view as most important. Given that information, and your own views, you will be asked to reconsider and comment on your previous responses. Through this process, the total respondent group is expected to move toward consensus regarding what gerontological content is considered most important for inclusion in nursing programs. As well, the views of each respondent sub-group (practicing nurses, nurse administrators, and nurse educators) will be identified.

I believe your participation in this study, as an educator, is very important. As a practice focused profession our education programs must prepare graduates who can effectively meet the health needs of our aging population. Therefore it is appropriate that content in nursing education programs reflect the collective view.

This study provides you the opportunity for written dialogue with other nurses involved in care of the elderly. As well as the final study results being available to you, you will receive immediate feedback after submission of each questionnaire.

Your involvement in this study will be treated in confidence. Questionnaires are identified by a code number, facilitating follow-up and distribution of subsequent questionnaires, while ensuring your anonymity. Study results will be presented as collective views of either the total group or a sub-group, with no reference made to individual respondents. This study has been approved by the Education Joint Research Ethics Committee, University of Calgary.

This research serves to meet the requirements of a MA Degree in Education. As the outcomes are also expected to contribute to future program development in nursing education, a summary of this study may be made available to the wider profession through an appropriate nursing publication.

For the sake of expediency, I have included the first questionnaire materials. If you agree to participate in this study please 1) sign the copies of the enclosed Informed Consent, 2) complete the first questionnaire and 3) return one copy of the consent form and the completed questionnaire in the enclosed self-addressed stamped envelope no later than December 15, 1986.

The second and third questionnaires will be sent to you in January and February, 1987 respectively.

Thank you for your consideration of this study and I look forward to your participation.

Sincerely,

Jean Miller, R.N., B.Sc.N.
Instructor
Diploma Nursing Program

JM:pt

Dear :

As an administrator whose area of experience and expertise is care of the elderly, I invite you to participate in a study addressing a topic of importance to each of us: the educational preparation of nurses in the care of the elderly.

The purposes of this study are to identify 1) the gerontological knowledge, and skills viewed as important for inclusion in nursing education programs by nurses in Alberta and 2) the varied points of view among nurses in Alberta regarding what is considered important for inclusion in nursing programs.

This study will use a modified Delphi research method: a method of collecting and synthesizing opinions on a particular subject, facilitating the merging of a variety of viewpoints. The Delphi requires the submission of a series of mail-out questionnaires to persons having expertise in the area under investigation. To that end, selected practicing nurses, nurse administrators, and nurse educators whose area of expertise is gerontological nursing are being invited to participate in this study.

In this study you will be involved in three sequential questionnaires sent to you over a period of approximately four months. Each questionnaire will take about forty-five minutes to complete. In the first questionnaire you will rate and comment on the relative importance, in your view, of specific gerontological content for inclusion in nursing education programs. In the second and third questionnaires you will receive feedback in the form of the consensus of your peers regarding what they view as most important. Given that information, and your own views, you will be asked to reconsider and comment on your previous responses. Through this process, the total respondent group is expected to move toward consensus regarding what gerontological content is considered most important for inclusion in nursing programs. As well, the views of each respondent sub-group (practicing nurses, nurse administrators, and nurse educators) will be identified.

I believe your participation in this study, as an administrator, is very important. As a practice focused profession our education programs must prepare graduates who can effectively meet the health needs of our aging population. Therefore it is appropriate that content in nursing education programs reflect the collective view.

This study provides you the opportunity for written dialogue with other nurses involved in care of the elderly. As well as the final study results being available to you, you will receive immediate feedback after submission of each questionnaire.

Your involvement in this study will be treated in confidence. Questionnaires are identified by a code number, facilitating follow-up and distribution of subsequent questionnaires, while ensuring your anonymity. Study results will be presented as collective views of either the total group or a sub-group, with no reference made to individual respondents. This study has been approved by the Education Joint Research Ethics Committee, University of Calgary.

This research serves to meet the requirements of a MA Degree in Education. As the outcomes are also expected to contribute to future program development in nursing education, a summary of this study may be made available to the wider profession through an appropriate nursing publication.

For the sake of expediency, I have included the first questionnaire materials. If you agree to participate in this study please 1) sign the copies of the enclosed Informed Consent, 2) complete the first questionnaire and 3) return one copy of the consent form and the completed questionnaire in the enclosed self-addressed stamped envelope no later than December 15, 1986.

The second and third questionnaires will be sent to you in January and February, 1987 respectively.

Thank you for your consideration of this study and I look forward to your participation.

Sincerely,

Jean Miller, R.N., B.Sc.N.
Instructor
Diploma Nursing Program

JM:pt

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The purposes of this study are to identify 1) the gerontological knowledge, and skills viewed as important for inclusion in nursing education programs by nurses in Alberta and 2) the varied points of view among nurses in Alberta regarding what is considered important for inclusion in nursing programs.

This study will use a modified Delphi research method: a method of collecting and synthesizing opinions on a particular subject, facilitating the merging of a variety of viewpoints. The Delphi requires the submission of a series of mail-out questionnaires to persons having expertise in the area under investigation. To that end, selected practicing nurses, nurse administrators, and nurse educators whose area of expertise is gerontological nursing are being invited to participate in this study.

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Jean Miller, R.N., B.Sc.N.
Instructor
Diploma Nursing Program

JM:pt

Identification of Core Gerontological Nursing Content Appropriate to Nursing Education in Alberta by Practicing Nurses, Nurse Educators and Nurse Administrators: Using a Modified Delphi Research Method

Informed Consent

I am willing to participate in the study entitled: "Identification of Core Gerontological Nursing Content Appropriate to Nursing Education in Alberta by Practicing Nurses, Nurse Educators and Nurse Administrators: Using a Modified Delphi Research Method". I have read the accompanying information explaining the aims and methods of this study.

I give permission for the information I provide to be used to identify: 1) the gerontological knowledge and skills viewed as important for inclusion in nursing education programs, and 2) the varied points of view among nurses regarding what is considered important for inclusion in nursing programs.

I am satisfied that every effort will be made to ensure my anonymity. I understand that I have the right to withdraw from this study at any time and grant the researcher the corresponding right.

My signature below indicates my willingness to participate in the study under the conditions outlined.

_____	_____	____
Participant's Signature	Participant's Printed Name	Date
_____	_____	____
Researcher's Signature	Researcher's Printed Name	Date

Please complete this consent form: retain the white copy for your records and return the yellow, along with the completed questionnaire, in the enclosed self-addressed, stamped envelope.

QUESTIONNAIRE

AGING IN NURSING EDUCATION

Identification of Core Gerontological Nursing Content Appropriate to Nursing Education in Alberta by Practicing Nurses, Nurse Educators and Nurse Administrators: Using a Modified Delphi Research Method.

PURPOSES:

The purposes of this study are to identify 1) gerontological content for inclusion in nursing education programs in Alberta and 2) the varying points of view among nurses in Alberta regarding that content. As a review of the literature results in extensive lists of recommended gerontological content, which are often incomplete and even contradictory, this study will serve to clarify what is viewed as most important.

INSTRUCTIONS:

In this questionnaire you are asked to rate gerontological content in terms of how important you feel it is for inclusion in nursing education programs.

In Sections One, Two and Three rate each content item as to its **individual importance** for inclusion in nursing education programs by circling the number that represents how important you view it to be: 1 being of little importance, 2 being somewhat important, 3 being of moderate importance, 4 being of great importance and 5 being of utmost importance. At the end of each Section your comments are requested and you are given the opportunity to add or delete content items. Please keep in mind that the purpose of this study is to provide focus and clarification regarding what should be included. Therefore in responding to each content item please be discriminating in your rating.

In Sections Four and Five circle your answer unless otherwise requested.

DEFINITIONS:

Nursing education program: In keeping with the profession's mandate for the year 2000, this is a program offered through an educational institution granting a degree in nursing and preparing the graduate to write licensing examinations.

Gerontological content or aging content: Knowledge and skills related to care of the elderly in a nursing education program.

Aging: The process of growing old.

Old age: The period of human development from age 65 onward.

The elderly: Persons age 65 and over.

Normal aging: Changes that occur as a natural result of the passage of time.

Dysfunctional aging: Changes that result from pathology or disease in the aging process.

Interventions: Actions taken by the nurse to assist a client/patient reach a goal: either by doing for, doing with or enabling the person to do.

SECTION ONE: NORMAL AGING
(Natural changes resulting from the passage of time.)

In this section consider aspects of **normal aging** for inclusion in nursing education programs. Please rate each statement in terms of how important you feel the knowledge is for inclusion in nursing programs. Please be discriminating in your ratings.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Related to normal aging, nurses should have knowledge of:					
1. physiological theories of aging.....	1	2	3	4	5
2. sensory changes in old age.....	1	2	3	4	5
3. integumentary changes in old age..	1	2	3	4	5
4. musculoskeletal changes in old age.	1	2	3	4	5
5. gastrointestinal changes in old age..	1	2	3	4	5
6. urinary changes in old age.....	1	2	3	4	5
7. respiratory changes in old age.....	1	2	3	4	5
8. cardiovascular changes in old age..	1	2	3	4	5
9. neurological changes in old age....	1	2	3	4	5
10. endocrine changes in old age.....	1	2	3	4	5
11. sexual response changes in old age.	1	2	3	4	5
12. psychological theories of aging.....	1	2	3	4	5
13. personality in old age.....	1	2	3	4	5
14. self concept in old age.....	1	2	3	4	5
15. cognition in old age.....	1	2	3	4	5
16. memory in old age.....	1	2	3	4	5
17. intelligence in old age.....	1	2	3	4	5
18. stress in old age.....	1	2	3	4	5

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
19. death and dying in old age.....	1	2	3	4	5
20. sociological theories of aging.....	1	2	3	4	5
21. stereotyping of aging.....	1	2	3	4	5
22. myths of aging.....	1	2	3	4	5
23. demography of the aging population.	1	2	3	4	5
24. relationships in old age.....	1	2	3	4	5
25. retirement in old age.....	1	2	3	4	5
26. leisure in old age.....	1	2	3	4	5
27. spirituality in old age.....	1	2	3	4	5
28. ethnicity in old age.....	1	2	3	4	5
29. economics and aging.....	1	2	3	4	5
30. transportation and aging.....	1	2	3	4	5
31. housing and aging.....	1	2	3	4	5
32. institutionalization in old age.....	1	2	3	4	5
33. public policies and old age.....	1	2	3	4	5

Comments:

Please add any content items you feel should be included with respect to normal aging. If you do add an item please rate its importance using the scale provided.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Add:	1	2	3	4	5

Please list below any content items you feel should not be included with respect to normal aging. If you do delete an item please comment on your reason(s) for doing so.

Delete: Reason(s):

SECTION TWO: DYSFUNCTIONAL AGING
(Changes resulting from pathology or disease in aging.)

Now consider aspects of **dysfunctional** aging for inclusion in nursing education programs. Please rate each statement in terms of how important you feel the knowledge is for inclusion in nursing programs. Please be discriminating in your ratings.

	Circle your selection Degree of importance				
	very little	**some-what**	**moderate**	**great deal**	**utmost**
Related to dysfunctional aging, nurses should know:					
34. sensory problems in old age.....	1	2	3	4	5
35. integument problems in old age....	1	2	3	4	5
36. musculoskeletal problems in old age	1	2	3	4	5
37. nutritional problems in old age.....	1	2	3	4	5
38. elimination problems in old age.....	1	2	3	4	5
39. respiratory problems in old age.....	1	2	3	4	5
40. cardiovascular problems in old age..	1	2	3	4	5
41. neurological problems in old age....	1	2	3	4	5
42. self care problems in old age.....	1	2	3	4	5
43. infection problems in old age.....	1	2	3	4	5
44. fluid and electrolyte problems in old age.....	1	2	3	4	5
45. pain problems in old age.....	1	2	3	4	5
46. sleep problems in old age.....	1	2	3	4	5
47. self concept problems in old age....	1	2	3	4	5
48. sexual response problems in old age	1	2	3	4	5
49. intimacy problems in old age.....	1	2	3	4	5
50. learning problems in old age.....	1	2	3	4	5
51. memory problems in old age.....	1	2	3	4	5
52. cognitive problems in old age.....	1	2	3	4	5

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Related to dysfunctional aging, nurses should know:					
53. emotional problems in old age.....	1	2	3	4	5
54. spiritual problems in old age.....	1	2	3	4	5
55. ethical problems in old age.....	1	2	3	4	5
56. financial problems in old age.....	1	2	3	4	5
57. transportation problems in old age..	1	2	3	4	5
58. housing problems in old age.....	1	2	3	4	5
59. relocation problems in old age.....	1	2	3	4	5
60. substance abuse problems in old age	1	2	3	4	5
61. medication problems in old age.....	1	2	3	4	5

Comments:

Please add any content items you feel should be included with respect to dysfunctional aging. If you do add an item please rate its importance using the scale provided.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Add:	1	2	3	4	5

Please list below any content items you feel should not be included with respect to dysfunctional aging. If you do delete an item please comment on your reason(s) for doing so.

Delete: Reason(s):

SECTION THREE: INTERVENTIONS
(Nursing actions that assist the client patient reach a goal.)

In this section consider the **interventions** nurses should be able to do when caring for the elderly. Please rate each statement in terms of how important you feel the intervention is for inclusion in nursing programs. Please be discriminating in your ratings.

Circle your selection

Nurses should be able to implement:	Degree of importance: very little	somewhat	moderate	great deal	utmost
62. assessment of the elderly.....	1	2	3	4	5
63. skin care interventions for the elderly	1	2	3	4	5
64. mobility interventions for the elderly	1	2	3	4	5
65. interventions to meet exercise needs ofthe elderly.....	1	2	3	4	5
66. interventions to meet nutritional needs of the elderly.....	1	2	3	4	5
67. interventions to meet elimination needs of the elderly.....	1	2	3	4	5
68. interventions to meet respiratory needs of the elderly.....	1	2	3	4	5
69. interventions to meet cardiovascular needs of the elderly.....	1	2	3	4	5
70. safety interventions for the elderly..	1	2	3	4	5
71. interventions to deal with medication problems in the elderly.....	1	2	3	4	5
72. interventions to meet self care needs of the elderly.....	1	2	3	4	5
73. interventions to deal with infections in the elderly.....	1	2	3	4	5
74. interventions to maintain fluid and electrolyte balance in the elderly...	1	2	3	4	5
75. pain management interventions for the elderly.....	1	2	3	4	5
76. sleep promotion interventions for the elderly.....	1	2	3	4	5

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
77. interventions to meet sexuality needs of the elderly	1	2	3	4	5
78. interventions to meet intimacy needs of the elderly	1	2	3	4	5
79. communication interventions with the elderly	1	2	3	4	5
80. interventions to meet learning needs of the elderly	1	2	3	4	5
81. interventions to promote self-concept in the elderly	1	2	3	4	5
82. stress management interventions for the elderly	1	2	3	4	5
83. interventions to orientate the elderly	1	2	3	4	5
84. interventions to meet spiritual needs of the elderly	1	2	3	4	5
85. interventions to deal with death and dying in old age	1	2	3	4	5
86. interventions to deal with relocation of the elderly	1	2	3	4	5
87. discharge planning for the elderly	1	2	3	4	5
88. referral of the elderly to community resources	1	2	3	4	5
89. interventions to deal with ethical issues of care of the aged	1	2	3	4	5
90. advocacy interventions for the elderly	1	2	3	4	5
Nurses need to be able to:					
91. work as a member of the interdisciplinary health care team involved in meeting the needs of the elderly	1	2	3	4	5
92. communicate information on aging to others: formally or informally	1	2	3	4	5
93. locate and use information on aging.	1	2	3	4	5
94. recognize areas for research related to care of the elderly	1	2	3	4	5
95. participate in research related to care of the elderly	1	2	3	4	5

Comments:

Please add any content items you feel should be included with respect to interventions. If you do add an item please rate its importance using the scale provided.

Circle your selection
Degree of importance

	very little	some-what	moderate	great deal	utmost
Add:	1	2	3	4	5

Please list below any content items you feel should not be included with respect to interventions. If you delete an item please comment on your reason(s) for doing so.

Delete: Reason(s):

SECTION FOUR: SUPPLEMENTAL CONSIDERATIONS

In questions 96 thru 98 complete the sentences by circling your choice.

96. "In rating the imporance of the items in Sections One, Two and Three, I was thinking **primarily of:**

    1. 'IDEAL' CIRCUMSTANCES."
    2. 'ACTUAL' CIRCUMSTANCES."

97. "When I think about nursing of the elderly I think **mainly** of those:

    1. AGE 65 AND OVER."
    2. AGE 65 TO 75."
    3. OVER AGE 75."

98. "When I think about nursing of the elderly I think **mainly** of those who are:

    1. ILL IN HOSPITAL."
    2. CHRONICALLY ILL IN INSTITUTIONS."
    3. CHRONICALLY ILL IN THE COMMUNITY."
    4. HEALTHY IN THE COMMUNITY."
    5. OTHER: _____
    (PLEASE SPECIFY)

In each of questions 99 and 100 rank the items in order of importance:

99. Which of the following aspects of aging do you view as being first (1) second (2) and third (3) in importance for inclusion in nursing education programs. (Write one number beside each item.)

    __DYSFUNCTIONAL AGING
    __NORMAL AGING
    __NURSING INTERVENTIONS

100. Which of the following aspects of normal aging do you view as being first (1) second (2) and third (3) in importance for inclusion in nursing education programs. (Write one number beside each item.)

    __SOCIOLOGICAL AGING
    __PHYSIOLOGICAL AGING
    __PSYCHOLOGICAL AGING

SECTION FIVE: BACKGROUND INFORMATION

In this last section please answer some questions about yourself: your work, professional responsibilities and activities as well as educational background.

101. Circle the number that describes **your present place of employment in nursing.** If employed in more than one place, indicate your **main** place of employment.

1. GENERAL HOSPITAL
2. AUXILIARY HOSPITAL
3. NURSING HOME
4. PUBLIC/COMMUNITY HEALTH
5. HOME CARE/VISITING CARE AGENCY
6. UNIVERSITY NURSING PROGRAM
7. COLLEGE NURSING PROGRAM
8. HOSPITAL NURSING PROGRAM
9. OTHER:_____
(PLEASE SPECIFY)

102. Circle the number which indicates **how long you have worked in your present place of employment.**

1. LESS THAN 1 YEAR
2. 1 TO 3 YEARS
3. 4 TO 7 YEARS
4. 8 TO 12 YEARS
5. OVER 12 YEARS

103. Circle the number that describes your **position at your place of employment in nursing.** If you hold more than one position, indicate your **main** position.

1. DIRECTOR OF NURSING
2. ASSOC./ASSIST. DIRECTOR
3. SUPERVISOR/COORDINATOR
4. HEAD NURSE/NURSING UNIT SUPERVISOR
5. ASSIST. HEAD NURSE/NURSING UNIT SUPERVISOR
6. GENERAL DUTY/STAFF NURSE
7. INSERVICE COORDINATOR
8. CLINICAL SPECIALIST
9. INSTRUCTOR/PROFESSOR
10. OTHER:_____
(PLEASE SPECIFY)

104. Circle the number that indicates **how long you have been in your present position.**
    1. LESS THAN ONE YEAR
    2. 1 TO 3 YEARS
    3. 4 TO 7 YEARS
    4. 8 TO 12 YEARS
    5. OVER 12 YEARS
105. Circle the number that indicates **how long you have been involved in nursing of the elderly:** as a practicing nurse, nurse administrator or nurse educator.
    1. LESS THAN ONE YEAR
    2. 1 TO 3 YEARS
    3. 4 TO 7 YEARS
    4. 8 TO 12 YEARS
    5. OVER 12 YEARS
106. Circle the number that describes your **highest level of completed educational program.**
    1. RN DIPLOMA
    2. BACHELORS DEGREE IN NURSING
    3. BACHELORS DEGREE IN FIELD OTHER THAN NURSING
    4. MASTERS DEGREE IN NURSING
    5. MASTERS DEGREE IN FIELD OTHER THAN NURSING
    6. DOCTORAL DEGREE IN NURSING
    7. DOCTORAL DEGREE IN OTHER THAN NURSING
107. Circle the number(s) that describe(s) your **involvement in educational activities** related to nursing of the elderly.
    1. COMPLETION OF A PROGRAM IN AGING OR A PROGRAM IN WHICH THE MAJOR FOCUS WAS AGING
    2. COMPLETION OF CREDIT COURSE(S) IN AGING (IN ADDITION TO 1. ABOVE)
    3. COMPLETION OF NON-CREDIT COURSE(S) IN AGING
    4. ATTENDANCE AT EDUCATIONAL WORKSHOPS, INSERVICES, SEMINARS, OR TELECONFERENCES ON AGING.
    5. OTHER:_____
    (PLEASE SPECIFY)
108. Circle the number(s) that describe(s) your **involvement in professional development activities** related to nursing of the elderly.
    1. MEMBER OF PROFESSIONAL ORGANIZATION(S) IN THE FIELD OF AGING
    2. AUTHOR OR CO-AUTHOR OF PUBLICATION(S) ON AGING
    3. SUBSCRIBER TO PUBLICATION(S) ON AGING
    4. OTHER:_____
    (PLEASE SPECIFY)

Is there anything else you would like to add or comment on with regard to aging in nursing education programs? If so please use this space for that purpose.

Thank you for the time and consideration you have given this study. Your contribution is greatly appreciated.

Please return this questionnaire in the enclosed self-addressed, stamped envelope no later than

Date

Last week an invitation (and questionnaire) to take part in a study to identify aging content appropriate for nursing education programs in Alberta was mailed to you. If you have already completed and returned the questionnaire, my sincere thanks. If you wish to participate in this study but have not yet completed the questionnaire, please do so as soon as possible. In order to include your views in the results of the first questionnaire and subsequent design of the second, I must receive your completed questionnaire within the next few days.
If by some chance you did not receive the invitation and questionnaire, or it has been misplaced, please call me right now, collect (0-242-6816) and I will get one in the mail to you today.

Sincerely,

Jean Miller

Appendix B

Second Round Questionnaire Materials

Dear :

Thank you for completing the first questionnaire in the study: Aging in Nursing Education. Response to this study has been very positive, both in the number of participants and consideration given to the questions. Your individual input is most appreciated. The educational preparation of nurses in the care of the elderly is a real concern to each of us.

As you will recall, the Delphi research method requires the submission of a series of mail-out questionnaires. In this second questionnaire, you are given feedback on the responses of the total group to the first questionnaire items. Given that information and your own views, you are asked to reconsider your initial responses. Through this process the group is expected to move toward consensus on the relative importance of the items presented.

Results of the first questionnaire are presented as numerical data as well as a summary of comments. In compiling your comments I have attempted to represent them as accurately as possible and at the same time as concisely as possible. As it is important not to lose your views and ideas, I have included a copy of your original responses. If you feel your view has been lost in the process please be sure to add it again.

Several participants have asked how they came to be chosen for this study. The Delphi method identifies 'subjects' in a manner which may be unfamiliar to many of us. Individuals are invited to participate based on their expertise in the area under investigation: in this case, gerontological nursing. Potential participants were identified through the 'aging network': as fellow members of aging organizations, fellow participants at conferences, peer referral and directories.

As compilation of your responses requires several days and I would like you to receive the third and last questionnaire as soon as possible, I would appreciate you completing this questionnaire at your earliest convenience. Please return your completed questionnaire on or no later than February 3, 1987.

Thank you for your support of this project. Your continued input is very important to its successful completion.

Sincerely,

Jean Miller, R.N., B.Sc.N.
Instructor
Diploma Nursing Program

JM:pt

QUESTIONNAIRE

AGING IN NURSING EDUCATION

Identification of Core Gerontological Nursing Content Appropriate to Nursing Education in Alberta by Practicing Nurses, Nurse Educators and Nurse Administrators: Using a Modified Delphi Research Method.

PURPOSES:

The purposes of this study are to identify 1) gerontological content for inclusion in nursing education programs in Alberta and 2) the varying points of view among nurses in Alberta regarding that content. As a review of the literature results in extensive lists of recommended gerontological content, which are often incomplete and even contradictory, this study will serve to clarify what is viewed as most important.

DEFINITIONS:

Nursing education program: In keeping with the profession's mandate for the year 2000, this is a program offered through an educational institution granting a degree in nursing and preparing the graduate to write licensing examinations.

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The elderly: Persons age 65 and over.

Normal aging: Changes that occur as a natural result of the passage of time.

Dysfunctional aging: Changes that result from pathology or disease in the aging process.

Interventions: Actions taken by the nurse to assist a client/patient reach a goal: either by doing for, doing with or enabling the person to do.

INSTRUCTIONS:

In this questionnaire you are asked to rate again gerontological content in terms of how important you feel it is for inclusion in nursing education programs. This second questionnaire is set up similar to the first: Section One dealing with Normal Aging, Section Two with Dysfunctional Aging and Section Three with Interventions.

In each of these sections you are given 1) a Summary of Comments from the first questionnaire, 2) a list of Consensus Items (consensus is defined as ≥80% of the group agreeing as to the relative importance of an item, 3) Non-consensus items for re-rating, 4) Additional Items, suggested by the participants, for rating and once again an opportunity for Comments/Additions/Deletions. Section Four presents a summary of your additional comments regarding aging in nursing education programs.

Re-rating of Non-consensus Items:

For each item the percentage of participants choosing each rating has been inserted above the scale and comments included. Compare the total group response with your own: a copy of your first responses has been included in your package. Examine each item carefully, considering your own view as well as the views of others. If your original response **does not** fall in one of the three or four larger percentage groups, please select a response that does. If you choose to remain in the one or two smaller percentage group please state your reason(s) for doing so (under COMMENTS/ADDITIONS/DELETIONS).

If your original response **does fall** in one of the three or four larger percentage groups please re-rate the item as to your present view. If you choose to move out of one of the three or four larger percentage groups and into the one or two smaller percentage groups please state your reason(s) for doing so (under COMMENTS/ADDITIONS/DELETIONS).

Rating of Additional Items:

Please rate each content item as to its individual importance for inclusion in nursing education programs by circling the number that represents how important you view it to be.

Please keep in mind that the purpose of this study is to provide **focus and clarification** regarding what should be included. Therefore in re-rating or rating each item, **please be discriminating in your selection.**

SECTION ONE: NORMAL AGING
(Natural changes resulting from passage of time)

SUMMARY OF COMMENTS

Normal aging: essential as must be knowledgable about biopsychosocial aging before understanding abnormal; of utmost importance as students can draw on (it) and apply to practice; feel very strong about the importance of this area-cannot stress this enough; the cornerstone of nursing education in gerontology; need to know normal to better plan, teach and provide care; difficult to be discriminating as all should be included.

Physio/psycho/sociological aspects: nurses are adequately prepared to meet physical but not social needs; some emphasis should be on political, socio, and economic rather than just physical.

Other: very complete section; emphasize reality rather than theories; emphasize we're dealing with individuals; specialization versus basic preparation would influence relative importance of items.

CONSENSUS ITEMS:

Consensus was reached on the following items:

being of 'a great deal'/'utmost' importance:

sensory changes in old age
cardiovascular changes in old age
stress in old age
urinary changes
self concept in old age
cognition in old age
death and dying in old age

NON-CENSENSUS ITEMS

Please reconsider each statement below and re-rate each in terms of how important you feel the knowledge is for inclusion in nursing program. Examine each item carefully: comparing the group response with your own as well as considering the comments. Re-rate each item as outlined in the instructions. Please be discriminating in your responses.

Circle your selection
Degree of importance

	very little	somewhat	moderate	great deal	utmost
Related to **normal aging**, nurses should have knowledge of:					
1. physiological theories of aging.....	2% 1	11% 2	20% 3	35% 4	32% 5
2. integumentary changes in old age.. Comment: important for inclusion; essential part of physiological theories.	1% 1	3% 2	22% 3	46% 4	28% 5
3. musculoskeletal changes in old age. Comment: important for inclusion; essential part of physiological theories.	0% 1	2% 2	20% 3	42% 4	36% 5
4. gastrointestinal changes in old age.. Comment: important for inclusion; essential part of physiological theories.	0% 1	2% 2	22% 3	43% 4	33% 5
5. respiratory changes in old age..... Comment: essential part of physiological theories.	0% 1	2% 2	19% 3	48% 4	31% 5
6. neurological changes in old age.... Comment: essential part of physiological theories.	0% 1	2% 2	19% 3	42% 4	37% 5
7. endocrine changes in old age..... Comment: essential part of physiological theories.	1% 1	1% 2	29% 3	41% 4	28% 5
8. sexual response changes in old age. Comment: essential part of physiological theories.	1% 1	4% 2	29% 3	42% 4	24% 5
9. psychological theories of aging..... Comment: could be part of a psychology course; not sure what those theories are.	4% 1	4% 2	25% 3	40% 4	27% 5

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
10. personality in old age. . . . . (e.g.: personality traits, habits, motives and values) Comment: could be part of a psychology course.	0% 1	7% 2	27% 3	44% 4	22% 5
11. memory in old age. . . . . Comment: could be part of a psychology course.	0% 1	2% 2	21% 3	47% 4	30% 5
12. intelligence in old age. . . . . Comment: could be part of a psychology course.	2% 1	5% 2	23% 3	44% 4	26% 5
13. sociological theories of aging. . . . . Comment: others look after in large urban hospital - more important for home care; delete as encompassed in other items; could be part of a psychology course; not sure what those theories are.	3% 1	14% 2	23% 3	40% 4	20% 5
14. stereotyping of aging. . . . . Comment: delete, as only serves to confuse. will be eliminated by teaching of facts; very important as stereotypes by society and health care professionals cause stress for the elderly; stereotypes are common amongst nurses; could be part of a psychology course.	2% 1	6% 2	29% 3	37% 4	26% 5
15. myths of aging. . . . . Comment: as above for stereotyping.	1% 1	9% 2	30% 3	30% 4	30% 5
16. demography of the aging population. Comment: fine but not absolutely necessary; environmentalist and social worker area; could be part of a psychology course.	2% 1	17% 2	39% 3	31% 4	11% 5
17. retirement in old age. . . . . Comment: environmentalist and social worker area.	1% 1	12% 2	25% 3	49% 4	13% 5
18. leisure in old age. . . . . Comment: applies to a variety of age groups; more important for community nursing; could be part of a psychology course.	0% 1	9% 2	29% 3	43% 4	19% 5

Circle your selection
Degree of importance

	very little	some-what	moderate	great deal	utmost
19. spirituality in old age.	0% 1	7% 2	40% 3	38% 4	15% 5
Comment: applies to a variety of age groups; could be part of a psychology course.					
20. ethnicity in old age.	2% 1	15% 2	36% 3	38% 4	9% 5
Comment: applies to a variety of age groups; could be part of a psychology course.					
21. economics in old age.	1% 1	9% 2	30% 3	40% 4	20% 5
Comment: applies to a variety of age groups; important for mental vitality and community involvement; could be part of a psychology course.					
22. transportation and aging.	2% 1	14% 2	41% 3	35% 4	8% 5
Comment: applies to a variety of age groups; important for mental vitality and community involvement; could be part of a psychology course.					
23. housing and aging.	2% 1	9% 2	32% 3	41% 4	16% 5
Comment: applies to a variety of age groups; more important for community nursing; important for mental vitality and community involvement; environmentalists and social workers area; could be part of a psychology course.					
24. public policies and old age.	2% 1	6% 2	36% 3	29% 4	27% 5
Comment: applies to a variety of age groups; could be part of a psychology course.					

COMMENTS/ADDITIONS/DELETIONS

ADDITIONAL ITEMS

Please rate each statement in terms of how important you feel the knowledge is for inclusion in nursing programs. Please be discriminating in your ratings.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Related to **normal aging**, nurses should have knowledge of:					
25. wellness model of old age.	1	2	3	4	5
26. exercise and aging.	1	2	3	4	5
27. dentition in old age.	1	2	3	4	5
28. sleep changes in old age.	1	2	3	4	5
29. developmental tasks and stages in old age.	1	2	3	4	5
30. independence in old age.	1	2	3	4	5
31. judgment in old age.	1	2	3	4	5
32. learning capabilities in old age.	1	2	3	4	5
33. their personal beliefs about old age.	1	2	3	4	5
34. family relationships in old age.	1	2	3	4	5
35. peer relationships in old age.	1	2	3	4	5
36. role changes in old age.	1	2	3	4	5
37. special problems of women in old age.	1	2	3	4	5
38. losses in old age.	1	2	3	4	5
39. elderly as an untapped resource. . . .	1	2	3	4	5
40. educational levels in old age.	1	2	3	4	5
41. community resources for the elderly	1	2	3	4	5

COMMENTS/ADDITIONS/DELETIONS

NON-CENSENSUS ITEMS

Please reconsider each statement below and re-rate each in terms of how important you feel the knowledge is for inclusion in nursing programs. Examine each item carefully: comparing the group response with your own as well as considering the comments. Re-rate each item as outlined in the instructions. Please be discriminating in your responses.

Circle your selection

Degree of importance

	very little	somewhat	moderate	great deal	utmost
Related to **dysfunctional aging**, nurses should have knowledge of:					
42. integument problems in old age....	0% 1	5% 2	25% 3	41% 4	29% 5
43. musculoskeletal problems in old age	0% 1	2% 2	23% 3	42% 4	33% 5
44. respiratory problems in old age.....	0% 1	2% 2	21% 3	50% 4	27% 5
45. cardiovascular problems in old age..	0% 1	2% 2	21% 3	43% 4	34% 5
46. neurological problems in old age....	0% 1	1% 2	27% 3	40% 4	32% 5
47. infection problems in old age.....	0% 1	3% 2	32% 3	40% 4	25% 5
48. fluid and electrolyte problems in old age.....	0% 1	1% 2	22% 3	35% 4	42% 5
49. pain problems in old age.....	0% 1	2% 2	19% 3	40% 4	39% 5
50. self concept problems in old age....	0% 1	1% 2	23% 3	44% 4	32% 5
51. sexual response problems in old age Comment: put with intimacy problems; more important in public health.	1% 1	7% 2	39% 3	40% 4	13% 5
52. intimacy problems in old age..... Comment: put with sexual problems; more important in public health.	0% 1	6% 2	37% 3	36% 4	21% 5
53. learning problems in old age.....	1% 1	5% 2	37% 3	37% 4	19% 5
54. memory problems in old age.....	0% 1	2% 2	23% 3	45% 4	30% 5
55. cognitive problems in old age.....	0% 1	1% 2	22% 3	41% 4	36% 5

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
56. ethical problems of the elderly in old age. . . . . Comment: more important in public health.	1% 1	11% 2	34% 3	36% 4	18% 5
57. financial problems in old age. . . . . Comment: more important in public health.	0% 1	11% 2	31% 3	41% 4	17% 5
58. transportation problems in old age. . Comment: more important in public health.	0% 1	14% 2	40% 3	33% 4	13% 5
59. housing problems in old age. . . . . Comment: more important in public health; important to maintain seniors in home environment.	0% 1	14% 2	33% 3	35% 4	18% 5
60. relocation problems in old age. . . . . Comment: more important in public health.	0% 1	6% 2	19% 3	34% 4	41% 5
61. substance abuse problems in old age Comment: of particular importance.	0% 1	4% 2	19% 3	43% 4	34% 5
62. institutionalization in old age. . . . . Comment: also consider deinstitutionaliz ation; should be last resort for older person; (author's comment: moved from normal aging as recommended).	1% 1	3% 2	23% 3	34% 4	39% 5

COMMENTS/ADDITIONS/DELETIONS

ADDITIONAL ITEMS

Please rate each of the statements in terms of how important you feel the knowledge is for inclusion in nursing programs. Please be discriminating in your ratings.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Related to dysfunctional aging, nurses should know about:					
63. hearing problems in old age.....	1	2	3	4	5
64. vision problems in old age.....	1	2	3	4	5
65. dentition problems in old age.....	1	2	3	4	5
66. independence problems in old age..	1	2	3	4	5
67. impact of physical/mental problems on daily living in old age.....	1	2	3	4	5
68. reversible and irreversible dementia in old age.....	1	2	3	4	5
69. depression in old age.....	1	2	3	4	5
70. coping problems associated with loss in old age (e.g. roles, health, money, family).....	1	2	3	4	5
71. grieving problems in old age.....	1	2	3	4	5
72. family problems in old age.....	1	2	3	4	5
73. physical abuse in old age.....	1	2	3	4	5
74. the nature of disease processes in old age.....	1	2	3	4	5
75. differences in problems between the young-old (65-80) and old-old (80+).	1	2	3	4	5
76. problems related to elderly as an untapped resource.....	1	2	3	4	5
77. ethical issues around consent or refusal of treatment.....	1	2	3	4	5

COMMENTS/ADDITIONS/DELETIONS

SECTION THREE: INTERVENTIONS (NURSING ACTIONS THAT ASSIST THE CLIENT/PATIENT REACH A GOAL.)

SUMMARY OF COMMENTS

Interventions: Difficult to discriminate, all are important; would hope to find all skills in a gerontological nurse; these are core to nursing; wanted to rank all as 5-but you asked for discrimination; many physiological interventions nurses should know-need to relate them to the elderly.

Other: Nurses need to be able to teach and serve as role models for attitudes toward older people.

CONSENSUS ITEMS

Consensus was reached on the following items:

being of 'a great deal'/'utmost' importance:

communicating information on aging	skin care interventions
elimination interventions	safety interventions
medication problems interventions	self care interventions
pain management interventions	sleep promotion interventions
orientation interventions	discharge planning
referral to community resources	work as a team member
locate and use information on aging	mobility interventions
interventions to deal with relocation	assessment of the elderly
interventions to deal with death and dying	

NON-CENSENSUS ITEMS

Please consider each statement below and re-rate each in terms of how important you feel the knowledge is for inclusion in nursing programs. Examine each item carefully: comparing the group response with your own as well as considering the comments. Re-rate each item as outlined in the instructions. Please be discriminating in your responses.

	Circle your selection Degree of importance				
	very little	somewhat	moderate	great deal	utmost
Nurses should be able to implement:					
78. interventions to meet exercise needs of the elderly.....	0% 1	3% 2	29% 3	43% 4	25% 5
Comment: more appropriate to/assisted by PT/OT.					
79. interventions to meet nutritional needs of the elderly.....	0% 1	0% 2	20% 3	37% 4	43% 5
Comment: assisted by another discipline.					
80. interventions to meet respiratory needs of the elderly.....	0% 1	2% 2	28% 3	45% 4	25% 5

		Circle your selection Degree of importance				
		very little	some-what	moderate	great deal	utmost
81.	interventions to meet cardiovascular needs of the elderly. . . . . Comment: assisted by another discipline.	0% 1	1% 2	21% 3	49% 4	29% 5
82.	interventions to deal with infections in the elderly. . . . . Comment: assisted by another discipline.	0% 1	2% 2	2% 3	5% 4	31% 5
83.	interventions to maintain fluid and electrolyte balance in the elderly. . . Comment: assisted by another discipline.	0% 1	0% 2	23% 3	32% 4	45% 5
84.	interventions to meet sexuality needs of the elderly. . . . . Comment: not sure how the nurse 'meets' sexuality needs other than respecting privacy; assisted by another discipline.	1% 1	10% 2	42% 3	33% 4	14% 5
85.	interventions to meet intimacy needs of the elderly. . . . . Comment: assisted by another discipline; delete-they don't change as people grow older.	0% 1	10% 2	33% 3	40% 4	17% 5
86.	communication interventions with the elderly. . . . . Comment: assisted by another discipline.	0% 1	0% 2	21% 3	33% 4	46% 5
87.	interventions to meet learning needs of the elderly. . . . . Comment: best handled by social worker	1% 1	8% 2	37% 3	33% 4	21% 5
88.	interventions to promote self concept in the elderly.	0% 1	3% 2	18% 3	41% 4	38% 5
89.	stress management interventions for the elderly. . . . . Comment: assisted by another discipline	0% 1	2% 2	27% 3	38% 4	33% 5
90.	interventions to meet spiritual needs of the elderly. . . . . Comment: best handled by social worker; assisted by another discipline	0% 1	7% 2	39% 3	34% 4	20% 5
91.	interventions to deal with ethical issues of care of the elderly. . . . . Comment: best handled by social worker; more a specialist area than basic prepar ation; delete as just need awareness that old people have same rights as anyone; must feel comfortable with 'no code'; should be approached practically-i.e.: show respect	1% 1	7% 2	28% 3	37% 4	27% 5

	Circle your selection Degree of importance very little	somewhat	moderate	great deal	utmost
92. advocacy interventions for the elderly.....	0% 1	5% 2	17% 3	34% 4	44% 5
Comment: not as important in larger centers, prime importance for rural nursing and home care; best handled by social worker; nurses must be prepared and assertive in this area; more a specialist area than basic preparation; elderly often unaware of resources-especially if they have no family					
Nurses need to be able to:					
93. recognize areas for research related to care of the elderly.....	0% 1	6% 2	22% 3	41% 4	31% 5
Comment: must rely on research to meet needs of increased lifespan; need for awareness is great; ability to see greater need may not be for every nurse.					
94. participate in research related to care of the elderly.....	1% 1	6% 2	27% 3	35% 4	31% 5
Comment: delete as part of a research course-would need to do research on each age group if include in aging; participation an individual choice; must participate in research to meet needs of increased lifespan; need to participate is great.					

COMMENTS/ADDITIONS/DELETIONS

ADDITIONAL ITEMS

Please rate each statement in terms of how important you feel the knowledge is for inclusion in nursing programs. Please be discriminating in your ratings.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Nurses should be able to implement:					
95. interventions to prevent physical and mental health problems.	1	2	3	4	5
96. hearing aid care for the elderly.	1	2	3	4	5
97. footcare for the elderly.	1	2	3	4	5
98. dental care for the elderly.	1	2	3	4	5
99. emotional support for the elderly. . . .	1	2	3	4	5
100. validation therapy (80-100 yrs old). .	1	2	3	4	5
101. interventions to deal with the confused elderly.	1	2	3	4	5
102. interventions to deal with the negative impact of ethical and sociological family issues.	1	2	3	4	5
103. interventions for dealing with the family of the aged.	1	2	3	4	5
104. advocacy for family caregivers.	1	2	3	4	5
105. family interviewing skills.	1	2	3	4	5
106. principles related to group work with the elderly.	1	2	3	4	5
107. guardianship procedures for the elderly.	1	2	3	4	5
108. rehabilitation for the elderly.	1	2	3	4	5

COMMENTS/ADDITIONS/DELETIONS

SECTION FOUR: SUMMARY OF ADDITIONAL COMMENTS

The Need: Aging content should be included/manditory in the curriculum; should increase in education programs; gerontological nursing must be made more attractive to nurses-hopefully positive education will do this; critical that students learn the knowledge, skills and attitudes for working with the elderly; not enough time is allotted to aging in nursing programs; if the percentage of aging content in nursing programs was equal to the percentage of aged in the community- that would be an improvement; should be a speciality in nursing as is peds, (etc).

Acute Care of the Elderly: should be a significant session in the curriculum; the hospitalized elderly seem to be the least understood by the medical profession; nurses need to know what happens to the elderly in acute care while awaiting institutional placement.

Definitions: Age 65 does not signify old age; aging should be treated as a process beginning at birth and ending with death; why not use the term 'seniors' rather than 'elderly'-former implies wellness and latter, illness.

The Process: topics are very broken down; this is very subjective - easier to discuss than answer; nicely done questionnaire.

Specific Comments: In using the nursing process and in patient teaching it is important to understand the elderly as individuals and give special consideration related to physiological changes.

Emphasis should be in two main areas: normal aging (to dispel myths that affect treatment) and the unique effects of illness on the elderly (life changes, medications).

This is very important and pertinent research. We need to 1) dispel myths, 2) increase knowledge and understanding 3) improve practice 4) plan for the future- education and service.

Let's not always pull the elderly out as a special group- they have unique needs but also many in common with other ages- we focus too much on their differences.

Ideally all areas mentioned should be covered, however this is not realistic.

Other: must treat the elderly with respect; must assist elderly maintain independence and self esteem; wish we had access to geriatric nurse practitioners; why hasn't the AARN done a position paper on care of the elderly; my answers are based on the lack of skills I see in the nursing home; over and above theory is the importance of a practicum.

Is there anything else you would like to add or comment on with regard to aging in nursing education programs? If so please use this space for that purpose.

Thank you for the time and consideration you have given this study. Your contribution is greatly appreciated.

Please return this questionnaire in the enclosed self-addressed, stamped envelope no later than

Date

Last week the second questionnaire of a study identifying aging content appropriate for nursing education programs in Alberta was mailed to you. If you have already completed and returned this questionnaire, once again my sincere thanks.

If you have not yet returned the questionnaire, please do so as soon as possible. In order to include your views in the results of this second questionnaire and subsequent design of the third, I must receive your completed questionnaire within the next few days. If by some chance you did not receive the second questionnaire or it has been misplaced, please call me right now, collect (0-242-6816) and I will get one in the mail to you today.

Thank you for your continued interest in this study.

Jean Miller

Appendix C

Third Round Questionnaire Materials

Dear :

Thank you for completing the second questionnaire in the study: Aging in Nursing Education. Response to this project continues to be very positive, both in the number of participants and consideration given to the questions. Your continued individual input is most appreciated.

Enclosed is the last questionnaire of this modified Delphi study. This third questionnaire contains feedback of the total group to the second questionnaire items. Based on that information and your own views, you are once again asked to reconsider your previous responses. Through this process, the group will continue to move toward consensus on the relative importance of the items presented.

Results of the second questionnaire are presented in this questionnaire as numerical data as well as a summary of the comments. In compiling our comments I have once again attempted to represent them as accurately as possible and at the same time as concisely as possible. As it is important not to lose your views and ideas, I have included a copy of your original responses. If you feel your view has been lost in the process, please be sure to add it again.

In the previous questionnaires, many of you commented on strategies you would recommend for teaching nursing students about care of the elderly (eg. placement in the curriculum, kinds of clinical experiences). I have saved these comments for this last questionnaire, addressing the question of how best to teach aging in the curriculum in a separate section: Section Four. That section begins with a summary of your comments from both the first and second questionnaires.

In order to compile the final results of this study as soon as possible, I would appreciate you completing this questionnaire at your earliest convenience. Each participant returning this last questionnaire will receive a summary of the results of this study. Please return your completed questionnaire on or no later than March 20, 1987.

I sincerely thank you for your continued support of this project. I recognize the time you are investing in this study is considerable. Your final input is very important to its successful completion.

Sincerely,

Jean Miller, R.N., B.Sc.N.
Instructor
Diploma Nursing Program

JM:pt

QUESTIONNAIRE

AGING
IN
NURSING
EDUCATION

Identification of Core Gerontological Nursing Content Appropriate to Nursing Education in Alberta by Practicing Nurses, Nurse Educators and Nurse Administrators: Using a Modified Delphi Research Method.

PURPOSES:

The purposes of this study are to identify 1) gerontological content for inclusion in nursing education programs in Alberta and 2) the varying points of view among nurses in Alberta regarding that content. As a review of the literature results in extensive lists of recommended gerontological content, which are often incomplete and even contradictory, this study will serve to clarify what is viewed as most important.

DEFINITIONS:

Nursing education program: In keeping with the profession's mandate for the year 2000, this is a program offered through an educational institution granting a degree in nursing and preparing the graduate to write licensing examinations.

Gerontological content or aging content: Knowledge and skills related to care of the elderly in a nursing education program.

Aging: The process of growing old.

Old age: The period of human development from age 65 onward.

The elderly: Persons aged 65 or over.

Normal aging: Changes that occur as a natural result of the passage of time.

Dysfunctional aging: Changes that result from pathology or disease in the aging process.

Interventions: Actions taken by the nurse to assist a client/patient reach a goal: either by doing for, doing with or enabling the person to do.

INSTRUCTIONS:

In this questionnaire you are asked to rate, for the last time, gerontological content in terms of how important you feel it is for inclusion in nursing education programs. This last questionnaire is set up similar to the others: Section One dealing with Normal Aging, Section Two with Dysfunctional Aging and Section Three with Interventions. In each section you are given: 1) a Summary of Comments from the second questionnaire, 2) a list of Consensus Items, 3) Non-consensus Items for re-rating, 4) Additional Items, suggested by the participants, for rating and once again an opportunity for Comments.

In Section Four circle your selection unless otherwise requested. Section Five is a summary of your other comments regarding aging in nursing education programs.

Re-rating of Non-consensus Items:

For each item the percentage of participants choosing each rating has been inserted above the scale and comments included. Compare the total group response with your own: a copy of your previous responses has been included in your package. Examine each item carefully, considering your own view as well as the views of others.

> If your original response **does not fall** in one of the <u>two or three larger</u> percentage groups please select a response that does. If you choose to remain in one of the smaller percentage groups please state your reason(s) for doing so (under COMMENTS).
>
> If your original response **does fall** in one of the <u>two or three</u> larger percentage groups please re-rate the item as to your present view. If you choose to move out of the larger percentage group and into one of the smaller percentage groups, please state your reason(s) for doing so (under COMMENTS).

Rating of Additional Items:

Please rate each content item as to its individual importance for inclusion in nursing education programs by circling the number that represents how important you view it to be.

Please keep in mind that the purpose of this study is to provide focus and clarification regarding what should be included. Therefore in re-rating or rating each item, please be discriminating in your selection.

IN SECTIONS ONE, TWO AND THREE PLEASE BE SURE TO RATE EACH ITEM: BOTH NON-CONSENSUS AND ADDITIONAL

SECTION ONE: NORMAL AGING
(Natural changes resulting from passage of time)

SUMMARY OF COMMENTS

Normal aging: continued to rate as 5's as important in planning (eg. must know intellectual and neurological changes to plan patient teaching); difficult to identify most important; all are important; cannot teach all; all needed for complete assessments; the comment 'applies to a variety of age groups' discounts the elderly have fewer options and less flexibility.

Physio/psycho sociological aspects: am not prepared to sit by and watch 'nursing the whole person' be distributed to other care givers; do not want this to be the domain of others; the comment 'more important for community nursing' is a narrow view of the elderly; must learn to view the whole person - not segments; prefer each body system be under a section on physiology of aging - then I could rate physiology in general, as well as each system; remained in smaller percentage group on items more appropriate for other disciplines, non-specific to aging or irrelevant to understanding the elderly; body systems should carry equal weight - consistent with current research; less researched areas are changing rapidly; shouldn't be taught in other courses.

Comments on additional items: many encompassed in previous items; important as we are increasingly the initial assessor, teacher and patient/family advocate; many can be in support courses or public health input; all important though depth of coverage will vary.

Other: author's note: a number of people said rating depended on length of program, overlap with other disciplines and content of support courses.

CONSENSUS ITEMS:

Consensus has been reached on the following items:

FROM FIRST QUESTIONNAIRE:

Being of 'a great deal'/'utmost' importance:

sensory changes in old age
cardiovascular changes in old age
stress in old age
urinary changes in old age
self concept in old age
cognition in old age
death and dying in old age

FROM SECOND QUESTIONNAIRE:

Being of 'a great deal' of importance:

integumentary changes in old age
musculoskeletal changes in old age
gastrointestinal changes in old age
respiratory changes in old age
neurological changes in old age
endocrine changes in old age
sexual response changes in old age
psychological theories of aging
personality in old age
memory in old age
intelligence in old age
sociological theories of aging
stereotyping of aging
leisure in old age
sleep changes in old age
independence in old age
judgement in old age
family relationships in old age

Being of 'moderate' importance:

demography in old age

NON-CONSENSUS ITEMS:

Please reconsider each statement below and re-rate each in terms of how important you feel the knowledge is for inclusion in nursing programs. Examine each item carefully: comparing the group response with your own as well as considering the comments. Rate each item as outlined in the instructions. Please be discriminating in your responses.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Related to **normal aging**, nurses should have knowledge of:					
	0%	4%	22%	50%	24%
1. physiological theories of aging.....	1	2	3	4	5
Comment: important but actual changes more critical; can be part of support course; interesting but not very important as there's no consensus re: theories; not factual so rated less important.					
	1%	4%	36%	39%	20%
2. myths of aging.....	1	2	3	4	5
Comment: delete, teaching facts more important; include as discussion will dispel myths; important so nurses can affect society's attitudes; include in nursing & psych courses.					
	1%	6%	32%	56%	5%
3. retirement in old age.....	1	2	3	4	5
Comment: ? refers to role change; more important for public health nurse & social worker; type of work & retirement affect one's health; this is a nursing area; should be taken care of before age 65; coordinated by other depts in hospitals; important for preventive health & nursing programs.					

Circle your selection

Degree of importance

	very little	somewhat	moderate	great deal	utmost
4. spirituality in old age.....	0% 1	4% 2	46% 3	44% 4	6% 5
Comment: very important as a concern to the elderly themselves; can be part of psych course; part of holistic health; don't include in psych course as isn't psychological; less important with interdisciplinary care; fits with grieving; with swing to community care, should be included.					
5. ethnicity in old age.....	0% 1	5% 2	44% 3	48% 4	3% 5
Comment: very important as a concern to the elderly themselves; with swing to community care, should be included; important in LTC facilities; more important in US; essential to all nurses.					
6. economics in old age.....	0% 1	4% 2	32% 3	54% 4	10% 5
Comment: very important as a concern to the elderly themselves; with swing to community care, should be included; elderly have a wide diversity of financial constraints; important for community nursing, handled by others in hospitals; basis for most older people's problems - especially women; more important in US.					
7. transportation and aging.....	0% 1	11% 2	47% 3	37% 4	5% 5
Comment: very important as a concern to the elderly themselves; with swing to community care, should be included; focus on its impact on normal aging & needs; unique due to financial & dependency concerns; educate re: transportation system; important for community nursing, handled by others in hospital; more important for social worker in community.					
8. housing and aging.....	0% 1	10% 2	30% 3	52% 4	8% 5
Comment: very important as a concern to the elderly themselves; with swing to community care, should be included; focus on its impact on normal aging & needs; more important for public health and social worker; handled by others in hospital; is a nursing concern.					

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
9. public policies and old age.	0% 1	4% 2	48% 3	31% 4	17% 5
Comment: very important as a concern to the elderly themselves; with swing to community care, should be included; focus on its impact on normal aging & needs; include so nurses can be pt advocates; AARN encourages nurses involvement; essential to understanding fabric of old age; re: pensions, etc.					
10. wellness model of old age.	0% 1	2% 2	15% 3	47% 4	36% 5
Comment: use as framework for normal aging; essential; vague - is it different than for youth? means the same as normal aging? allows for degrees of wellness; important for all age groups.					
11. exercise and aging.	1% 1	4% 2	31% 3	53% 4	11% 5
Comment: part of leisure/cardio-vascular; applies more to rehab & physio.					
12. dentition in old age.	2% 1	6% 2	36% 3	48% 4	8% 5
Comment: part of musculoskeletal/nutrition; should be common sense.					
13. developmental tasks & stages in old age.	1% 1	6% 2	32% 3	40% 4	21% 5
Comment: important so correct therapy can be given; could include loss, roles, relationships; don't understand; part of intelligence/family relationships/personality; not necessary as very psychologically based.					
14. learning capabilities in old age.	0% 1	7% 2	23% 3	50% 4	20% 5
Comment: part of neurological; could be in psychology course; redundant - part of intelligence/memory; part of cognition/personality; not necessary as very psychologically based.					
15. students own beliefs about old age. .	0% 1	6% 2	26% 3	49% 4	19% 5
Comment: who it 'their'? part of wellness model; part of stereo- typing/myths; could be in psychology course; worthwhile to explore but not a major area; part of self concept/sociological theories; very important. Author's note: this item has been clarified.					

Circle your selection

Degree of importance

	very little	some-what	moderate	great deal	utmost
16. peer relationships in old age.	0% 1	5% 2	30% 3	51% 4	14% 5
Comment: delete, applies to social workers/anthropologists; part of sociological theories/self concept/relationships; could be in sociology course.					
17. role changes in old age.	0% 1	3% 2	22% 3	54% 4	21% 5
Comment: part of sociological theories/stress/self concept/relationships; could be in sociology course.					
18. special problems of women in old age.	3% 1	4% 2	31% 3	40% 4	22% 5
Comment: part of several other areas; delete, applies to social workers & anthropologists; could be in sociology course.					
19. losses in old age.	0% 1	3% 2	8% 3	50% 4	39% 5
Comment: part of stress/self concept/family/peer relationships/developmental tasks; delete, applies to social workers & anthropologists, could be in sociology course.					
20. elderly as an untapped resource. . . .	5% 1	9% 2	26% 3	46% 4	14% 5
Comment: essential; part of retirement; if it refers to healthy people would be social worker's area; put with wellness model; focus on positive; could be in sociology course.					
21. educational levels in old age.	5% 1	14% 2	44% 3	33% 4	4% 5
Comment: part of demography/retirement/intelligence; learning abilities more meaningful; nurse must adapt to a wide range of learning styles and needs; don't understand; delete, applies to social workers & anthropologists; could be in sociology course; increasingly important as education level rises.					
22. community resources for the elderly	0% 1	5% 2	20% 3	42% 4	33% 5
Comment: applies to community setting and social workers; important; should have input from elderly; nurse is first line for advice.					

COMMENTS:

ADDITIONAL ITEMS:

Please rate each statement in terms of how important you feel the knowledge is for inclusion in nursing programs. Please be discriminating in your ratings.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Related to **normal aging**, nurses should have knowledge of:					
23. institutional resources for the elderly	1	2	3	4	5
24. special needs of men in old age. . . .	1	2	3	4	5

COMMENTS:

SECTION TWO: DYSFUNCTIONAL AGING
(Changes resulting from pathology or disease in aging)

SUMMARY OF COMMENTS:

Dysfunctional aging: public health nurses can recognize this and intervene to keep the elderly in their homes; in rural/small urban areas the nurse is first to see the elderly's problems; did not change my views.

Normal/dysfunctional aging: yes, these must be integrated; in the wellness model normal aging is a degree of function/impairment; focus on how aging complicates dysfunction, teach pathology separately; focus on prevention/coping skills, not pathology.

On the comment 'these problems are more important to public health': I disagree - all apply to institutions as well as community; hospitalization does not eliminate housing or financial problems; this idea makes discharge planning and meeting community needs difficult; although other disciplines are a resource, nurses must assess these areas accurately; nursing education should emphasize community health; some areas (eg. financial) may be more acute in the community.

Comments on additional items: many include under previous items; some more appropriate to specialization; nursing programs cannot teach everything; all equally important; to give the best care we must learn all aspects of aging.

CONSENSUS ITEMS:

Consensus has been reached on the following items:

FROM THE FIRST QUESTIONNAIRE:

Being of a 'great deal'/'utmost' importance:

sensory problems in old age
elimination problems in old age
sleep problems in old age
emotional problems in old age
nutritional problems in old age
self care problems in old age
medication problems in old age

Being of a 'great deal'/'moderate' importance:

spiritual problems in old age

FROM SECOND QUESTIONNAIRE:

Being of 'utmost' importance:
institutionalization in old age

Being of a 'great deal' of importance:

integumentary problems in old age	housing problems in old age
musculoskeletal problems in old age	substance abuse in old age
respiratory problems in old age	vision problems in old age
cardiovascular problems in old age	independence problems
neurological problems in old age	grieving problems in old age
infection problems in old age	family problems in old age
coping problems associated with loss	physical abuse in old age
pain problems in old age	disease processes in old age
self concept problems in old age	memory problems in old age
cognitive problems in old age	financial problems in old age

impact of physical/mental problems on daily living

NON-CONSENSUS ITEMS

Please reconsider each statement below and re-rate each in terms of how important you feel the knowledge is for inclusion in nursing programs. Examine each item carefully: comparing the group response with your own as well as considering the comments. Rate each item as outlined in the instructions. Please be discriminating in your responses.

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
Related to dysfunctional aging, nurses should have knowledge of:					
25. fluid & electrolyte problems in old age.....	0% 1	0% 2	6% 3	46% 4	48% 5
26. sexual response problems in old age	0% 1	1% 2	42% 3	52% 4	5% 5
Comment: not just a public health concern; a nursing concern - especially in institutions; important item - often ignored; no different from normal aging or middle age; combine with intimacy problems, don't combine with intimacy, they're not the same.					
27. intimacy problems in old age.....	0% 1	0% 2	40% 3	50% 4	10% 5
Comment: as above for sexual response problems.					
28. learning problems in old age.....	1% 1	2% 2	42% 3	48% 4	7% 5
Comment: needed for patient teaching elderly; normal aging content is enough; related to patient teaching & compliance; don't understand; put with memory/cognitive problems; elderly take longer to learn.					

Circle your selection
Degree of importance

	very little	some-what	moderate	great deal	utmost
29. ethical problems of the elderly in old age.	3% 1	2% 2	34% 3	53% 4	8% 5
Comment: nurses have the ethical problems, not the elderly; important for both institutional & community: Codes, privacy, surgery, health care dollars; examining this is judgmental; more community health issue; is it different from other age groups? part of normal aging					
30. transportation problems in old age. .	1% 1	4% 2	52% 3	38% 4	5% 5
Comment: part of normal aging; put with self care/loss; important to public health; not just important for public health - many in institutions never get out; what about getting to Dr.'s appointments?					
31. relocation problems in old age.	0% 1	2% 2	12% 3	39% 4	47% 5
Comment: put with self care/loss/housing/ institutionalization/self concept; should occur before becoming too old and ill; also a LTC problem - on entering & when moving within; families/institutions/community need to work together; important.					
32. hearing problems in old age.	0% 1	1% 2	27% 3	53% 4	19% 5
Comment: part of sensory problems/self care/normal aging; covered in previous items; assessment & referral important.					
33. dentition problems in old age.	1% 1	5% 2	33% 3	52% 4	9% 5
Comment: part of musculoskeletal/sensory/nutrition/self care/normal aging; assessment & referral important.					
34. reversible and irreversible dementia in old age.	0% 1	1% 2	5% 3	51% 4	43% 5
Comment: put with neurological/cognitive; include differentiation from depression.					
35. depression in old age.	0% 1	1% 2	3% 3	51% 4	45% 5
Comment: put with emotional problems/ self concept/developmental/cognitive; why single this one out? more common than realized; differentiate from dementia.					

	Circle your selection Degree of importance very little	somewhat	moderate	great deal	utmost
36. differences in problems between the young-old (65-80) and old-old (80+).	3% 1	4% 2	34% 3	40% 4	19% 5
Comment: don't understand; attitudes & coping skills differ more than age; depends on environmental factors; needs clarification; reinforces stereotyping; aging is different between and within people.					
37. problems related to elderly as an untapped resource.....	6% 1	11% 2	35% 3	41% 4	7% 5
Comment: don't understand; sounds fascinating; put with normal aging; elderly should be an asset rather than a deficit to our economy.					
38. ethical issues around consent or refusal of treatment.....	2% 1	5% 2	25% 3	42% 4	26% 5
Comment: covered with ethical problems; is it different from other adults? consider living wills, no code, refusal of treatment; nursing in excellent position to facilitate discussion.					

COMMENTS:

ADDITIONAL ITEMS:

Please rate each statement in terms of how important you feel the knowledge is for inclusion in nursing programs. Please be discriminating in your ratings.

	Circle your selection Degree of importance very little	somewhat	moderate	great deal	utmost
Related to **dysfunctional aging**, nurses should know about:					
39. endocrine problems in old age.....	1	2	3	4	5

COMMENTS

SECTION THREE: INTERVENTIONS
(Nursing actions that assist the client patient reach a goal)

SUMMARY OF COMMENTS:

Interventions: persons believing these are best handled by other disciplines will let the 'nurse' become extinct; nurses should be taught holistic care and not give aspects to other disciplines; nurses should be leaders in assessing needs and accessing resources; perceptions of importance may be 'muddied' by confusing nursing interventions with those of other disciplines; rated lower than before; with thorough preparation in normal aging, these will develop with experience.

Comments on additional items: nurse must be knowledgable about all; nurse may need to implement these; some handled by other disciplines; nurses must refer to ensure all these are met; important in post-grad, not basic education; these are redundant; acute care staff unprepared to deal with complex problems of the elderly - realistic care planning eseential.

CONSENSUS ITEMS:

Consensus has been reached on the following items:

FROM FIRST QUESTIONNAIRE:

Being of a 'great deal'/'utmost' importance:

communicating information on aging
elimination interventions
medication problems interventions
pain management interventions
orientation interventions
referral to community resources
locate and use information on aging
interventions to deal with relocation
skin care interventions
safety interventions
self care interventions
sleep promotion interventions
discharge planning
work as a team member
mobility interventions
assessment of the elderly
interventions to deal with death and dying

FROM SECOND QUESTIONNAIRE:

Being of 'utmost' importance:

advocacy interventions for the elderly

Being of a 'great deal' of importance:

stress management interventions
recognition of research areas
respiratory interventions
cardiovascular interventions
interventions for dealing with family
ethical issue interventions
nutritional interventions
participation in research
self concept interventions
exercise interventions
prevention of physical/mental problems
interventions to deal with the confused elderly

NON-CONSENSUS ITEMS

Please reconsider each statement below and re-rate each in terms of how important you feel the knowledge is for inclusion in nursing programs. Examine each item carefully: comparing the group response with your own as well as considering the comments. Rate each item as outlined in the instructions. Please be discriminating in your responses.

Circle your selection
Degree of importance

	very little	some-what	moderate	great deal	utmost
Nurses should be able to **implement:**					
40. interventions to deal with infections in the elderly.....	0% 1	1% 2	15% 3	40% 4	44% 5
Comment: applies to all age groups; covered in other courses; emphasize those unique to elderly; assessment important. Author's note: percentages on second questionnaire were incorrect.					
41. interventions to maintain fluid and electrolyte balance in the elderly...	0% 1	0% 2	9% 3	44% 4	47% 5
Comment: assessment important; disagree other disciplines responsible.					
42. interventions to meet sexuality needs of the elderly.....	0% 1	5% 2	52% 3	37% 4	6% 5
Comment: disagree other disciplines responsible; included but not high priority; somewhat important; depending on the situation, nurse should know; interesting; part of holistic care; nurses need this knowledge; include respect & privacy.					
43. interventions to meet intimacy needs of the elderly.....	0% 1	2% 2	38% 3	50% 4	10% 5
Comment: rated higher than sexual; somewhat important; these needs do exist for elderly; interesting; disagree other disciplines responsible; consider respect & privacy.					
44. communication interventons with the elderly.....	0% 1	1% 2	11% 3	44% 4	44% 5
Comment: nursing responsibility; disagree other disciplines responsible; affects all care of elderly & family; essential skills; make a separate course.					

	Circle your selection Degree of importance				
	very little	some-what	moderate	great deal	utmost
45. interventions to meet learning needs of the elderly.	0% 1	4% 2	49% 3	36% 4	11% 5
Comment: nursing responsibility; disagree other disciplines responsible; health teaching involves (and relies on knowing) learning needs; best handled by social worker.					
46. interventions to meet spiritual needs of the elderly.	0% 1	1% 2	58% 3	34% 4	7% 5
Comment: nursing responsibility; becomes more important with increasing age; pastoral care.					
47. hearing aid care for the elderly.	3%	12%	38%	34%	13%
Comment: part of self care/sensory needs; leave to hearing aid people.					
48. footcare for the elderly.	0% 1	6% 2	32% 3	44% 4	18% 5
Comment: utmost importance; part of mobility/skin care; podiatrist best resource; nurses should teach, supervise foot care.					
49. dental care for the elderly.	1% 1	16% 2	34% 3	38% 4	11% 5
Comment: assessment important; part of nutrition; nurses should be aware of need and resources; leave to denturist; teaching important.					
50. emotional support for the elderly. . . .	1% 1	2% 2	14% 3	49% 4	35% 5
Comment: related to self concept/validation therapy/communication; vague.					
51. validation therapy (80-100 yrs old). . .	0% 1	5% 2	29% 3	46% 4	20% 5
Comment: is this part of orientation? useful for any aged elderly; if use, take a course; not sure what it is; no - not the therapy itself, just the underlying theory - along with psychological theories; should be familiar with it.					

Circle your selection
Degree of importance

	very little	some-what	moderate	great deal	utmost
52. interventions to deal with the negative impact of ethical & sociological family issues.	2% 1	4% 2	33% 3	46% 4	15% 5
Comment: related to stress, applies more to social worker/religious leader; unclear; recognition & referral important; useful for inservice but not basic education; not ethical to intervene; important, relates to discharge planning.					
53. advocacy for family caregivers.	0% 1	4% 2	31% 3	43% 4	22% 5
Comment: part of advocacy; put 'appropriate' before item; along with other disciplines; social worker; more important in public health; important, relates to discharge planning.					
54. family interviewing skills.	0% 1	5% 2	20% 3	52% 4	23% 5
Comment: family important part of patient; a priority; part of general interviewing skills/family interventions; important for public health; important; relates to discharge planning.					
55. principles related to group work with the elderly.	3% 1	7% 2	41% 3	42% 4	7% 5
Comment: part of communications; especially for public health; assisted by other disciplines; useful for inservice, not basic education; apply principles for any group & consider physical limitation; familiarity only.					
56. guardianship procedures for the elderly.	4% 1	12% 2	45% 3	28% 4	11% 5
Comment: legal area, knowledge of procedure good but leave to authority; nurse should be able to implement & understand; to assist others/mediate only; social worker area.					
57. rehabilitation for the elderly.	1% 1	4% 2	22% 3	44% 4	29% 5
Comment: part of self care/discharge planning; need working knowledge; area of rehap, physio, ot; too broad a category.					

COMMENTS:

SECTION FOUR: STRATEGIES FOR TEACHING AGING IN NURSING EDUCATION PROGRAMS

In this section, consider strategies (teaching/learning approaches) appropriate for assisting nursing students learn about care of the elderly. Read the summary of comments, then respond to each item as directed.

SUMMARY OF COMMENTS:

Compulsory/elective study: If aging isn't in the curriculum it should be a highly suggested elective; should be compulsory, not elective.

Integrated/separate course: should be a separate course like peds; separate from regular med/surg disease lectures; integration won't be adequate to overcome negative attitudes; integrate, as is part of human development continum; include normal assessment and aging in all nursing subjects; integrated concepts get 'lost in the shuffle'.

Beginning/end of program: should be early in nursing program.

Knowledge/practice components: practice important for applying knowledge; theory very important and a practicum is necessary.

Well/ill elderly: students should communicate with a well elderly person they know; clinical experience in long term care facility may attract more nurses to the field; should work with well and ill both; experience with well more important; should work with well before ill.

Other: communication with other disciplines important; should be a specialty beyond basic nursing education; involve seniors in the course.

For questions 58 through 64, complete the sentences by circling one choice and providing rationale for your selection.

58. "In my view, aging in nursing education programs (as defined in this study) should be:

    1. COMPULSORY STUDY FOR ALL STUDENTS"
    2. ELECTIVE STUDY FOR STUDENTS WITH AN INTEREST IN THE AREA"

    Rationale:

59. "In my view, aging in nursing education programs (as defined in this study) should be:

    1. INTEGRATED INTO THE ALREADY EXISTING NURSING COURSES"
    2. A SEPARATE NURSING COURSE"

    Rationale:

60. "In my view, care of the elderly should be addressed:

    1. NEAR THE BEGINNING OF THE NURSING PROGRAMS"
    2. TOWARD THE END OF NURSING PROGRAMS"

    Rationale:

61. "When it comes to the relative importance of the knowledge component vs the practice component of aging in the curriculum I feel the:

    1. KNOWLEDGE COMPONENT IS THE MOST IMPORTANT"
    2. PRACTICE COMPONENT IS THE MOST IMPORTANT"
    3. THEY ARE OF EQUAL IMPORTANCE"

    Rationale:

62. "When learning to care for the elderly, in my view, nursing students should have practice experiences with the:

    1. WELL ELDERLY **ONLY**"
    2. ILL ELDERLY **ONLY**"
    3. WELL AND ILL ELDERLY **BOTH**"

    Rationale:

63. "When learning to care for the elderly, in my view, nursing students should **initially** look after those who are:

    1. WELL
    2. ILL

    Rationale:

64. What other strategies would you suggest be used in nursing education programs for teaching nursing students about care of the elderly?

    Strategy: **Rationale:**

SECTION FIVE: SUMMARY OF OTHER COMMENTS

The Need: important as RN exams focus on geriatrics; important, given the number of elderly patients; nurses must be prepared for aging population.

Acute Care of the Elderly: endorse comments; with more diagnosis, treatment and rehab, discharge to community can occur.

Definitions: must distinguish elderly from old-old as many 70 year olds don't belong on questionnaire and seniors sometimes recognized at age 55; why do some believe 'elderly' implies 'illness'?

The Process: additional items interesting - agree with most; comprehensive curriculum if all areas included; appreciate feedback - nice we're in agreeance; didn't change my views; thanks for opportunity to participate; well done project; impressed with follow-up - it measures one's own thoughts; incorporation of my views appreciated; interesting process for curriculum development - learned from it; difficult to compare with previous responses as order of items changed.

Specific Comments: We need an excellent knowledge base, but can't be experts in all areas.

We're becoming more self-directed, leaving the role of physician's handmaiden behind. We must assertively grasp the 'new role' of health teacher, guide and supporter for patient and family, in health, illness, institution and community - a challenging role requiring study and commitment to holistic rather than fragmented care and knowledge.

If we see the bedside as the nurses only responsibility we'll fade into oblivion as a profession. Nurses must acquire leadership skills. Other disciplines won't see us as credible if we're content to be only the pill carrier. Education is the key to successful care giving and nursing is at the heart of caring.

If I work in an institution don't isolate me from the community!!

Content should be addressed using the nursing process.

I like the wide spectrum: both physical and social assessment skills. The latter are as important to all nurses as knowing how to take a BP.

As costs rise community focus will increase - content should reflect this.

Must stress individuality, which becomes more marked with age.

Prevention of illness and maintenance of health should be our focus.

Other: A better educated nurse can better educate the public; the elderly are a special group in our youth oriented society; seniors need access to pets for emotional support; public health is now called community health; geriatric nursing is very specialized - need post-grad programs.

Is there anything else you would like to add or comment on with regard to aging in nursing education programs? If so please use this space for that purpose.

Thank you for the time and consideration you have given this study. Your contribution is greatly appreciated.

Please return this questionnaire in the enclosed self-addressed, stamped envelope no later than

Date

Last week the final questionnaire of the study: Aging in Nursing Education was mailed to you. If you have already completed and returned this questionnaire, once again my sincere thanks. A summary of the results of this study will be sent to you.

If you have not yet returned the questionnaire, please do so as soon as possible. In order to finalize the results of this study and forward that summary to you, I must receive your completed questionnaire within the next few days. If by some chance you did not receive the last questionnaire or it has been misplaced, please call me right now, collect (0-242-6816) and I will get one in the mail to you today.

Thank you for your continued interest in this study. Your individual input into this last questionnaire is very important to its successful completion.

Jean Miller

Appendix D

Aging Content Items Ordered By Medians - Total Participants Group

AGING CONTENT ITEMS ORDERED BY MEDIANS: TOTAL PARTICIPANT GROUP

* non-consensus items

	ITEM	MEDIAN
1	Work as member of interdisciplinary team	4.890
2	Assessment of the elderly	4.856
3	Medication interventions	4.766
4	Medication problems	4.750
5	Safety interventions	4.708
6	Institutionalization	4.669
7	Self care interventions	4.654
8	Fluid and electrolyte interventions	4.631
9	Communication interventions	4.594
10	Fluid and electrolyte problems	4.558
11	Referral to community resources	4.537
12	Self care problems	4.530
13	Advocacy interventions	4.527
14	Relocation problems	4.507 *
15	Communicate information on aging	4.492
16	Locate and use information on aging	4.475
17	Discharge planning	4.464
18	Death and dying in old age	4.427
19	Pain management interventions	4.418
20	Sensory changes	4.379
21	Sensory problems	4.350
22	Sleep promotion interventions	4.338
23	Nutritional problems	4.331
24	Infection interventions	4.331 *
25	Death and dying interventions	4.306
26	Nutritional interventions	4.270
27	Interventions for confused	4.267
28	Stress in old age	4.246
29	Pain problems	4.244
30	Relocation interventions	4.230
31	Self-concept in old age	4.224
32	Skin care interventions	4.216
33	Urinary changes	4.216
34	Depression in old age	4.216
35	Neurological changes	4.215
36	Elimination interventions	4.203
37	Elimination problems	4.197
38	Substance abuse problems	4.194
39	Coping problems associated with loss	4.190
40	Reversible and irreversible dementia	4.178
41	Sleep problems in old age	4.173
42	Self-concept interventions	4.165
43	Impact of physical & mental problems	4.159
44	Prevention of physical & mental problems	4.157
45	Community resources for elderly	4.157

Total Participant Group -page 2

46	Musculoskeletal changes	4.156
47	Cardiovascular changes	4.153
48	Gastrointestinal changes	4.151
49	Respiratory changes	4.146
50	Wellness model of aging	4.138
51	Orientation interventions	4.134
52	Cognition in old age	4.123
53	Integumentary changes	4.117
54	Losses in old age	4.115
55	Cardiovascular problems	4.114
56	Self-concept problems	4.111
57	Mobility interventions	4.110
58	Memory in old age	4.097
59	Neurological problems	4.091
60	Emotional support	4.089
61	Cognitive problems	4.071
62	Endocrine changes	4.069
63	Recognition of research areas	4.067
64	Family relationships in old age	4.060
65	Independence in old age	4.056
66	Independence problems	4.052
67	Memory problems	4.047
68	Emotional problems	4.041
69	Family interviewing skills	4.027
70	Stress management interventions	4.026
71	Musculoskeletal problems	4.020
72	Respiratory problems	4.018
73	Grieving problems	4.016
74	Rehabilitation	4.015
75	Cardiovascular interventions	4.009
76	Interventions to deal with the family	4.006
77	Participation in research	4.006
78	Ethical issues around consent & refusal to treatment	3.981
79	Sexual response changes	3.978
80	Sleep changes in old age	3.978
81	Infection problems	3.967
82	Intelligence in old age	3.964
83	Integumentary problems	3.959
84	Psychological theories	3.952
85	Students' own beliefs about aging	3.946
86	Hearing problems	3.945
87	Vision problems	3.944
88	Respiratory interventions	3.941
89	Personality in old age	3.938
90	Role changes in old age	3.926
91	Family problems	3.925
92	Disease processes in old age	3.914
93	Validation therapy	3.894
94	Footcare	3.894

Total Participant Group - page 3

95	Advocacy for family care givers	3.891	
96	Physical abuse in old age	3.887	
97	Ethical issue interventions	3.886	
98	Physiological theories of aging	3.879	
99	Exercise in old age	3.874	
100	Stereotyping in old age	3.870	
101	Intimacy need interventions	3.868	
102	Special problems of women in old age	3.864	
103	Learning capabilities	3.859	
104	Developmental tasks and stages	3.856	
105	Exercise interventions	3.851	
106	Sociological theories	3.843	
107	Dentition problems in old age	3.841	
108	Intimacy problems in old age	3.821	
109	Elderly as an untapped resource	3.821	*
110	Peer relationships in old age	3.808	
111	Institutional resources for elderly	3.807	
112	Negative impact of ethical/sociological family issues	3.807	
113	Economics in old age	3.805	
114	Dentition in old age	3.798	
115	Financial problems	3.798	
116	Judgement in old age	3.789	
117	Retirement in old age	3.782	
118	Differences in problems between young old/old & old/old	3.782	
119	Leisure in old age	3.780	
120	Learning problems in old age	3.779	
121	Sexual problems in old age	3.776	*
122	Dental care	3.772	
123	Housing and aging	3.766	
124	Ethical problems in old age	3.755	*
125	Myths of aging	3.689	*
126	Endocrine problems in old age	3.680	*
127	Housing problems	3.676	
128	Principles related to group work	3.674	*
129	Untapped resource problems	3.585	
130	Hearing aid care	3.557	*
131	Ethnicity in old age	3.534	*
132	Spiritual problems	3.515	
133	Special problems of men in old age	3.508	*
134	Spirituality in old age	3.331	
135	Learning need interventions	3.289	
136	Sexual need interventions	3.283	
137	Transportation problems in old age	3.280	
138	Public policies in old age	3.258	
139	Spiritual need interventions	3.227	
140	Transportation and aging	3.213	
141	Demography in old age	3.119	
142	Guardianship procedures	3.106	
143	Educational levels in old age	3.029	

Appendix E

Aging Content Items Ordered By Medians - Sub-groups

AGING CONTENT ITEMS ORDERED BY MEDIANS: NURSE EDUCATORS

	ITEM	MEDIAN
1	Work as member of interdisciplinary team	4.896
2	Assessment of the elderly	4.856
3	Medication interventions	4.821
4	Self care interventions	4.817
5	Safety interventions	4.788
6	Medication problems in old age	4.708
7	Communicate information on aging	4.694
8	Locate and use information on aging	4.636
9	Fluid and electrolyte interventions	4.600
10	Self care problems in old age	4.581
11	Death and dying in old age	4.550
12	Sleep promotion interventions	4.550
13	Communication interventions	4.536
14	Skin care interventions	4.534
15	Pain management interventions	4.517
16	Sensory problems in old age	4.517
17	Referral to community resources	4.500
18	Institutionalization	4.478
19	Fluid and electrolyte problems	4.457
20	Neurological changes	4.407
21	Urinary changes in old age	4.405
22	Cardiovacular changes	4.375
23	Elimination interventions	4.354
24	Relocation problems	4.340
25	Gastrointestinal changes	4.339
26	Nutritional problems in old age	4.333
27	Sensory changes in old age	4.326
28	Discharge planning	4.326
29	Respiratory changes	4.323
30	Mobility interventions	4.320
31	Musculoskeletal changes	4.317
32	Integumentary changes	4.304
33	Elimination problems	4.300
34	Stress in old age	4.273
35	Advocacy interventions	4.235
36	Pain problems in old age	4.234
37	Endocrine changes	4.232
38	Sleep problems in old age	4.232
39	Infection interventions	4.231
40	Nutritional interventions	4.188
41	Cardiovascular problems	4.186
42	Wellness model aging	4.176
43	Interventions for the confused	4.172
44	Depression in old age	4.171
45	Self concept in old age	4.167
46	Neurological problems	4.157
47	Orientation interventions	4.150

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48	Self-concept interventions	4.125
49	Prevention of physical & mental problems	4.121
50	Coping problems associated with loss	4.117
51	Losses in old age	4.115
52	Cognition in old age	4.114
53	Death and dying interventions	4.100
54	Reversible and irreversible dementia	4.100
55	Substance abuse problems	4.097
56	Memory changes	4.083
57	Cardiovascular interventions	4.075
58	Musculoskeletal problems	4.074
59	Impact of physical and mental problems	4.069
60	Sexual response changes	4.065
61	Relocation interventions	4.056
62	Community resources for elderly	4.043
63	Rehabilitation	4.042
64	Respiratory problems	4.039
65	Emotional Support	4.037
66	Family relationships in old age	4.036
67	Integumentary problems	4.030
68	Recognition of research areas	4.029
69	Self concept problems	4.024
70	Independence in old age	4.019
71	Sleep changes in old age	4.015
72	Respiratory interventions	4.012
73	Personality in old age	4.000
74	Infection problems in old age	4.000
75	Intelligence in old age	3.985
76	Participate in research	3.985
77	Psychological theories of aging	3.984
78	Independence problems	3.984
79	Ethical issue interventions	3.984
80	Cognitive problems	3.983
81	Emotional problems in old age	3.983
82	Stress management interventions	3.971
83	Family interviewing skills	3.967
84	Memory problems in old age	3.953
85	Family problems	3.938
86	Developmental tasks and stages	3.929
87	Hearing problems	3.923
88	Role changes in old age	3.915
89	Ethical issues around consent & refusal to treatment	3.912
90	Grieving problems	3.900
91	Validation therapy	3.895
92	Footcare	3.895
93	Stereotyping	3.893
94	Students' own beliefs about aging	3.892
95	Exercise interventions	3.889
96	Physical abuse in old age	3.871

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97	Vision problems	3.865
98	Special problems of women in old age	3.865
99	Exercise in old age	3.861
100	Learning capabilities	3.859
101	Intimacy need interventions	3.859
102	Interventions to deal with family	3.857
103	Sociological theories of aging	3.844
104	Institutional resources for the elderly	3.839
105	Physiological theories of aging	3.833
106	Leisure in old age	3.828
107	Disease processes in old age	3.810
108	Peer relationships in old age	3.806
109	Elderly as an untapped resource	3.800
110	Dentition in old age	3.800
111	Differences in problems between young/old & old/old	3.790
112	Intimacy problems in old age	3.784
113	Dentition problems in old age	3.778
114	Dental care	3.757
115	Sexual Response problems in old age	3.750
116	Advocacy for family care givers	3.743
117	Ethical problems in old age	3.742
118	Learning problems in old age	3.735
119	Retirement in old age	3.735
120	Economics in old age	3.735
121	Negative impact of ethical/sociological family issues	3.729
122	Principles related to group work	3.721
123	Spiritual problems in old age	3.707
124	Judgment in old age	3.704
125	Myths of aging	3.672
126	Housing and aging	3.661
127	Endocrine problems in old age	3.646
128	Financial problems in old age	3.635
129	Hearing aid care	3.574
130	Special problems of men in old age	3.540
131	Housing problems in old age	3.479
132	Learning need interventions	3.462
133	Ethnicity in old age	3.420
134	Spirituality in old age	3.400
135	Untapped resource problems	3.357
136	Spiritual need interventions	3.339
137	Sexual need interventions	3.318
138	Transportation and aging	3.210
139	Public policies in old age	3.206
140	Transportation problems in old age	3.167
141	Educational levels in old age	3.063
142	Demography of aging	3.093
143	Guardianship procedures	2.986

AGING CONTENT ITEMS ORDERED BY MEDIANS: ADMINISTRATORS

	ITEM	MEDIAN
1	Work as member of interdisciplinary team	4.878
2	Assessment of the elderly	4.843
3	Medication problems in old age	4.750
4	Institutionalization	4.704
5	Communication interventions	4.680
6	Medication interventions	4.648
7	Advocacy interventions	4.625
8	Safety interventions	4.615
9	Fluid and electrolyte problems	4.609
10	Death and dying interventions	4.542
11	Self care interventions	4.500
12	Relocation problems	4.471
13	Fluid and electrolyte interventions	4.469
14	Referral to community resources	4.423
15	Death and dying in old age	4.375
16	Self care problems in old age	4.375
17	Interventions for the confused	4.350
18	Communicate information on aging	4.342
19	Infection interventions	4.325
20	Discharge planning	4.324
21	Coping problems with loss	4.320
22	Self concept in old age	4.300
23	Nutritional problems in old age	4.294
24	Depression in old age	4.280
25	Relocation interventions	4.278
26	Sleep promotion interventions	4.265
27	Sensory problems in old age	4.265
28	Nutritional interventions	4.238
29	Pain management interventions	4.238
30	Self concept problems	4.212
31	Locate and use information on aging	4.208
32	Self-concept interventions	4.188
33	Reversible and irreversible dementia	4.185
34	Pain problems in old age	4.173
35	Orientation interventions	4.167
36	Community resources for elderly	4.160
37	Sleep problems	4.159
38	Losses in old age	4.141
39	Prevention of physical & mental problems	4.138
40	Impact of physical & mental problems	4.120
41	Sensory changes in old age	4.119
42	Urinary changes in old age	4.119
43	Independence problems in old age	4.104
44	Substance abuse problems	4.096
45	Stress in old age	4.091
46	Wellness model of aging	4.083
47	Grieving problems	4.074
48	Memory changes	4.067

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49	Elimination problems in old age	4.063
50	Recognition of research areas	4.058
51	Mobility interventions	4.056
52	Neurological changes	4.045
53	Emotional support	4.044
54	Cognitive problems	4.034
55	Stress management interventions	4.033
56	Cognition in old age	4.022
57	Emotional problems	4.021
58	Interventions to deal with family	4.000
59	Ethical issues around consent & refusal to treatment	4.000
60	Memory problems	3.984
61	Integumentary changes	3.984
62	Family relationships	3.983
63	Independence in old age	3.980
64	Cardiovascular problems	3.970
65	Respiratory changes	3.969
66	Musculoskeletal changes	3.968
67	Family interviewing skills	3.966
68	Elimination interventions	3.958
69	Skin care interventions	3.955
70	Intimacy need interventions	3.953
71	Role changes in old age	3.943
72	Neurological problems	3.939
73	Gastrointestinal changes	3.931
74	Cardiovascular changes	3.929
75	Advocacy for family care givers	3.926
76	Participate in research	3.920
77	Musculoskeletal problems	3.917
78	Respiratory problems	3.914
79	Cardiovascular interventions	3.914
80	Endocrine changes	3.906
81	Psychological theories of aging	3.906
82	Negative impact of ethical/sociological family issues	3.900
83	Students' own beliefs about aging	3.897
84	Intimacy problems in old age	3.891
85	Rehabilitation	3.889
86	Sociological theories of aging	3.885
87	Sexual response changes	3.879
88	Hearing problems	3.875
89	Infection problems	3.873
90	Physiological theories of aging	3.871
91	Vision problems	3.870
92	Personality in old age	3.855
93	Integumentary problems	3.845
94	Learning capabilities	3.833
95	Elderly as an untapped resource	3.828
96	Exercise in old age	3.828
97	Intelligence in old age	3.827

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98	Disease processes in old age	3.820
99	Exercise interventions	3.817
100	Family problems	3.815
101	Economics in old age	3.804
102	Peer relationships in old age	3.804
103	Ethical problems in old age	3.804
104	Ethical issue interventions	3.795
105	Sleep changes in old age	3.792
106	Respiratory interventions	3.783
107	Validation therapy	3.783
108	Financial problems in old age	3.778
109	Sexual response problems in old age	3.769
110	Stereotyping in old age	3.765
111	Leisure in old age	3.750
112	Dentition problems in old age	3.750
113	Footcare	3.750
114	Housing and aging	3.750
115	Retirement in old age	3.741
116	Dentition in old age	3.731
117	Judgment in old age	3.727
118	Special problems of women in old age	3.720
119	Physical abuse in old age	3.694
120	Differences in problems between young/old old & old/old	3.667
121	Dental care	3.659
122	Housing problems in old age	3.646
123	Institutional resources for elderly	3.618
124	Developmental tasks and stages	3.614
125	Learning problems in old age	3.600
126	Untapped resource problems	3.575
127	Principles related to group work	3.571
128	Myths of aging	3.571
129	Ethnicity in old age	3.429
130	Hearing aid care	3.386
131	Spiritual problems in old age	3.381
132	Endocrine problems in old age	3.375
133	Sexual need interventions	3.280
134	Public policies in old age	3.280
135	Special problems of men in old age	3.250
136	Transportation problems in old age	3.229
137	Spirituality in old age	3.222
138	Guardianship procedures	3.190
139	Learning need interventions	3.183
140	Spiritual need interventions	3.183
141	Demography of aging	3.125
142	Transportation and aging	3.089
143	Educational levels in old age	3.000

AGING CONTENT ITEMS ORDERED BY MEDIANS: PRACTICING NURSES

	ITEM	MEDIAN
1	Work as member of interdisciplinary team	4.894
2	Assessment of the elderly	4.867
3	Medication interventions	4.788
4	Medication problems in old age	4.788
5	Institutionalization	4.779
6	Fluid and electrolyte interventions	4.750
7	Safety interventions	4.686
8	Relocation problems	4.661
9	Discharge planning	4.652
10	Advocacy interventions	4.630
11	Referral to community resources	4.625
12	Fluid and electrolyte problems	4.603
13	Self care problems in old age	4.581
14	Communication interventions	4.574
15	Self care interventions	4.550
16	Locate and use information on aging	4.534
17	Pain management interventions	4.479
18	Relocation interventions	4.444
19	Infection interventions	4.440
20	Substance abuse problems	4.435
21	Nutritional interventions	4.429
22	Nutritional problems in old age	4.354
23	Stress in old age	4.352
24	Death and dying interventions	4.350
25	Communicate information on aging	4.345
26	Death and dying in old age	4.341
27	Interventions for the confused	4.326
28	Pain problems in old age	4.317
29	Impact of physical and mental problems	4.315
30	Community resources for the elderly	4.293
31	Elimination interventions	4.288
32	Reversible and irreversible dementia	4.265
33	Sensory problems in old age	4.261
34	Sensory changes in old age	4.260
35	Prevention of physical and mental problems	4.229
36	Neurological changes	4.227
37	Self concept in old age	4.224
38	Elimination problems in old age	4.222
39	Sleep promotion interventions	4.217
40	Cognition in old age	4.214
41	Depression in old age	4.214
42	Memory problems in old age	4.203
43	Emotional support	4.189
44	Self concept interventions	4.188
45	Musculoskeletal changes	4.186
46	Cardiovascular problems	4.182
47	Cognitive problems	4.182
48	Gastrointestinal changes	4.181

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49	Family relationships	4.173
50	Neurological problems	4.167
51	Coping with loss	4.156
52	Interventions to deal with family	4.155
53	Independence in old age	4.155
54	Respiratory changes	4.153
55	Family interviewing skills	4.149
56	Wellness model of aging	4.147
57	Skin care interventions	4.143
58	Self concept problems	4.141
59	Urinary changes in old age	4.140
60	Memory changes	4.136
61	Cardiovascular changes in old age	4.133
62	Sleep problems in old age	4.120
63	Recognition of research areas	4.117
64	Disease processes in old age	4.111
65	Emotional problems in old age	4.109
66	Participate in research	4.107
67	Grieving problems	4.094
68	Orientation interventions	4.093
69	Losses in old age	4.092
70	Respiratory problems	4.090
71	Integumentary changes	4.086
72	Endocrine changes	4.085
73	Sleep changes in old age	4.081
74	Rehabilitation	4.079
75	Independence problems	4.078
76	Stress management interventions	4.078
77	Vision problems	4.063
78	Infection problems	4.059
79	Musculoskeletal problems	4.056
80	Intelligence in old age	4.042
81	Students' own beliefs about aging	4.042
82	Ethical issues around consent & refusal to treatment	4.041
83	Cardiovascular interventions	4.025
84	Family problems	4.018
85	Physical abuse in old age	4.016
86	Hearing problems	4.012
87	Respiratory interventions	3.988
88	Footcare	3.988
89	Integumentary problems	3.986
90	Sexual response changes	3.983
91	Advocacy for family care givers	3.978
92	Psychological theories of aging	3.967
93	Mobility interventions	3.967
94	Validation therapy	3.961
95	Special problems of women in old age	3.959
96	Personality in old age	3.955
97	Stereotyping in old age	3.955

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98	Dentition problems in old age	3.944
99	Developmental tasks and stages	3.932
100	Financial problems in old age	3.931
101	Judgment in old age	3.926
102	Physiological theories of aging	3.925
103	Role changes in old age	3.923
104	Learning problems in old age	3.921
105	Exercise in old age	3.917
106	Ethical issue interventions	3.891
107	Institutional resources for the elderly	3.889
108	Learning capabilities	3.882
109	Endocrine problems in old age	3.879
110	Economics in old age	3.868
111	Dental care	3.864
112	Housing and aging	3.859
113	Housing problems in old age	3.852
114	Retirement in old age	3.850
115	Differences in problems between young/old & old/old	3.843
116	Dentition in old age	3.842
117	Exercise interventions	3.839
118	Elderly as an untapped resource	3.838
119	Peer relationships in old age	3.814
120	Sexual response problems in old age	3.806
121	Negative impact of ethical/sociological family issues	3.806
122	Intimacy need interventions	3.800
123	Sociological theories of aging	3.800
124	Intimacy problems in old age	3.797
125	Myths of aging	3.781
126	Untapped resource problems	3.750
127	Leisure in old age	3.750
128	Ethical problems in old age	3.726
129	Special problems of men in old age	3.704
130	Ethnicity in old age	3.694
131	Principles related to group work	3.694
132	Hearing aid care	3.667
133	Transportation problems in old age	3.463
134	Spiritual problems in old age	3.400
135	Spirituality in old age	3.362
136	Transportation and aging	3.333
137	Public policies in old age	3.297
138	Learning need interventions	3.250
139	Sexual need interventions	3.250
140	Guardianship procedures	3.176
141	Spiritual need interventions	3.171
142	Demography of aging	3.138
143	Educational levels in old age	3.026