

A DESCRIPTION OF PROFESSIONAL PREPARATION
PRACTICE RESPONSIBILITIES AND
JOB SATISFACTION AMONG
OCCUPATIONAL HEALTH NURSES

by

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CHAPTER I

Introduction

Employers are paying nearly one-half of the nation's health care bills (Berry, 1981). Insurance, absenteeism, employee replacement and training lost through illness add to employers' burden of high health care costs through increased payment and premiums as well as decreased productivity which affects profit. These costs also contribute to the continuing, overall increase in health care costs in the U.S. Healthy employees and programs that promote their health can help reduce the trend of increased costs and decreased productivity. Employees are a company's greatest asset and deserve a health maintenance effort greater than that for equipment (Berry, 1981). One major way of achieving this effort is through the delivery of occupational health nursing services. The occupational health nurse is in a unique position to facilitate keeping employees healthy.

The role of the occupational health nurse in recent years has expanded rapidly to include a focus on health promotion, maintenance, and restoration of health (AAOHN, 1988). Occupational health nursing now focuses more on the preventive approach to health care, which includes early disease detection, health teaching, and counseling within the employee population. The occupational health nurse is accountable

for the nursing care provided to the employee while at the same time maintaining accountability to the employer.

The role of the occupational health nurse is complex. Because of the demands of this role, occupational health nursing has been designated as a specialty area of practice by the National Federation for Specialty Nursing Organizations (1987). Such specialty emphasis requires adequate preparation to provide the necessary evidence to the employer and employee that a nurse who claims to be a specialist does indeed have expertise in the field (Lewis, 1984).

To be considered a specialist by the American Nurses' Association (ANA), one must have at least a master's degree in nursing science and be certified or eligible for certification by a professional society. However, there is inconsistency among professional organizations themselves in terms of specialty preparation requirements.

The American Association of Occupational Health Nurses (AAOHN), at present, differs with the ANA definition of specialty preparation and endorses a baccalaureate degree as appropriate for entry into practice within the specialty of occupational health nursing (AAOHN News, 1986). These differences need to be addressed within the context of the understanding that nursing is continually evolving and striving for professional excellence. Therefore, the ANA definition of specialty preparation will be endorsed for the purposes of this study.

Using this standard of specialty preparation in occupational health nursing, there appears to be a deficiency within the occupational setting in meeting the criteria of a masters degree. The most recent membership profile of the American Association of Occupational Health

Nurses reveals that the majority of practicing occupational nurses lack the requirements as outlined by ANA for specialty practice. Of 9,707 occupational health nurses, 15% were prepared initially at the associate degree level, 64% at the diploma level, and 21% at the baccalaureate or higher degree level. At present, specialty preparation in occupational health nursing at the graduate level represents less than 0.5% of all occupational health nurses in practice (Bernhardt, 1986). Moreover, 77% hold no certification in this or any other specialty. It is apparent from these data that few occupational health nurses have entered this field prepared for the complex role required in the industrial or business work setting. Traditionally, nurses unprepared in occupational health have obtained specialized skills in an on-the-job format.

The diffuse range of activities that an occupational health nurse now performs coupled with inadequate preparation for these activities may cause frustration and ineffectiveness for the nurse, resulting in less than optimum health care for the employees. It is the purpose of this study to explore the role of the occupational health nurse, particularly the relation of professional preparation to practice responsibilities, and to job satisfaction.

Educational levels need to keep pace with the changing levels of practice responsibilities within occupational health nursing. As this specialty becomes much more multi-faceted, the profession needs to explore the impact of professional preparation as it relates to practice responsibilities and job satisfaction. This study will examine these timely concepts.

CHAPTER II

Review of Literature

Initially, in the following review, the scope of practice for occupational health nurses will be described both as defined in the American Association of Occupational Health Nurses standards and as actually experienced in the work setting. Second, preparation for occupational health nursing will be discussed in terms of formal education and eligibility for certification. Such evidence as is available in the literature will be summarized regarding the relation between the amount of specialized preparation and the scope of practice. Third, the job satisfaction of occupational health nurses will be considered in relation to their preparation for the specialty and in relation to their practice responsibilities.

The Scope of Practice of Occupational Health Nurses

The scope of practice responsibilities of occupational health nurses is specified by the AAOHN in the standards, adopted in 1988 (see Table 1). Included in the duties of the occupational health nurse (OHN) are activities directed toward assessment of employees' health, preventing illness and injuries in the work environment, maintaining the health of employees following work-related injury or illness, and evaluation of programs. Expanding on this statement, Zal (1985) writes that "the role of the occupational health nurse involves prevention, recognition and treatment of illness and injury, and requires special skills and knowledge in the fields of health education and counseling, environmental health, rehabilitation, and human relations" (p. 600-601). Thus, the

nurse's role involves the delivery of preventive nursing care at primary, secondary, and tertiary levels.

Standards are intended to guide OHN's in insuring the quality of the service provided the consumer. They will doubtless require ongoing revision as the scope of nursing practice changes over time, and as the knowledge base becomes more refined. Standards of nursing practice provide a means for determining quality of care, as well as accountability of the practitioner (AAOHN, 1988). The 1988 AAOHN standards of practice will guide the definition of the extent of practice for this study.

To what degree are these standards realized in actual practice? According to a recent survey (Cox, 1985), the average occupational health nurse spent about half of each traditional workday assessing individual workers' health problems, referral, and screening. The other half day was used for a variety of activities--supervision or administrative activities, developing and conducting employee health education programs, and assessing and monitoring the work environment. Thus, the nurse might wear a variety of hats even in the course of a single working day.

In a second study, Bey, McGovern and Foley (1988) demonstrated that nurses and managers in a Fortune 500 manufacturing company held very similar views of the nursing role, "with both groups placing the traditional function of direct employee care as their highest current and ideal priority. Nurses and managers ranked environmental hazard recognition and control as a very low priority." Between these extremes, ranked in order of decreasing importance, were health education and

counseling, medical management, record keeping, and health promotion. Such ratings are more consistent with the traditional nursing role stressing direct patient care than with the newer expanded role advocated by AAOHN, stressing prevention and managerial activities.

In still another study, Brown (1981) indicated that approximately two-thirds of the occupational health nursing services in this country are composed of one or two nurses. Therefore, in many instances, the occupational health nurse is the only nurse in the workplace. In many other instances, in firms that operate continuously, one nurse is hired for each shift so as to provide care around the clock. Nurses who work alone must be self-directed. They must be able to function both as managers and as patient care providers. To perform these broad responsibilities well, and to effectively implement safety and health programs in industry, the knowledge and skills specified by the AAOHN Standards are essential. Possession of this knowledge and expertise will depend, in large part, on the nurse's professional preparation for this exacting and demanding role.

TABLE 1

STANDARDS OF PRACTICE FOR OCCUPATIONAL HEALTH NURSES

(AAOHN, 1988)

<u>Standard</u>	<u>Description</u>
I. Policy	A defined philosophy, goals and specific objectives are established for the health and safety program. They provide direction for the health services that are implemented in relation to real and potential health hazards in the work environment, the health status of employees and the health needs of employees.
II. Personnel	The occupational health nursing service is administered by a professionally qualified nurse. Sufficient staff (professional, allied health, and paraprofessional) with adequate time and authority to design and implement the nursing service as set forth in policy is necessary to insure quality service.
III. Resources	Management provides adequate resources (equipment and facilities) to facilitate the implementation of an occupational health program.
IV. Nursing Practice	The occupational health nurse utilizes the nursing process to provide health care directed maintenance, disease prevention and rehabilitation for workers, and to provide a safe and healthy work place. The nurse is accountable for all aspects of the nursing care provided.
V. Evaluation	A systematic evaluation of the occupational health program is conducted on a periodic basis to determine goal achievement.

Source: AAOHN, (1988)

Preparation for Occupational Health Nursing

Preparation for the specialty of occupational health nursing includes both an education and certification component. As noted previously, occupational health nursing is designated as a specialty area of practice by the National Federation for Specialty Nursing Organizations (1987). To be considered a specialist by the American Nurses' Association (ANA), one must have at least a master's degree in nursing science and be certified (or be eligible for certification) by a professional society. The ANA believes these credentials are necessary evidence of expertise in specialty area (Lewis, 1984). While striving to achieve this preparation level within occupational health nursing, the AAOHN currently endorses a baccalaureate degree as appropriate for entry into practice within this specialty.

Today, most occupational health nurses do not meet these requirements for specialty practice, either in terms of education or of certification. It is not unusual for nurses to enter the work setting with little knowledge of the organization of industrial systems and little or no preparation specific to occupational health nursing (Davis, 1985). Moreover, there have been few educational opportunities for pre-service learning in occupational health, and little research into the essence of practice (Brown, 1981).

Using the criteria set forth by the American Nurses' Association for specialty practice preparation, preparation for occupational health nursing will be described below in terms of the formal educational component and in terms of certification in the specialty.

Education for Occupational Health Nursing

Until the 1950's, formal educational opportunities in occupational health nursing were virtually non-existent, particularly at the graduate level. Relatively few nurse educators have any background or experience in occupational health and ultimately depend on practicing occupational health nurses to supply this expertise (Klutas, 1973). The struggle for obtaining appropriate educational resources has been long and difficult.

Preceptorships (Wheeler, 1984) and mentorships (Lipera, 1983) in occupational health nursing have only recently become a part of a few baccalaureate nursing programs. And it was not until the 1950's and 1960's that universities began offering graduate degrees with special studies in occupational health. The Yale School of Medicine, Department of Public Health offered the degree of Master of Public Health with special occupational courses, from 1950 to 1961. The University of Washington had a similar program from 1959 to 1962 (Solomon, 1982). In the early 1970's, the University of North Carolina School of Public Health was awarded a 5-year grant to prepare occupational health nurses. The school developed an 11-month program leading to a master's degree. At the end of the 5-year funding period, a total of 18 nurses had graduated. In 1979, the National Institute of Occupational Safety and Health (NIOSH) provided funding for twelve Educational Resource Centers. These centers were established at universities to provide continuing education in occupational health and master's support graduate education in occupational health for physicians, nurses, and industrial hygienists and safety specialists (Lipera, 1983). With support from NIOSH, graduate programs subsequently developed across the country. By 1984, there

were 16 graduate occupational health nursing programs in existence (Bernhardt, 1986).

Traditional nursing programs are often deficient in preparing practitioners who may eventually find themselves working with healthy populations (Talbott, 1983). Associate degree and diploma graduates are trained almost exclusively in hospital settings, which focus on the care of acutely ill patients. Today's graduates of baccalaureate programs are somewhat better prepared to work in occupational health than past graduates. They have received clinical education in a variety of settings in community agencies as well as hospitals. They have developed health assessment skills, and are better able to provide health education, counseling, and community referrals. Bernhardt (1986) however, found in her discussion of factors affecting nursing practice and occupational health nursing that the amount of occupational health nursing content in baccalaureate programs is very limited. Ossler (1987) notes that curricula for occupational health nurses must include skills and knowledge from the fields of epidemiology, industrial hygiene, safety, organizational theory, financial skills, and business administration. Bey et al. (1988) suggest that a lack of formal education in environmental hazard recognition and control may account for the discomfort of occupational health nurses in performing these two functions as they were not part of any formal nursing education program. It is imperative that these areas become a focus in the educational component of the occupational health nursing specialty since they are rapidly becoming areas of accountability within the practice setting as defined by AAOHN.

As stated above, associate degree and diploma school graduates are not educationally prepared for occupational health nursing. Yet most nurses working industry received their basic education in those programs. According to a recent AAOHN survey (Cox, 1987), 64% of the occupational health nurses were prepared at the diploma level, and 15% at the associate degree level. This same survey reveals a basically female population between the ages of 41 to 50 years of age. It was typical in previous years for occupational health nurses to remain in their positions for 15 or more years (Conrad, Conrad, & Parkes, 1985, Wolf, 1981) which may account for the large percentage of diploma prepared occupational health nurses. These figures reflect the incongruence of the education of today's occupational health nurses with the ANA guidelines for specific practice.

Adequate preparation for practice in the occupational health setting is a growing concern. Fennell and Wood (1985) claim that inadequate education in occupational health nurses in a southwestern state was related to powerlessness in terms of the nurses' perception of their knowledge base for job performance. Christensen, Richard, Froberg, McGovern, and Abanobi (1985) analyzed the employment patterns of master's prepared occupational health specialists, (N=73), and found that education may be an important role determinant in the levels of responsibility in the practice setting. The level of preparation for practice responsibilities is a growing concern among occupational health nurses themselves and it does not meet even minimal requirements of ANA or AAOHN. To begin to address these gaps there is an increasing

emphasis on continuing educational offerings at local, regional and national occupational health nursing meetings.

Certification for Occupational Health Nursing

Certification, the second component of a specialty preparation, appeals to nurses with strong academic backgrounds (Lewis, 1984). Impetus to create a certifying program in the occupational health field came from the American Association of Industrial Nurses in 1969 (Stern-er, 1983). In 1972, the American Board for Occupational Health Nurses, Inc., was established as an independent specialty board to implement and conduct a certification program for qualified occupational health nurses (Courtney, 1980). The AAOHN (formerly AAIN) is the professional association of registered nurses engaged in the specialty of occupational health nursing and is a separate organization from ABOHN. A liaison committee composed of members from the AAOHN and ABOHN comprises the main channel of communication between the two groups (ABOHN, 1987). The Board's primary responsibilities are

- 1) to establish standards and examinations for professional nurse certification in occupational health nursing;
- 2) to certify licensed professional nurses who meet these standards;
- 3) to maintain a Directory of Certified Occupational Health Nurses (Courtenay, 1980).

The certification criteria developed by the Board includes: general eligibility requirements, specific requirements, and continuing education requirements. The general eligibility requirements include current licensure to practice professional nursing in a state,

commonwealth, possession of the United States, or in a province of Canada. The nurse must also complete credit or non-credit courses related to occupational health nursing, and exhibit acceptable moral character and high ethical and professional standing.

The specific eligibility requirements include 5 years full time experience as a registered professional nurse in the practice of occupational health nursing and current full time employment as a registered professional nurse in occupational health nursing. Individual consideration is given to occupational health nurses who meet the experience criteria but are currently enrolled as full time students in a graduate program of study in occupational health nursing or related field.

The continuing education eligibility requirements include validation of 75 contact hours in courses on occupational health or in courses related to occupational health taken within the 5 year period prior to application. College or university credit courses are rated as 15 contact hours per semester credit and 10 contact hours per quarter credit (American Board of Occupational Health Nurses, Inc. 1987)

After eligibility requirements have been met, the candidate is required to achieve a satisfactory level on a written national examination. Upon satisfactory completion of the examination, a certificate is issued indicating that the candidate has demonstrated proficiency and special knowledge in occupational health nursing.

The board's secondary responsibilities are to preserve quality in occupational health nursing service, and to improve educational standards and programs in the field.

This review of occupational nursing education and certification revealed that the desired level of preparation for practice as defined by professional organizations for the occupational health nurse was incongruent with the current levels of preparation of most of the practicing occupational health nurses. Studies suggest continuing education as a way of bridging the gap between professional recommendations and current preparation levels in the practice setting (Brown & Brown, 1982; Bernhardt, 1986). Continuing education was found by Archer (1983) to have a beneficial effect on occupational health nursing practice. This investigator notes, that for occupational health nurses, continuing education is often the only means to maintain current and relevant knowledge because formal education has not yet adequately introduced occupational health courses into the curriculum.

Relation of Preparation to Scope of Practice Responsibilities

Occupational health nursing is in a state of transition with pressure to expand into a comprehensive health service management role, but with little direction for accomplishing the change (Bey, McGovern, & Foley, 1988). These researchers suggest that occupational health nurses can prepare for the expanded role of the future while gaining acceptance as an integral part of the occupational management team by establishing a power base, developing leadership and management skills, and participating in continuing education. Their findings were consistent with occupational nursing role responsibilities as defined by Howe (1975). Nurses and managers ranked direct injury and illness care as the highest priority for both the current and ideal role. Low priority was given by both nurses and managers for the function of environmental hazard

recognition and control, posing a concern in view of increasing governmental regulations.

Changes in federal governmental priorities regarding occupational health and safety have a decided impact on occupational nursing responsibilities. For instance, recent Occupational Safety and Health Act standards were implemented to regulate labeling of hazardous substances and ensure education of the employees who work with these substances. A program of this magnitude includes an inventory of all hazardous substances on site, monitoring the labeling and handling of the substances, and conducting appropriate training of employees who handle these chemicals. The responsibility for this program is often delegated to the occupational health nurse within a company because of her assumed expertise in health and exposure issues.

The scope of practice responsibilities for the occupational health nurse is expanding and continuing education programs are conducted by NIOSH as well as AAOHN in an effort to provide nurses with an adequate knowledge base. These programs are designed to provide the occupational health nurse with the most current information on practice issues.

Job Satisfaction of Occupational Health Nurses

This section reviews (1) studies of job satisfaction of occupational health nurses, (2) studies of the relation between scope of practice and job satisfaction, and (3) studies of the relationship between educational preparation and job satisfaction.

Studies of job satisfaction among occupational health nurses are few in number but report that OHN's are generally satisfied with their jobs. Levinsohn (1984) found that the majority of Texas occupational

health nurses considered health teaching, patient care, and rapport to be the most rewarding aspects of their work. Bey et al (1988) obtained results similar to Levinsohn's. Their respondents identified health education and counseling, contact with employees, and direct care-giving as most rewarding. Bey's respondents also listed motivating factors which Herzberg (1968) categorized in his theoretical framework (Herzberg, 1968) such as job creativity, diversity, independence, self-esteem, and learning opportunities. Only 6% mentioned "hygiene" factors (Herzberg, 1968) such as hours and co-worker cooperation. They wanted less record keeping and clerical work, more recognition from management, and more management responsibility for themselves. When asked to select the three most important problems from a list of 16 possibilities, they most frequently identified excessive clerical work, excessive workload, lack of opportunity for advancement, exclusion from policy formation, and isolation from peer support.

In a third study, Conrad, Conrad and Parker (1985) reported that both intrinsic and extrinsic rewards could be sources of satisfaction and of dissatisfaction for this group. That is, factors derived from the content of the job (intrinsic--i.e., self-esteem, motivation) and factors derived from the work environment (salary, vacation) both could be sources of satisfaction among occupational health nurses. They found that occupational health nurses were most satisfied with social service, moral values and achievement, and least satisfied with their lack of advancement, lack of availability of technical supervision, and compensation.

Relation of Job Satisfaction To Scope of Practice

Studies of job satisfaction as it relates to scope of practice among occupational health nurses are minimal. Edmunds describes the scope of practice of the nurse as almost totally with well personnel with a focus on the health care problems which cause work loss such as alcoholism, obesity, hypertension, diabetes, impaired circulation, stress and digestive disorders (Lawler & Bernhardt, 1986). While it is understood that occupational nursing is much more than the care of basically well adults in a nontraditional setting, it is also recognized that much of the workload of the occupational health nurse is involved with nonoccupational health and lifestyle problems. This broad scope of practice and the opportunity to engage in disease prevention and health teaching were factors cited in a study by Levinsohn (1984) as satisfying aspects of occupational health nursing practice.

In close agreement with this were the findings of Bey, McGovern, and Foley (1988) who found that when a sample of 26 occupational health nurses and 15 managers were asked to list the three most rewarding aspects of their job, the most frequent response was the practice based functions of health education and counseling as well as employee interaction.

There have been several studies done relating satisfaction with nursing practice in other specialties. Godfrey (1978) collected data from 17,000 nurse respondents in a Nursing 77 questionnaire. The study found no correlation between job satisfaction and actual salary earned or hours worked. Based on this study, the general conclusion was that nurses are adequately satisfied by the factors of salary, working

conditions, and are most concerned with meeting higher professional practice needs. It should be noted, however, that the conclusions of this study may now be outdated since it was published over a decade ago. Hale (1986), found in a literature review of hospital based nurses that satisfaction is derived from the intrinsic aspects of their jobs. Giving care to patients is reported to be one of the most satisfying of the intrinsic aspects of practice whereas, the extrinsic variables such as pay and supervision varied in importance. These researchers found that if nurses viewed nursing as a vocation, pay as a reward was of low importance.

On a more administrative level, White and Maguire (1973) found that nursing supervisors were more concerned with job content itself as a determinant for job satisfaction rather than other factors. It is apparent then that practice impacts job satisfaction in various nursing arenas.

Relation of Job Satisfaction To Professional Preparation

Literature which examines the relationship of job satisfaction to professional preparation in other nursing areas reveals consistent findings of that within occupational nursing.

Castiglia, Hunter and McCausland (1986) found that amount of continuing education among nurses was associated with a number of satisfaction variables such as a feeling of accomplishment, job security, opportunity for advancement, opportunity to provide comprehensive patient care and ability to maintain professional standards. Other factors included were opportunities for creativity, challenging work, perception of adequate support, and satisfaction with career direction.

Practice oriented variables such as opportunity to provide comprehensive patient care and ability to maintain professional standards were significant for continuing education.

McClure, Poulin, Sovie and Wandelt (1983) combined their efforts as members of a Task Force on Nursing Practice in Hospitals to study the magnetism that attracts and retains professional nursing staff to various organizations in each of eight identified regions of the country. The staff nurses' perceptions of one satisfying variable in such a magnet hospital would be that of the organization's enthusiasm toward higher education. There were comments about the availability of counseling in relation to their plans for advanced education, and there was extensive discussion of encouragement toward achieving the bachelor's degree. The perception of the Directors of Nursing of magnet hospitals supported these findings.

In a study of attitudes toward master's degree preparation in nursing, Watson and Wells (1987) studied 524 subjects in two nursing specialty groups, that of Rehabilitation and Oncology, who were bachelor's prepared. They found that the nurses surveyed had a moderately positive attitude toward the advantage of a master's degree preparation in nursing. Most respondents agreed that a master's degree would allow for greater professional development. Nurses employed in hospitals and schools of nursing were most likely to express an intention to obtain a master's degree than nurses employed in other agency categories. It appears therefore, that this population of nurses associates professional growth and perhaps implied job satisfaction with the acquisition of a master's degree in nursing.

Rickard (1986) conducted a descriptive study of clinical nurse specialists whose educational preparation was closely aligned with the definition held by the American Nurses' Association. It was found that in light of this educational base, a clear perception of role responsibilities was a strong correlate of job satisfaction. Thus, the relation of professional preparation to job satisfaction appears to be evidenced in various nursing arena, but there is little research in the area of occupational health nursing regarding the variables of job satisfaction and professional preparation. However, an interesting professional trend is the minimal turnover of occupational health nurses in contrast to hospital nurses, who until recently, have had an annual turnover rate as high as 40% (Conrad, Conrad, & Parker, 1985, Wolf, 1981). It is typical to find occupational health nurses working for the same company for 15-20 or more years. This may be an indication of various factors impacting job satisfaction in occupational health nurses, other than either professional preparation or practice.

Statement of the Problem

The literature recognizes the independent importance of professional preparation, practice responsibilities, and job satisfaction of occupational health nurses but the positive or negative relation among the three has not been tested. Specifically, this study will address three research questions. (1) Does professional preparation relate to extent of practice responsibility of occupational health nurses? (2) Does professional preparation relate to the job satisfaction of occupational health nurses? (3) Does extent of practice responsibility relate to the job satisfaction of occupational health nurses?

Significance of the Problem

The issue of exploring the relationship of the three variables-- practice responsibility, levels of preparation, and job satisfaction--is relevant to occupational health nursing from not only an educational standpoint but from the practitioner's view, as well. Without sufficient professional preparation, it may be difficult for the occupational health nurse to fulfill job demands which can lead to a lack of satisfaction in practice.

CHAPTER III

METHODS

This chapter will describe the sample, setting, data collection instrument, design and analyses for this study.

Design and Procedure

The study used selected data concentrating on the three variables of interest--occupational health nursing education, job responsibility and job satisfaction--from a comprehensive regional survey sponsored by the Columbia River Association of Occupational Health Nurses and the School of Nursing, Oregon Health Sciences University. Data were analyzed using descriptive statistics and, where appropriate, the Pearson's Product Moment Correlation Coefficient.

Sample and Setting

Since no national comprehensive list of occupational health nurses exists, names of registered nurses in that practice area were obtained from the mailing lists of professional nursing organizations in the northwest United States. These organizations were the Idaho State Board of Nursing, the Columbia River Association of Occupational Health Nurses, and Northwest Association of Occupational Health Nurses. Informal networking throughout the occupational health nursing sector provided additional names. In this way, a total of 375 nurses comprised the sample of the study. Two were identified as occupational health nurses in Alaska, 60 in Idaho, 146 in Oregon and 167 in Washington. Questionnaires were mailed to these nurses, and 200 (53.3%) responded. Twenty-six questionnaires were discarded because of failure to complete the survey, resulting in a total of 174 (46.4%) that were included in

the final tabulations. No follow up was conducted after the initial batch mailing.

It is difficult to say how representative this group of respondents of occupational health nurses was, and therefore how generalizable the findings of this research may be. The distribution of responses showed that Idaho was distinctly underrepresented with only 9.5% responding, in contrast to Oregon's 45.2% and Washington's 44.5%.

Data Collection Instrument

The 13-page questionnaire sought information on the sociodemographic characteristics of occupational health nurses, their current positions, their education and professional development, and the local associations to which they belonged. Questions were also included regarding characteristics of the industries in which they were employed, and regarding their interest in continuing education programs, as expressed by their past attendance and plans for future attendance at such classes. (A copy of the entire questionnaire is presented in Appendix A). Only selected items of the questionnaire were used for this secondary analysis.

The original purpose of the Northwest survey used in this study was to gather information about the employment and professional practice activities of occupational health nurses which might then serve as a data bank for occupational health nurses in this geographic area. To that end, a questionnaire was formulated over a 5-year period, using items from a similar Texas study by Levinsohn (1984), as well as other professional resources and collegial expertise. The questionnaire was pretested for clarity and understandability. After revisions, the

questionnaire was mailed in April, 1986 to occupational health nurses in the four northwestern states of Alaska, Washington, Oregon and Idaho. Instructions for completing the questionnaire were provided both in a cover letter and on the instrument itself (see Appendix B for copy of cover letter). Confidentiality of responses was assured and return of the questionnaire was viewed as informed consent. The survey was completed in 1986.

Levels of Preparation for Occupational Health Nursing

Although the survey obtained a broad array of information, only the specific content areas relating to levels of preparation for occupational health nursing, extent of practice responsibilities, and job satisfaction were used in this study.

Each respondent's level of preparation was determined by summing the two scores assigned him or her for (a) educational preparation, and (b) certification or eligibility for certification. Educational level was determined from responses to Item #45, which asked: Highest degree obtained. Scores could range from 0 to 4. A score of 4 was assigned for the MS/MN degree, 3 for the MPH degree, 2 for the baccalaureate degree, 1 for the AA or AD degree, and 0 for any other response. It may be noted that this scoring system weights attainment of the MS or MN degree in nursing above the MPH, because of the specialty concentration in nursing in contrast to the broader focus of the MPH and because they conform to the ANA specialty standards.

Certification, or eligibility for certification, was determined by responses to Item #31 and Item #32, which asked about certification and/or eligibility for certification. Respondents answering COHN

(Certified in Occupational Health Nursing) on the former item, or "yes" on the latter which addresses eligibility for certification, were accorded a score of 1, whereas all other respondents received scores of 0. Each respondent's level of preparation was then determined by summing the two scores on educational preparation and certification. The total score might thus vary from 0 to 5. The highest score, 5, represents a level of preparation consistent with ANA standards for specialty practice, namely both a master's degree in nursing and certification or evidence of eligibility for certification.

Extent of Practice Responsibilities

The practice responsibilities for occupational health nurses were reviewed by looking at the responses to question #4 which asked for position title and question #19 which asked for position responsibility. Practice responsibility was measured by the percentage of administrative responsibilities comprised from the nurse's total duties. Information on the extent of the responsibility each nurse assumed was derived from responses to Item #19. Question #19 asked the respondent to rate involvement in several areas of position responsibility. The listed areas of occupational health nursing here considered as administrative are: environmental surveillance, program development and administration, managing the occupational health department, and management of other occupational health employees, and consultation with other companies and divisions of the same company. These areas were designated as administrative due to the level of management component of people and/or information systems required, which goes beyond the scope of

direct nursing care. All other areas were considered to refer to direct occupational health nursing care.

Each administrative area could be scored from 0 ("I have no responsibility") to 3 ("I do this all myself"). These scores were added for all administrative areas checked, for a total score for administrative responsibility. This score formed the numerator for calculating the percentage. For the denominator, a similar score was calculated for all areas of involvement checked by the respondent. The relative percentage involvement in administrative activities was then calculated for each respondent. Higher percentages indicate a higher level of responsibility with a possible percentage range of 0%-100%.

Job Satisfaction

A measure of job satisfaction was provided from responses to Item #51, which asked the respondent to rate their degree of satisfaction with occupational health nursing. Scores on a Likert scale could range from 1, indicating strong dissatisfaction, to 5, indicating strong satisfaction. Items #21 and 22, which asked the respondent to indicate the four most rewarding aspects of occupational health nursing and the one most frustrating aspect, respectively, help expand understanding of the job satisfaction of these nurses, by identifying specific areas of occupational health nursing that nurses find more or less satisfying. Respondents were requested to indicate on those two checklists the four aspects of occupational nursing that were most rewarding and satisfying (Item #21), and the one aspect most frustrating (Item #22).

Analysis

This study measured the relationship among the variables of professional preparation, practice responsibility and job satisfaction within this sample of occupational health nurses using descriptive statistics and a Pearson's r correlation. The items chosen from the survey as outlined previously were rescored and used in this analysis to answer the three research questions.

Table 2 lists the research questions posed in this study, followed by a definition of the pertinent terminology and a brief description of the methods that were used in the analysis of these major questions. These major questions are outlined as they were selected from a comprehensive northwest regional survey of occupational health nurses.

TABLE 2

RESEARCH QUESTIONS

<u>Research Question</u>	<u>Definition of Terms</u>	<u>Method</u>
1. Does professional preparation relate to extent of occupational health nursing practice responsibilities?	<p><u>Preparation for occupational health nursing</u> - Educational preparation and certification or eligibility for certification in occupational health nursing.</p> <p><u>Occupational health nursing practice responsibilities</u> - Range of practice responsibilities as defined by the standards of practice for occupational health nurses from direct nursing care to administrative duties.</p>	<p>Each respondent's level of preparation was determined by summing the two scores assigned him or her for (a) educational preparation using #45 from questionnaire (b) certification or eligibility for certification using #31 and #32 from the questionnaire. The total score might vary from 0 to 5. The highest score of 5 represents a level of preparation consistent with ANA standards for specialty practice.</p> <p>The percentage of administrative responsibilities comprise from the occupational nurse's total duties. Item #19 will be used from the questionnaire. Higher percentages indicate a higher level of responsibility.</p>
2. Does professional preparation relate to the job satisfaction of occupational health nurses?	<p><u>Preparation for occupational health nursing</u> - Educational preparation and certification or eligibility for certification in occupational health nursing.</p>	<p>Each respondent's level of preparation was determined by summing the two scores assigned him or her for (a) educational preparation using #45 from questionnaire (b) certification or eligibility for certification using #31 and #32 from the questionnaire. The total score might vary from 0 to</p>

Research Question	Definition of Terms	Method
		5. The highest score of 5 represents a level of preparation consistent with ANA standards for specialty practice.
	<u>Job Satisfaction</u> - Global measure of overall job satisfaction inclusive of intrinsic factors.	Responses to item #51. Scores can vary from 1, indicating strong dissatisfaction, to 5, indicating strong satisfaction.
3. Does job satisfaction relate to practice responsibilities?	<u>Occupational health nursing practice responsibilities</u> - Range of practice responsibilities as defined by the standards of practice for occupational health nurses from direct nursing care to administrative duties.	The percentage of administrative responsibilities comprise from the occupational nurse's total duties. Item #19 will be used from the questionnaire. Higher percentages indicate a higher level of responsibility.
	<u>Job Satisfaction</u> - Global measure of overall job satisfaction inclusive of intrinsic and extrinsic factors.	Response to item #51. Scores can vary from 1, indicating strong dissatisfaction, to 5, indicating strong satisfaction.

CHAPTER IV

FINDINGS

This section will report the findings of this study as they were determined for this sample and setting. The findings are presented in the format of the research questions.

The demographic characteristics of the 174 respondents are summarized in Table 3. Respondents were mainly female, with a mean age of 45.5 years. Most were employed fulltime and had an average of 8.5 years of working experience in occupational health nursing. Most had either Associate or Baccalaureate degrees in nursing (21.2% and 20.7%, respectively). Certification in occupational health nursing was held by 14.8% of the respondents while another 24% were eligible to be certified. However, it may also be noted that the respondents were not dissimilar to occupational health nurses nationwide in respect to sex, age, and lack of certification. Thus the most current membership profile of the American Association of Occupational Health Nurses (Cox, 1987) showed that occupational health nurses nationally were mostly female; 34.0% were between the ages of 41 to 50 years of age (this was the single largest age group); and 77.4% were not certified. However, the respondents in this study were better educated, with 33.3% possessing baccalaureate degrees, in contrast to 24.2% of occupational health nurses nationwide and 21.3% were educated at the master's level, in contrast to 5.9% nationwide.

TABLE 3

CHARACTERISTICS OF RESPONDENTS

Characteristic	Number	Adj. Freq. %*
Sex (N=174)		
Male	12	7%
Female	159	93%
Missing	3	1%
Age (N=174)		
20-29	7	4.1%
30-39	50	29.2%
40-49	56	32.7%
50-59	43	25.1%
60-69	15	8.8%
Missing	3	2.0%
Employment Status (N=174)		
Full Time	137	79.2%
Part Time	28	16.2%
Unemployed	8	4.6%
Missing	1	.5%
Years of Experience (N=174)		
0-4	53	32.0%
5-9	62	37.0%
10-14	29	18.0%
15-19	10	6.0%
20+	12	7.0%
Missing	8	4.0%
Highest Degree (N=174) Obtained		
Associate	37	21.2%
Baccalaureate	36	20.7%
Master's in Nursing	20	11.5%
Master's in Public Health	3	1.7%
Diploma	63	36.2%
Missing	3	1.7%
N/A	12	6.0%

State of
Residence (N=174)

Oregon	76	45.2%
Washington	75	44.6%
Idaho	16	9.5%
Alaska	1	.6%
Missing	6	3.0%

Position Title**

Staff Nurse	96	55.2%
Supervisor	33	19.0%
Consultant	20	11.5%
Director	3	1.7%
Administrator	7	4.0%
Nurse Practitioner	6	3.4%
Educator	13	7.5%
Other	43	24.7%

*Totals may vary slightly from 100% due to rounding.

**Four respondents checked more than one category.

Practice Responsibilities

The practice responsibilities for the occupational health nurse were reviewed by looking at the responses to question #4 which asked for position title and question #19 which asked for position responsibility. Analysis of the responses to question #4 (Appendix C) showed that the participants checked more than one position title. However, the trend of the responses showed that even when an administrative position was indicated, the occupational health nurse assumed responsibility for both direct nursing care activities as well as administrative activities. As indicated earlier, often the occupational health nurse functions in a one- or two-nurse unit and the delegation of responsibility is limited. Therefore, the nurse may be required to assume a broad practice base.

Multiple responses affected the validity of question #19 in terms of calculating percentage of administrative responsibility since many nurses in administrative positions indicated that they performed both administrative and direct nursing care responsibilities. The total percentages of practice responsibilities in question #19 are limited in terms of their measurement of administrative responsibility (Appendix C).

Professional Preparation

In examining the data for professional preparation, the distribution reflected the combined scores of highest degree (#45) and certification or eligibility for certification (#'s 31 and 32). Table 4 shows the frequencies of the professional preparation of this sample of nurses using this combined scoring method. A questionnaire-by-questionnaire examination was done because 66 of the cases were missing or

nonapplicable on Item #45. A comparison of the responses was done of Item #44 which asked the respondent to indicate basic nursing education to the responses to Item #45. The rationale for this was to determine if basic nursing education was marked in #44 and #45 left blank simply because basic nursing education was the higher degree obtained. Sixty-three of the 66 missing scores in Item #45 had marked diploma as the basic nursing education in Item #44; therefore it was determined that in 63 out of the 66 cases, diploma was also the highest degree earned and the data were entered as such.

The majority of nurses in this sample falls into the professional preparation of AD/AA and BS. Certification or eligibility for certification affected the scoring of 38.8% of this sample by increasing the total preparation score.

TABLE 4.

FREQUENCY DISTRIBUTION OF HIGHEST DEGREE AND
CERTIFICATION HELD BY OCCUPATIONAL HEALTH NURSES

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
DIPLOMA - LEVEL I	32	18.39
AD-AA - LEVEL II	64	36.78
BS - LEVEL III	43	24.71
MPH - LEVEL IV	12	6.90
MS-MN - LEVEL V	17	9.77
OTHER	6	3.45

Job Satisfaction

The job satisfaction variable was reflected simply from the Likert scale using item #51. Table 5 indicates the satisfaction scores of the respondents to occupational health nursing.

The majority of occupational nurses in this sample (89.9%) indicated a medium to strong satisfaction with this practice of nursing.

TABLE 5.

FREQUENCY DISTRIBUTION OF JOB SATISFACTION OF OCCUPATIONAL HEALTH NURSES

<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
Strong Dissatisfaction	0	0.00
Medium Dissatisfaction	2	1.18
Neutral	13	7.69
	2	1.18
Medium Satisfaction	56	33.14
Strong Satisfaction	<u>96</u>	<u>56.80</u>
Total	169	99.99

Mean = 4.462	Standard deviation = 0.697
Median = 5.000	Variance = 0.485

Professional Preparation and Practice Responsibility

The findings for the first research question--Does professional preparation relate to practice responsibility of occupational health nurses--are as follows. Item #19 was first examined for basic differences in those occupational health nurses who indicated administrative responsibilities compared to those nurses who did not indicate any administrative responsibilities. This was done by doing a crosstabulation between job title/position obtained by item #4 and practice responsibilities in item #19. The results of this cross tabulation are listed in Appendix C. It appears that those nurses indicating a staff position participated in both administrative and nonadministrative activities, whereas those nurses in administrative positions appeared to delegate some areas of responsibility but continued to indicate accountability for both administrative and nonadministrative activities. (The findings of this crosstabulation were confounded by the fact that some of the respondents checked more than one position title.)

In Appendix D the job responsibilities of all occupational health nurses are listed, combining both groups. The trend is noted that the majority of the nurses do all, or delegate only some, of the responsibility. This may be indicative of limited staff resources. It was noted earlier in this study that many occupational health nursing units function as one- or two-nurse entities, therefore limiting the delegation of responsibility.

The total sample for the correlation of professional preparation and practice responsibility of occupational health nurses was 129. The Pearson's r correlation for this question revealed a slightly positive

correlation of .1013 ($p = .2532$). Thus, no clear link between professional preparation and job responsibility was determined from this sample in general.

Professional Preparation and Job Satisfaction

The finding of the second research question--Does professional preparation relate to job satisfaction for occupational health nurses--is as follows. The total N for this correlation was 169. The Pearson's r correlation indicated a correlation of $-.1341$ ($p = .0822$). A cross-tabulation on the total group of occupational health nurses as well as a subset of those nurses in the field of occupational health nursing 5 years or less was done to examine this correlation further which indicates that when level of education increases, job satisfaction decreases. Years of experience was examined in a crosstabulation with job satisfaction. The results are listed in Table 6. It appears that when experience in occupational health nursing increases, job satisfaction increases. Learning that takes place in the work setting through peer interaction, literary sources, as well as interdisciplinary opportunities may be a more powerful vehicle to job satisfaction than formal education.

TABLE 6

CROSSTABULATION--YEARS OF EXPERIENCE WITH SATISFACTION

N				
Years of Experience	N	Neutral	Satisfaction	Strong Satisfaction
5 years or less	70	13 (18.60%)	28 (40.00%)	29 (41.40%)
More than 5 years	94	3 (3.20%)	27 (28.70%)	64 (68.10%)

Age and satisfaction were also examined (see Table 7). Age might have been an extraneous variable influencing the results. The age factor was considered in terms of a younger population now having more educational opportunities in occupational health nursing versus an older population having had fewer formal educational opportunities. It appears that as age increases, job satisfaction also increases. Sixty-six percent of the sample was above the age of 39. It was noted earlier that occupational health nursing has a low turnover rate. It appears, then, that age and years of experience have a strong positive effect on job satisfaction while the effect of education exerts a slightly negative effect.

TABLE 7

CROSSTABULATION--AGE WITH SATISFACTION

<hr/>				
N				
Age	N	Low, Neutral	Satisfaction	Strong Satisfaction
20-39	55	8 (47.06%)	24 (44.44%)	23 (23.96%)
40-49	55	7 (41.18%)	14 (25.93%)	34 (35.42%)
50-69	57	2 (11.76%)	16 (29.63%)	39 (40.63%)
Total	167	17 (10.18%)	54 (32.34%)	96 (57.49%)

Practice Responsibilities and Job Satisfaction

The finding of the third research question--Does extent of practice responsibilities relate to job satisfaction in occupational nursing--revealed a slightly negative and statistically nonsignificant correlation of $-.0086$ ($p = .9238$). The problem of position differentiation of the occupational health nurse in the one- or two-person department and the lack of greater specificity in the instrument in eliciting more definitive information must be considered regarding this finding.

Additional Findings of Study Questions

A crosstabulation between professional preparation and years of experience indicated that nurses with 5 or less years of experience held higher levels of preparation than did those nurses with more than 5 years of occupational health nursing experience (see Table 8). This

finding will be discussed as it relates to the current educational role and response transition in occupational health nursing.

TABLE 8.

YEARS OF EXPERIENCE REPORTED BY OCCUPATIONAL HEALTH NURSES
BY HIGHEST DEGREE OBTAINED

Years of Experience	N	0	1	2	3	4	5*
5 years or less	71	11 (36.67%)	16 (26.67%)	27 (64.29%)	2 (16.67%)	12 (75.00%)	3 (50.00%)
More than 5 years	95	19 (63.33%)	44 (73.33%)	15 (35.71%)	10 (83.33%)	4 (25.00%)	3 (50.00%)
Total	166	30 (18.07%)	60 (36.14%)	42 (25.30%)	12 (7.23%)	16 (9.64%)	6 (3.61%)

*Scores include certification or eligibility for certification.

Since the data revealed very low correlations, the same procedures were performed by examining the responses of those occupational health nurses who had worked for 5 or less years to determine if occupational health nurses with few years of practice scored differently from those with extensive practice in occupational health nursing. In this sample, 45.4% of the respondents (N = 79) had 5 or less years of experience. As shown in Table 9, the strength of the correlations became stronger for the subset in response to questions I and III, whereas in question II, the strength of the correlation decreased, although all of the correlations were weak and none of the correlations was significant.

TABLE 9

CORRELATION AMONG PROFESSIONAL PREPARATION, PRACTICE RESPONSIBILITIES,
AND JOB SATISFACTION FOR ALL SUBJECTS AND THOSE WITH FIVE OR LESS YEARS
OF OCCUPATIONAL HEALTH NURSING EXPERIENCE

Item	N	r	p Value*
<u>Question I--Does professional preparation</u> <u>relate to extent of practice responsibility?</u>			
All subjects	129	.1013	.2532
Subjects with 5 years or less occupational health work experience	57	.1629	.2260
<u>Question II--Does professional preparation</u> <u>relate to job satisfaction?</u>			
All subjects	169	-.1341	.0822
Subjects with 5 years or less occupational health work experience	75	-.0422	.7194
<u>Question III--Does extent of practice</u> <u>responsibility relate to job satisfaction?</u>			
All subjects	127	-.0086	.9238
Subjects with 5 years or less occupational health work experience	55	-.0230	.8678

*Two tailed p values were used with the non-directional hypothesis.

CHAPTER V

FINDINGS DISCUSSION

This study involved the use of secondary data to examine professional preparation, job satisfaction, and practice responsibilities in a population of occupational health nurses. Overall, the results of the questionnaire answers used in this study found no significant relationships among the study questions:

1. Does professional preparation relate to extent of practice responsibility of occupational health nurses?
2. Does professional preparation relate to the job satisfaction of occupational health nurses?
3. Does extent of practice responsibility relate to the job satisfaction of occupational health nurses?

Even though the results are not significant, other data of interest were revealed.

Professional Preparation and
Extent of Practice Responsibility

In examining the data more closely, the results of this study indicate only a weak positive relationship between professional preparation and extent of practice responsibility ($r = .10$). In looking at the subset of those nurses in occupational health for 5 years or less, there was only a small increase in this positive relationship ($r = .16$). Although there is a lack of statistical significance, the direction of the relationship supports that found in the study by Christensen, Richard, Frobert, McGovern, and Abanobi (1985). Their findings indicate that education may be an important role determinant in the levels of

responsibility in the practice setting. Bey, McGovern, & Foley (1988) view the educational component as an integral part of preparing for the expanded role of the future in conjunction with establishing a power base and developing leadership and management skills. This study supported the issue of leadership in that the certification component was viewed by 63% of the respondents as an enhancement to credibility. Archer (1983) also believes education has a beneficial effect on occupational health nursing practice. Other data in this study also revealed a positive relationship between the number of hours of continuing education a nurse accrued and the number of health related programs offered to employees.

Precisely ascertaining the practice responsibility component in this study was problematic. Thus, the correlations should be considered with caution. The slight increase in the correlation for the subgroup of nurses that held higher degrees than those in the field 5 years or longer is somewhat encouraging, but further sampling should be undertaken before concluding that this new generation of nurses is coming into the field of occupational health nursing better prepared for their role responsibilities, particularly in the leadership and management arena, than the previous generation of nurses.

Professional Preparation and Job Satisfaction

A weak negative relationship between professional preparation and job satisfaction was found which was not significant ($p = .08$, $r = -.13$). The correlation was even weaker among those of occupational health nurses in the study who had worked for 5 years or less ($r = -.04$). This finding is somewhat expected since the previous

literature review revealed little evidence for any relationship. Studies of other clinician specialists, however, have found that preparation influenced the perception of role responsibilities and strongly correlated with job satisfaction (Rickard, 1986). The findings in studies of other specialties whose educational preparation is closely aligned with the definition held by the ANA may not, therefore, be applicable to occupational health nursing in general at present. The difference may be due not only to the very broad, complex scope of practice (Zal, 1985) but also to the trend of minimal turnover in the field of occupational health nursing which was characteristic of this sample as well as samples in other studies (Conrad, Conrad & Parker, 1985; Wolf, 1981). Examination of those nurses in the sample with 5 years or less work experience suggests that the new generation of occupational health nurses, unlike their predecessors, may be experiencing professional preparation specific to occupational health perhaps through preceptorships and mentoring (Wheeler, 1984; Libera, 1983) which may be impacting satisfaction. That is, preparation for specific role responsibilities may be alleviating much of the anxiety that unfamiliar roles often produce; however, further evaluation of these slight trends is warranted.

The "new generation of nurses" (ages 20-39) indicated neutral to moderate levels of satisfaction in comparison to nurses aged 40-49. The other end of the scale (ages 50-69) seemed to reflect the increased familiarity and satisfaction with the occupational health nursing role. Thus, the impact of the current transition into a more expanded role of occupational health nursing is evidenced here.

Extent of Practice Responsibility and Job Satisfaction

The results of this study revealed a nonsignificant negative correlation between practice responsibility and job satisfaction ($r = -.008$) which increased but was still nonsignificant among occupational health nurses with 5 years or less of work experience ($r = -.02$). This finding relates in some degree to Levinsohn's (1984) findings that the broad scope of practice impacts the satisfying aspects of occupational health nursing practice in perhaps unique ways. The indicators of satisfaction in other nursing arenas appear to focus more highly on intrinsic factors such as professional practice needs and patient care (Hale, 1986; Godfrey, 1978).

For the nurses in this study, however, the most satisfying aspects of practice, as noted in the responses to item #21 on the questionnaire, were health teaching, patient care, and prevention--that is, keeping people healthy (see Appendix E). The most frustrating aspects of practice, as noted in the responses to item #22 on the questionnaire, were indicated as not enough time to provide all assistance needed and lack of management support for health services (see Appendix F). Yet, the attraction to occupational health nurses in this population was viewed as that of independence, challenge, and the broad scope of practice. Therefore, the items that were the sources of attraction to occupational health nursing were also the sources of frustration. One could speculate that the interplay between the corporate environment and occupational health services may account for the attraction/frustration combination leading one to ask how the corporate environment facilitates or hinders the fulfillment of the scope of occupational health nursing

practice. This speculation appeared in reviewing the data for position title in comparison to role responsibilities. There does not appear to be a major portion of delegation occurring in this field of nursing. Perhaps the occupation has limited time and resources. However, this needs further study to determine the reason.

CHAPTER VI

SUMMARY, LIMITATIONS, RECOMMENDATIONS, AND
IMPLICATIONS FOR NURSINGSummary

Basic nursing principles and an awareness of environmental hazards once provided a sufficient knowledge base for the occupational health nurse. Today, the occupational health nurse faces the challenge of an expanded role. She must now be prepared to anticipate problems in an increasing number of areas such as detecting subtle changes in the environment before they pose serious health hazards, providing leaderships to correct or eliminate the problem, and developing prevention or treatment programs for employees (Lustk, Disch & Barkauskas, 1988). The knowledge and skills necessary to carry out these complex tasks are considerable and go beyond most basic nursing education programs.

This study used secondary data to examine the relationship between professional preparation for this expanded role, practice responsibility, and job satisfaction. Literature had suggested that a positive relationship existed between these three variables.

The result of the study suggests that although a slight relationship exists among the following, none of the evidence is statistically significant:

1. Advanced professional preparation was positively related to a higher extent of practice responsibility.
2. Advanced professional preparation was negatively related to job satisfaction.

3. A higher extent of practice responsibility was negatively related to job satisfaction.

None of the findings were even moderately strong nor statistically significant, but the data revealed some related pertinent information (see Appendix G). The respondents indicated that they were drawn into the field of occupational health nursing because it seemed to offer independence, challenge, and a broad scope of practice as reflected in their responses to item #50 on the questionnaire. Item #50 asks the participants to mark the one factor that most attracted them to occupational health nursing. Also, the responses were favorable to advancing their educational base. Yet, the respondents indicated that a lack of management support for health services in addition to being given responsibility but not authority for fulfilling these responsibilities were among the more frustrating aspects of occupational health nursing. The concepts that were appealing in the respondents' attraction to occupational health nursing were also sources of frustration to them.

The slight decrease in the negative relationship between advanced professional preparation and job satisfaction noted when only those nurses who had worked in occupational health 5 years or less is encouraging. Perhaps it may indicate a greater awareness of working closely with management in the new generation. There was also a slight increase in the positive relationship between education and practice responsibilities in this group. This may signify a heightened awareness in this group of the expanding role in occupational health nursing.

Limitations of the Study

There are many limitations in this study. First is the use of secondary data. Not only were there missing responses to several items on the questionnaire, but there were also missing questionnaires as well. This issue of missing data was particularly evident in #45 which addressed the education component of the professional preparation variable.

A second limitation to using secondary data involved the original data entry. Data were entered by several people and the interpretation of some responses varied with the individual. This necessitated extensive recoding to obtain accurate information for the study questions.

A third limitation was the limited geographical responses of the data. The majority of respondents (89.8%) were from the states of Washington and Oregon. Therefore, the results are clearly limited in terms of generalizability.

A fourth limitation to the study was noted in the areas of validity. The content validity of this study--that is, the degree to which the items were representative of the universe of all questions that might be asked on this topic--was a factor. Greater specificity in the survey items may have illicit information which would have led to more understanding in the puzzling finding of similar sources of satisfaction and frustration. The questionnaire contained only a limited number of items that addressed the traits of professional preparation, practice responsibility and job satisfaction. A larger pool of questions with greater specificity is needed for sampling adequacy.

It is recommended that a new questionnaire be designed specific to the variables of interest. A less lengthy questionnaire may also enhance a greater completion of the items by more of the sample. On the other hand, perhaps a different methodology should be considered. For example, a telephone survey using a structured interview may be useful in illiciting more qualitative information. This method would also insure complete data.

Implications for Nursing Practice

Many changes are beginning to occur within occupational health nursing practice. The scope of practice has broadened and has become more complex which has several implications for occupational health nursing. These include the need for an increased knowledge base suitable to the emerging practice responsibilities and the need for the occupational health nurses to be given the authority to fulfill these responsibilities. As it was noted in this study, many occupational health nurses do the majority of role responsibilities or delegate only some. Therefore, the nurses must be prepared for the ever-changing responsibilities that enter into the practice setting.

Since occupational health nurses appear favorable to advanced educational opportunities that prepare them for practice, it is important that courses be designed to meet these needs in terms of relevant content and accessibility. Advanced educational preparation will assist the occupational health nurse not only in her direct practice setting but also in the areas of communication with management which can assist the nurse in successfully negotiating the initiation of needed health programs. Further, it can help occupational health nurses to understand

the literature applicable to the occupational health setting as well as to design studies and evaluate programs aimed at promoting health and safety in the workplace.

REFERENCES

- American Association of Occupational Health Nurses (1988). Standards of practice. AAOHN Journal, 36 (4), 162-165.
- American Board for Occupational Health Nurses, Inc. Bulletin. 1987.
- Archer, H. (1983). A study of the impact of continuing education on occupational health nursing practice. Occupational Health Nursing, 31 (2), 15-26.
- Bernhardt, J. (1986). Education: Current factors affecting nursing practice and occupational health nursing. AAOHN Journal, 34, (5), 210-215.
- Berry, C. (1981). Good health for employees & reduced health care cost for industry. Washington DC: Health Insurance Association of America.
- Bey, J., McGovern, P, & Foley, M. (1988). How management and nurses perceive occupational health nursing. AAOHN Journal, 36 (2), 61-69.
- Brown, M. (1981). Occupational health nursing. New York: Springer Publishing.
- Brown, V. & Brown, K. (1982). Continuing education needs of occupational health nurses. Occupational Health Nursing, 30, 22-26.
- Castiglia, P., Hunter, J. & McCausland, L. (1986). A study of the relationship between job satisfaction and continuing education. Journal, N.Y.S.N.A., 17 (2), 15-19.
- Christensen, M., Richard, E. Froberg, D., McGovern, P., & Abanobi, O. (1985). An analysis of the employment patterns, roles and functions of master's prepared occupational health nurses: Part II. Occupational Health Nursing, 33 (9), 453-459.
- Conrad, K.M. Conrad, K.J. & Parker, J. (1985). Job satisfaction among occupational health nurses. Journal of Community Health Nursing, 2 (3), 161-173.
- Courtenay, I. (1980). Certification in occupational health nursing. Occupational Health Nursing, 28 (11), 28-30.

- Cox, A. (1985). Profile of the occupational nurse. Occupational Health Nursing, 33 (12), 591-593.
- Cox, A. (1987). AAOHN membership profile. AAOHN Journal, 35 (7), 324-325.
- Crump, R. (1986). Utilization of nurse practitioners in occupational health. AAOHN Journal, 34 (2), 92-94.
- Fennell, K. & Wood, J. (1985). Powerlessness among occupational health nurses. Occupational Health Nursing, 33 (1), 33-36.
- Godfrey, N.A. (1978). Job satisfaction - - or should that be dissatisfaction? How nurses feel about nursing. Parts one-three. Nursing '78, 8 (4,5,6), pp 89-110.
- Hale, C. (1986). Measuring job satisfaction. Nursing Times, 82 (5), 43-46.
- Herzberg, F. (1968). One more time: How do you motivate employees? Harvard Business Review, 37, Jan./Feb., 53-62.
- Howe, H. (1975). Organization and operation of an occupational health program. American Medical Association, Dept. of Environmental, Public and Occupational Health Institute, Chicago, Il.
- Klutas, E. (1973). The occupational health nurse views future needs in continuing education. Occupational Health Nursing, 21, September, 9-15.
- Lawler, T. & Bernhardt, J. (1986). Nurse practitioners and HMO's in occupational health. AAOHN Journal, 34 (7), 333-336.
- Levinsohn, M. (1984). A study of occupational health nurses in Texas. Occupational Health Nursing, April, 32, 216-221.
- Lewis, H. (1984). Specialization: The best career path? RN, 47 (6), 40-47.
- Lipera, N. (1983). The professional - bureaucratic role orientation among occupational health nurses. Unpublished master's thesis, University of Washington, Seattle, Washington.
- McClure, M., Poulin, M. Sovie, M. & Wandelt, M. (1983). Magnet hospitals: Attraction and retention of professional nurses. Kansas City: ANA.
- National Federation for Specialty Nursing Organizations (1987). Listing of specialty nursing organizations.

- Ossler, C. (1987). Establishing cost-effectiveness in occupational health nursing. AAOHN Journal, 35 (10), 449-453.
- Rickard, L. (1986). Ambiguity and job satisfaction of clinical specialists in a cost-conscious environment. Nursing Administration Quarterly, 11 (1), 65-70.
- Solomon, C. (1982). The effects of a master's degree in occupational health on the delivery of services to workers. Occupational Health Nursing, 30 (8), 9-24.
- Sterner, P. (1983). What does COHN mean? Occupational Health Nursing, 31 (3), 36-48.
- Talbot, D. (1983). An educational model to prepare the baccalaureate nurse for occupational health nursing. Occupational Health Nursing, 31 (5), 20-25.
- Watson, P. & Wells, N. (1987). Nurses attitudes toward the advantages of master's degree preparation in nursing. Journal of Nursing Education, 26 (2), 63-68.
- Wheeler, J. (1984). Preceptorship in occupational health nursing. Occupational Health Nursing, 32 (8), 410-411.
- White, C. & Maguire, M. (1973). Job satisfaction and dissatisfaction among hospital nursing supervisors: The applicability of Herzberg's theory. Nursing Research, 22 (1), 25-30.
- Wolf, G.A. (1981). Nursing turnover: Some causes and trends. Nursing Outlook, 24, 233-236.
- Zal, H. (1985). The occupational nurse's influence on employee attitude and ability to return to work. Occupational Health Nursing, 33 (12), 600-602.

APPENDICES

APPENDIX A
NORTHWEST REGIONAL OCCUPATIONAL HEALTH NURSES SURVEY

APPENDIX A

February 1986

NORTHWEST REGIONAL OCCUPATIONAL HEALTH NURSES SURVEYSECTION I - CURRENT POSITION INFORMATION

This section contains questions about your current occupational health nursing position, responsibilities, and benefits. Please mark one response for each question, unless otherwise indicated.

1. What is your current employment status?

___ Full time ___ Part time ___ Unemployed

IF YOU ARE NOT EMPLOYED AT THIS TIME, CHECK THIS BOX ☐ AND GO ON TO SECTION II, QUESTION 30, PAGE 6.

2. How many years have you worked for your present employer? _____ Years.

3. What is your job classification?

___ Exempt (salary) ___ Nonexempt (hourly wages)
___ Other: Specify _____

4. What is your position title? Please check all that apply.

___ Staff Occupational Health Nurse ___ Administrator
___ Supervisor ___ Certified Nurse Practitioner
___ Consultant ___ Educator
___ Director ___ Other: Specify _____

5. To whom are you responsible administratively?

___ Nursing Director ___ Safety Director
___ Medical Director ___ Personnel Director
___ Industrial Hygienist ___ Risk Manager
___ Industrial Relations ___ Other: Specify _____

6. Indicate your salary or wage range for one month (present primary position).

___ Less than \$1000 ___ \$1501 to \$1750 ___ \$2501 to \$3000
___ \$1001 to \$1250 ___ \$1751 to \$2000 ___ More than \$3000
___ \$1251 to \$1500 ___ \$2001 to \$2500

7. Are you paid an extra hourly sum for evening or night shift work?

___ Yes ___ No ___ Compensatory time ___ Not applicable

8. Are you paid for overtime?

___ Yes ___ No ___ Other: Specify _____

9. How do you receive salary review and increase?

___ On merit
___ Annual (a percentage or \$ amount that is the same for all employees)
___ Other: Specify _____

OHN Survey
Page 2

10. What part of your benefits are paid by your employer?
☐ All ☐ Some ☐ None (skip to item 11)
- a. How does your employer pay the employer portion of your benefits?
☐ Cash ☐ Specific benefits ☐ Flex plan benefits
11. Does the company provide you with any professional liability insurance?
☐ All ☐ Part ☐ None
- a. Do you carry your own professional liability insurance?
☐ Yes ☐ No
12. Do you travel with overnight stays as part of your regular job responsibilities?
☐ Yes ☐ No
13. Are you reimbursed for any of your business expenses (transportation, hotel, meals, etc.)?
☐ All ☐ Part ☐ None
14. Indicate your work schedule. Please check all that apply.
☐ Days ☐ Rotate shifts
☐ Evenings ☐ Weekends
☐ Nights ☐ Holidays
15. Indicate the amounts of time you work at your present primary job.
a. Circle the approximate amount of hours you work each day.
1 2 3 4 5 6 7 8 9 10 More than 10
b. Circle the approximate number of shifts you work each week.
1 2 3 4 5 6 7 8 9 10 More than 10
16. Indicate the type of organization for which you are presently working.
Mark only one.
- | | |
|--|--|
| <input type="checkbox"/> Aerospace | <input type="checkbox"/> Metal fabrication |
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Mining |
| <input type="checkbox"/> Chemical | <input type="checkbox"/> Office |
| <input type="checkbox"/> Construction | <input type="checkbox"/> Petroleum |
| <input type="checkbox"/> Educational institution | <input type="checkbox"/> Pharmaceutical |
| <input type="checkbox"/> Electronics | <input type="checkbox"/> Retail |
| <input type="checkbox"/> Federal/State/County agency | <input type="checkbox"/> Textile |
| <input type="checkbox"/> Food processing | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Health care facility | <input type="checkbox"/> Utilities and energy |
| <input type="checkbox"/> Insurance | <input type="checkbox"/> Other: Specify _____ |
| <input type="checkbox"/> Lumber/wood products | <input type="checkbox"/> Not presently working |
| <input type="checkbox"/> Machinery | |

OHN Survey
Page 3

IF YOU ARE NOT PRESENTLY WORKING AS AN OCCUPATIONAL HEALTH NURSE IN A BUSINESS OR INDUSTRY, PLEASE SKIP TO QUESTION 30, SECTION II, PAGE 6.

17. How many employees are presently working for your organization?

_____ employees

18. Indicate the occupational health personnel employed by the organization for which you are presently working.

	<u>Full Time</u> (Specify number)	<u>Part Time</u> (Specify number)
Occupational health nurse	_____	_____
Industrial hygienist	_____	_____
Doctor	_____	_____
LPN	_____	_____
Medical secretary	_____	_____
Clerical help	_____	_____
Other: Specify _____	_____	_____
Other: Specify _____	_____	_____

19. Indicate your involvement in the following areas of position responsibility.
Mark all that apply.

<u>Areas of Responsibilities</u>	<u>Type of Involvement</u>				
	<i>I do this all myself.</i>	<i>I delegate some of this.</i>	<i>I delegate all of this.</i>	<i>I have no responsibility.</i>	<i>Not applicable.</i>
Prevention and health promotion/maintenance (teaching, health education)					
Crisis and acute care - work-related					
Crisis and acute care - non-work-related					
Health surveillance (including routine physical exams, screening programs, protective clothing and equipment)					
Employee assistance programs (including health counseling)					
Environmental surveillance (plant rounds)					
Program development and administration					
Managing the occupational health department (including budget, writing standards, record work, treatment logs, etc.)					
Management of other occupational health employees					
Consultation with other companies and divisions of the same company, cooperating with other employee health professionals					
Using community resources (making referrals, working with agencies)					
Other: Specify _____					

OHN Survey
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20. Indicate the percentage of time you spend in the following activities each week.

<u>Activity</u>	<u>Percentage</u>
a. Individual nursing care	_____
b. Individual/group health teaching and other primary prevention	_____
c. Counseling - job-related	_____
d. Counseling - personal matters	_____
e. Administrative duties	_____
f. Environmental surveillance/plant walk-through	_____
g. Consulting with line managers	_____
h. Attending meetings	_____
i. Record keeping	_____
j. Free time	_____
k. Program development	_____
l. Other: Specify _____	_____
TOTAL =	100 %

21. Which FOUR of the following aspects of occupational health nursing are most satisfying/rewarding to you? Mark only FOUR (4).

___ Administration of the occupa- tional health program	___ Improving early return-to-work programs
___ Attending meetings	___ Individual patient care
___ Being an advocate for patients	___ Making effective referrals to community health resources
___ Consulting with managers	___ Prevention - keeping people healthy
___ Counseling - job-related	___ Professional independence
___ Counseling - personal matters	___ Record keeping
___ Doing environmental surveillance	___ Working in a business setting
___ Gaining rapport with patients	___ Working with other health and safety professionals
___ Handling emergencies	___ Other: Specify _____
___ Health teaching	
___ Improving compliance with health and safety programs	

22. Which ONE aspect of occupational health nursing is MOST frustrating to you?
Mark only ONE.

___ Working conditions - underpaid, shift rotation, poor benefits
___ Given responsibility, not authority
___ Keeping skills and knowledge current
___ Inadequate facilities/equipment/materials
___ Paper work
___ Other health personnel
___ Employee non-compliance with safety and health rules
___ Employee abuse of health service or insurance
___ Not enough time to provide all assistance needed
___ Government regulations
___ Working with management
___ Lack of management support for health services
___ Preparing budgets
___ Missing hospital work
___ Lack of occupational health nursing preparation/background
___ Other: Specify _____
___ Nothing is frustrating

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IF YOU ARE NOT PRESENTLY WORKING AS AN OCCUPATIONAL HEALTH NURSE IN A BUSINESS OR INDUSTRY, PLEASE SKIP TO QUESTION 30, SECTION II, PAGE 6.

23. How important do you think the occupational health and safety program is to your employer? Circle one number.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Low		Medium		Great
Importance		Importance		Importance

24. Which ONE of the following factors do you think contribute MOST to your employer's valuing of the occupational health and safety program? Mark only ONE.

- ☐ Corporate interest in employee welfare
- ☐ Management is health and safety oriented
- ☐ Health services are seen as cost effective
- ☐ Health personnel push for quality services
- ☐ Government regulations
- ☐ Management is concerned only when an incident occurs
- ☐ Unable to document money saved through health services
- ☐ Health personnel are not involved in the decision-making process
- ☐ Health and safety are not a chief concern
- ☐ Management does not want to finance the health program
- ☐ Other: Specify _____
- ☐ Uncertain if any of the above are a factor

25. How important do you think the occupational health and safety program is to the employees/workers at your place of employment? Circle ONE number.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Low		Medium		Great
Importance		Importance		Importance

26. Which ONE of the following factors do you think contributes MOST to the employees'/workers' valuing of the occupational health and safety program? Mark only ONE.

- ☐ It is free and easily available health care
- ☐ Health needs are met by the service
- ☐ Employees have knowledge and awareness of good health practices
- ☐ The nurse is the employee's advocate
- ☐ Health care keeps the employee on the job
- ☐ Management supports the health service
- ☐ Union support of health services
- ☐ Employees get services elsewhere
- ☐ There is poor management support for the health services
- ☐ Employees are ignorant or have a lack of interest
- ☐ Employees see the nurse as too company-oriented
- ☐ Other: Specify _____
- ☐ Uncertain if any of the above are a factor

27. Which types of workers receive individual health care/counseling services from the occupational health nurse at your company? Mark all that apply.

- | | |
|---|---|
| <input type="checkbox"/> Laborers | <input type="checkbox"/> Professional staff |
| <input type="checkbox"/> Skilled workers | <input type="checkbox"/> Top management |
| <input type="checkbox"/> White collar workers | <input type="checkbox"/> Other: Specify _____ |
| <input type="checkbox"/> First level management | <input type="checkbox"/> Not applicable |
| <input type="checkbox"/> Middle management | |

OHN Survey
Page 6

28. What are the FIVE most frequently occurring health problems/injuries handled by the nurse at your company? Mark only FIVE.

<input type="checkbox"/> Back injuries	<input type="checkbox"/> Heat or electrical burns
<input type="checkbox"/> Broken bones	<input type="checkbox"/> Hernia
<input type="checkbox"/> Cancer	<input type="checkbox"/> High blood pressure
<input type="checkbox"/> Cardiovascular disease	<input type="checkbox"/> Mental illness
<input type="checkbox"/> Chemical burns	<input type="checkbox"/> Nervousness/anxiety
<input type="checkbox"/> Chronic lung disease	<input type="checkbox"/> Reportable communicable diseases
<input type="checkbox"/> Cuts/wounds	<input type="checkbox"/> Upper respiratory infection
<input type="checkbox"/> Dermatitis/skin disease	<input type="checkbox"/> Other: Specify _____
<input type="checkbox"/> Eye injuries	<input type="checkbox"/> Not applicable
<input type="checkbox"/> Headaches	

29. What ONE change would you MOST like to see to improve the services offered by the occupational health nurse in your employment setting? Mark only ONE.

☐ Additional health personnel

☐ Improvements in the industrial hygiene/safety component of the health program

☐ Offer more prevention and wellness programs

☐ Offer a wider variety of screening programs

☐ Have more frequent/better physical exams

☐ Increase the operating budget

☐ Purchase new equipment/update old equipment

☐ Expand facilities

☐ Other: Specify _____

☐ No change is needed now

SECTION II - EDUCATION AND PROFESSIONAL DEVELOPMENT

This section contains questions about continuing education and professional development. Please mark ONE response for each question.

30. Indicate the type and amount of education you completed as preparation for occupational health nursing. Indicate amounts of each type.

☐ College Courses - approximate number of credits _____

☐ College degree: Specify type _____

☐ Workshops/Seminars - approximate number of hours _____

☐ No special preparation

31. Check the types of certification you hold. Mark all that apply.

<input type="checkbox"/> Audiometry	<input type="checkbox"/> ANA Certified in a nursing specialty
<input type="checkbox"/> Spirometry	<input type="checkbox"/> Nurse practitioner
<input type="checkbox"/> Cardiopulmonary resuscitation	<input type="checkbox"/> Other: Specify _____
<input type="checkbox"/> COHN (Certified Occupational Health Nurse)	

32. If you are not now certified as a COHN, are you eligible for certification (5 years of full time work and 75 contact hours of education)?

☐ Yes (skip to 32 b, c, d) ☐ No (answer 32 a, b, c, d) ☐ Don't know

☐ I am certified (skip to question 33)

a. If no, in what year will you be eligible for certification (COHN)? _____

OHN Survey
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32. b. Obtaining certification as an occupational health nurse would enhance my professional skills. Circle your desired response.

1 2 3 4 5
Strongly Neutral Strongly
Disagree Agree

- c. Obtaining certification as an occupational health nurse would enhance my professional credibility. Circle your desired response.

1 2 3 4 5
Strongly Neutral Strongly
Disagree Agree

- d. Would you attend a course to prepare for the certification examination?

___ Yes ___ No ___ Unsure

33. Does your employer allow you time off to attend continuing education courses?

___ Always ___ Sometimes ___ Never

34. Estimate the number of continuing education credits you took in the last year.

_____ Hours of continuing education workshops
_____ Number of college credits

35. Approximately what percentage of your continuing education expenses are paid by your employer?

_____ Indicate the percentage covered ___ None is covered

36. What level of interest do you have in attending continuing education workshops designed for occupational health nurses? Circle your desired response.

1 2 3 4 5
Low Medium High
Interest Interest Interest

37. Indicate continuing education topics of interest to you. Check ALL that apply.

___ Advanced life support	___ Managing a program/department budget
___ Alcoholism programs for business	___ Occupational health/illness
___ Audiometric certification	___ Orthopedic nursing
___ Business administration	___ Pharmacology update
___ Cardiopulmonary resuscitation	___ Physical assessment
___ Computer record keeping	___ Program evaluation techniques
___ Counseling techniques	___ Risk management/accident prevention
___ Drug abuse programs	___ Safety engineering
___ Environmental surveillance	___ Spirometry certification
___ Ergonomics/human factors	___ Sports medicine
___ Health/wellness	___ Stress management
___ Industrial hygiene	___ Toxicology
___ Labor relations	___ Trauma/emergency nursing
___ Leadership and management skills	___ Worker compensation laws
___ Legal aspects for the OHN	___ Other: Specify _____

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Page 8

38. Which of the following factors would deter you from attending continuing education offerings? Mark ALL that apply.

- ☐ Too high a cost
☐ Topic not relevant to needs/interests
☐ Having to travel too far
☐ Unable to leave work during scheduled work hours
☐ Other: Specify _____

39. When would it be most convenient for you to attend continuing education offerings?

- ☐ Can arrange to attend any time with enough notice
☐ Can attend during work hours
☐ Can attend only during off work times
☐ Can attend only evenings
☐ Can attend only weekends
☐ Other: Specify _____

a. Indicate day(s) of the week you prefer.

b. Indicate length of program you prefer.

- ☐ 1-2 hours a day for several weeks
☐ 4-hour blocks
☐ One day at a time
☐ 2-3 days at a time
☐ Length doesn't matter
☐ Other: Specify _____

40. How much interest do you have in pursuing more academic education?

- ☐ High interest
☐ Moderate interest
☐ Low interest
☐ Uncertain
☐ No interest

41. What course of academic study would you pursue, if interested?

- ☐ Bachelors degree in nursing
☐ Other bachelors degree: Major _____
☐ Masters degree in nursing
☐ Other masters degree: Major _____
☐ Doctoral degree: Major _____
☐ No further academic education
☐ Uncertain

SECTION III - DESCRIPTIVE INFORMATION

This section contains questions about individual information. Please mark ONE response for each question.

42. Sex: ☐ Male ☐ Female

43. Age: ☐ Less than 20 years ☐ 50-59 years
☐ 20-29 years ☐ 60-69 years
☐ 30-39 years ☐ 70 or more years
☐ 40-49 years

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44. Basic nursing education: _____ Diploma _____ AD/AA _____ BS/BSN
45. Highest degree obtained: _____ AD/AA
 _____ BS Major: _____
 _____ MS/MN Major: _____
 _____ MPH Major: _____
 _____ Other: Specify _____
46. Indicate the type and amount of work experience you had prior to working in occupational health nursing. Mark ALL that apply.
- | | <u>Number of years</u> | | <u>Number of years</u> |
|------------------|------------------------|------------------|------------------------|
| ICU/CCU | _____ | Pediatrics | _____ |
| Emergency/trauma | _____ | Community health | _____ |
| Medical | _____ | Psychiatric | _____ |
| Surgical | _____ | Operating room | _____ |
| OB/Gyn | _____ | Other: Specify | _____ |
| Float | _____ | | _____ |
47. How many years have you worked in occupational health nursing? _____ Years
48. Indicate the number of employers you have had in your occupational health nursing career - FULL TIME STATUS.
- _____ Number of employers _____ Not applicable
49. Indicate the number of employers you have had in your occupational health nursing career - PART TIME STATUS.
- _____ Number of employers _____ Not applicable
50. Which ONE of the following factors MOST attracted you to occupational health nursing? Mark only ONE.
- _____ Job security
 _____ Acceptance as a professional
 _____ Desired one-to-one care of patients
 _____ Enjoy trauma care
 _____ Professional independence and challenge
 _____ Wanted to focus on prevention and health teaching
 _____ Personal advancement
 _____ Good salary/hours/benefit
 _____ Tired of hospital nursing
 _____ The challenge of a broad scope of practice and/or variety of tasks
 _____ Wanted to work in an industrial/business setting
 _____ Wanted to work with healthy people
 _____ Other: Specify _____
51. Indicate your degree of satisfaction with occupational health nursing by circling the appropriate number.
- | | | | | |
|-----------------|---|---------|---|--------------|
| 1 | 2 | 3 | 4 | 5 |
| Strong | | Neutral | | Strong |
| Dissatisfaction | | | | Satisfaction |

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52. Indicate the professional organizations to which you belong. Mark ALL that apply.

- ☐ American Association of Occupational Health Nurses
- ☐ Western Association of Occupational Health Nurses
- ☐ The local Association of Occupational Health Nurses
- ☐ American Nurses' Association
- ☐ Oregon Nurses' Association
- ☐ Washington Nurses' Association
- ☐ Idaho Nurses' Association
- ☐ Alaska Nurses' Association
- ☐ National League for Nursing
- ☐ The state League for Nursing
- ☐ Sigma Theta Tau
- ☐ American Public Health Association
- ☐ The state Public Health Association
- ☐ American Industrial Hygiene Association
- ☐ American Society of Safety Engineers
- ☐ Other: Specify _____
- ☐ I don't belong to any organization

SECTION IV - INFORMATION ABOUT THE LOCAL ASSOCIATION OF OCCUPATIONAL HEALTH NURSES

This section contains questions about the local Association of Occupational Health Nurses in your area. Please mark ONE response for each question, unless otherwise indicated.

53. Are you a member of the local Association of Occupational Health Nurses in your area?

- ☐ Yes ☐ No (go on to item 54) ☐ No local association is available where I am

a. If yes, of which local association are you a member?

- ☐ Columbia River AOHN
- ☐ North Western AOHN
- ☐ Other: Specify _____

b. If yes, who pays your membership dues?

- ☐ Nurse pays all
- ☐ Employer pays all
- ☐ Nurse and employer share the cost
- ☐ Other: Specify _____

54. If you are not currently a member of the local AOHN in your area, would you like to be?

- ☐ Yes ☐ No ☐ Unsure

55. If you are not currently a member of the local AOHN in your area, have you been a member in the past?

- ☐ Yes (please complete the next three pages)
☐ No (you need not complete the next three pages of this questionnaire).

a. If you dropped your local AOHN membership, indicate why. Check ALL that apply.

- ☐ Cost of dues was too high
- ☐ Distance to travel for meetings was too far
- ☐ Meeting topics were not of interest
- ☐ I didn't feel welcome
- ☐ Other: Specify _____

Circle your response for each item in Column I. Indicate how important this characteristic is by circling a response in Column II.

IF YOU HAVE NEVER BEEN A MEMBER OF
THE LOCAL ACHN IN YOUR AREA, YOU
NEED NOT ANSWER THIS SECTION.

COLUMN I
To what degree does the
local AOHN achieve the
following character-
istics?

COLUMN II
In your opinion,
how important is
this characteris-
tic for the local
AOHN?

	Low degree					Moderate degree				High degree				No priority				Low priority				Medium priority				High priority					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
56. The local AOHN has an efficient system of communication within the organization.	1	2	3	4	5											0	1	2	3												
57. The local AOHN's written communication with its members is clear, concise and complete.	1	2	3	4	5											0	1	2	3												
58. The local AOHN's meetings are stimulating and provide challenging and useful information.	1	2	3	4	5											0	1	2	3												
59. The local AOHN conducts its business and activities in an ethical manner.	1	2	3	4	5											0	1	2	3												
60. The local AOHN sponsors appropriate educational programs.	1	2	3	4	5											0	1	2	3												
61. The local AOHN sponsors and/or co-sponsors continuing education programs with other organizations.	1	2	3	4	5											0	1	2	3												
62. The local AOHN encourages establishment of cooperative relationships with other professional organizations.	1	2	3	4	5											0	1	2	3												
63. The local AOHN members communicate well with individuals in related fields such as safety, industrial hygiene, and risk management.	1	2	3	4	5											0	1	2	3												
64. The local AOHN is recognized by business and industry leaders as a resource on occupational health and safety.	1	2	3	4	5											0	1	2	3												
65. The local AOHN is recognized by the State Legislature as a resource on occupational health and safety issues.	1	2	3	4	5											0	1	2	3												
66. The local AOHN encourages individual nurses to assume more initiative in relation to pertinent legislative activities.	1	2	3	4	5											0	1	2	3												

Circle your response for each item in Column I. Indicate how important this characteristic is by circling a response in Column II.

IF YOU HAVE NEVER BEEN A MEMBER OF THE LOCAL ACHN IN YOUR AREA, YOU NEED NOT ANSWER THIS SECTION.		COLUMN I					COLUMN II				
		To what degree does the local ACHN achieve the following characteristics?					In your opinion, how important is this characteristic for the local ACHN?				
		Low degree	Moderate degree			High degree	No priority	Low priority	Medium priority	High priority	
67.	The local ACHN is current regarding trends in the administration of occupational health and safety programs.	1	2	3	4	5	0	1	2	3	
68.	The local ACHN is progressive in ideas and actions in providing leadership to occupational health nurses in the community.	1	2	3	4	5	0	1	2	3	
69.	The local ACHN supports the certification program for the American Board of Occupational Health Nursing	1	2	3	4	5	0	1	2	3	
70.	The local ACHN members are willing to share information regarding their individual activities.	1	2	3	4	5	0	1	2	3	
71.	The local ACHN supports me in seeking to pursue my career goals.	1	2	3	4	5	0	1	2	3	
72.	The local ACHN encourages professionalism and the pursuit of excellence in occupational health nursing.	1	2	3	4	5	0	1	2	3	
73.	The local ACHN actively supports education of nursing students in relation to occupational health.	1	2	3	4	5	0	1	2	3	

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Circle your response for each item in Column I. Indicate the priority of change needed for each item by circling a response in Column II.

IF YOU HAVE NEVER BEEN A
MEMBER OF THE LOCAL ACHN, YOU
NEED NOT ANSWER THIS SECTION.

COLUMN I
Indicate the amount
of agreement you have
with the following.

COLUMN II
If this area presently
needs improvement, how
important is the need
for change?

NOTE CHANGE IN
INSTRUCTIONS!!

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	No change priority	Low priority	Medium priority	High priority
74. The purpose and objectives of the local ACHN are clear.	1	2	3	4	5	0	1	2	3
75. The primary function of the local ACHN is education.	1	2	3	4	5	0	1	2	3
76. The primary function of the local ACHN is socializing.	1	2	3	4	5	0	1	2	3
77. The primary function of the local ACHN is net-working.	1	2	3	4	5	0	1	2	3
78. During my time as a member of the local ACHN, I have seen positive growth and changes.	1	2	3	4	5	0	1	2	3
79. Ways for members to participate in the organization are clear.	1	2	3	4	5	0	1	2	3
80. As a member of the local ACHN, I feel motivated to donate time and energy to organization projects.	1	2	3	4	5	0	1	2	3
81. I have time to attend meetings and fulfill membership obligations.	1	2	3	4	5	0	1	2	3
82. The local ACHN meetings are conveniently scheduled.	1	2	3	4	5	0	1	2	3
83. Meetings should also occur in the summer months.	1	2	3	4	5	0	1	2	3
84. The meeting locations are convenient.	1	2	3	4	5	0	1	2	3
85. Meeting locations should be rotated among the cities represented in the organization.	1	2	3	4	5	0	1	2	3
86. The cost of dinner meetings is reasonable.	1	2	3	4	5	0	1	2	3
87. Membership dues are reasonable.	1	2	3	4	5	0	1	2	3
88. Educational programs should continue as part of the monthly meetings.	1	2	3	4	5	0	1	2	3
89. There should be a charge for educational programs.	1	2	3	4	5	0	1	2	3
90. The local ACHN should maintain an occupational health nursing library.	1	2	3	4	5	0	1	2	3

APPENDIX B
SURVEY COVER LETTER

APPENDIX B

THE OREGON HEALTH SCIENCES UNIVERSITY

School of Nursing
Community Health Care Systems

3181 S.W. Sam Jackson Park Road Portland, Oregon 97201 (503) 225-7709

February 1986

Dear Colleague,

Attached to this letter of introduction is a copy of the Northwest Regional Occupational Health Nurses Survey. This survey is being sent to about four hundred registered nurses in Alaska, Idaho, Oregon and Washington who have occupational health as their special area of nursing practice. The survey is sponsored by the Columbia River Association of Occupational Health Nurses with support from the Schools of Nursing at Oregon Health Sciences University and the University of Washington, and the Northwest Association of Occupational Health Nurses.

This comprehensive regional survey has been designed to describe many aspects of the professional practice activities and employment characteristics of occupational health nurses. It contains four sections:

- Section I - Current Position Information
- Section II - Education and Professional Development
- Section III - Descriptive Information
- Section IV - Information About the Local Association of Occupational Health Nurses (in your area)

All responses are confidential. No individual participant can be identified.

I hope that you will take the time to carefully answer the survey questionnaire. It should take about 15-20 minutes. Instructions are located on the tool. For your convenience, a stamped envelope has been included for returning the completed questionnaire. Survey results will be available in the summer.

Thank you for your attention and participation. If you have questions or know an occupational health nurse who did not receive a questionnaire, please call me at (503) 225-7709. I look forward to your response with much anticipation.

Sincerely,



Shelley L. Jones, RN, MS
Assistant Professor
Occupational Health Consultant



APPENDIX C

AREAS OF RESPONSIBILITY BY POSITION

APPENDIX C

ADMINISTRATIVE	PERSONNEL									
	STAFF					ADMINISTRATIVE				
	Areas of Responsibility	Supervisor	Consultant	Director	Administrator	Nurse Practitioner	Educator	Other		
	N	33	20	3	7	6	13	43		
Environmental Surveillance										
Do all	9	9%	1	5%	0	0	0	0	2	15%
Delegate some	32	33%	15	45%	2	29%	3	50%	6	46%
Delegate all	4	4%	0	0%	0	0	1	17%	0	0%
No responsibility	24	25%	5	15%	6	30%	0	0%	2	15%
Program Direction										
Do all	35	36%	14	42%	10	50%	2	67%	4	57%
Delegate some	26	28%	9	27%	4	20%	1	33%	1	14%
Delegate all	1	1%	1	3%	0	0%	0	0%	0	0%
No responsibility	16	17%	2	6%	2	10%	0	0%	1	8%
Occupational Health Dept. Mgmt.										
Do all	44	46%	17	52%	9	45%	2	67%	4	57%
Delegate some	26	27%	9	27%	1	5%	1	33%	0	0%
Delegate all	0	0%	0	0%	0	0%	0	0%	0	0%
No responsibility	11	11%	1	3%	5	25%	0	0%	1	14%
Mgmt. of Oth. Health Dept. Employees										
Do all	12	13%	14	42%	3	15%	0	0%	2	29%
Delegate some	8	8%	4	12%	4	20%	2	67%	1	14%
Delegate all	1	1%	0	0%	0	0%	0	0%	1	14%
No responsibility	21	22%	2	6%	5	25%	0	0%	1	14%
Consultation										
Do all	44	46%	16	48%	11	55%	2	67%	3	43%
Delegate some	14	15%	8	24%	2	10%	1	33%	2	29%
Delegate all	0	0%	0	0%	0	0%	0	0%	0	0%
No responsibility	13	14%	2	6%	2	10%	0	0%	1	14%

APPENDIX G

NONADMINISTRATIVE															
		Staff Nurse		POSITION											
				Supervisor	Consultant	Director	Administrator	Nurse Practitioner	Educator	Other					
Areas of Responsibility		N = 96	33	20	3	7	6	13	43						
Prevention and Health Promotion															
Do all		49	51%	12	37%	8	40%	2	29%	2	33%	7	54%	11	23%
Delegate some		30	31%	14	42%	4	20%	1	33%	2	33%	3	23%	19	44%
Delegate all		0	0%	0	0%	1	5%	0	0%	1	14%	0	0%	1	2%
No responsibility		5	5%	2	6%	3	15%	0	0%	0	0%	0	0%	4	9%
Crisis Care--Work Related															
Do all		34	35%	6	18%	3	15%	1	33%	1	14%	2	33%	4	31%
Delegate some		24	25%	6	18%	3	15%	2	67%	1	14%	3	50%	2	15%
Delegate all		5	5%	2	6%	2	10%	0	0%	1	14%	0	0%	0	0%
No responsibility		5	5%	1	3%	5	25%	0	0%	1	14%	0	0%	0	0%
Crisis Care--Non-Work Related															
Do all		45	47%	7	21%	6	30%	2	67%	1	14%	2	33%	5	38%
Delegate some		28	29%	17	52%	3	15%	1	33%	2	29%	3	50%	3	23%
Delegate all		3	3%	2	6%	2	10%	1	33%	1	14%	0	0%	0	0%
No responsibility		3	3%	1	3%	5	25%	0	0%	1	14%	0	0%	1	8%
Employee Assistance Program															
Do all		27	28%	9	27%	6	30%	2	67%	1	14%	1	17%	4	31%
Delegate some		34	35%	14	42%	2	10%	1	33%	2	29%	4	66%	5	38%
Delegate all		7	7%	2	6%	2	10%	0	0%	0	0%	0	0%	0	0%
No responsibility		10	10%	1	3%	5	25%	0	0%	1	14%	0	0%	0	0%
Using Community Resources															
Do all		52	54%	13	39%	12	60%	2	67%	3	43%	1	17%	5	38%
Delegate some		23	24%	13	39%	3	15%	1	33%	2	29%	4	66%	4	31%
Delegate all		2	2%	1	3%	0	0%	0	0%	1	14%	0	0%	0	0%
No responsibility		3	3%	1	3%	2	10%	0	0%	0	0%	0	0%	0	0%

APPENDIX D

PRACTICE RESPONSIBILITY OF ALL OCCUPATIONAL HEALTH NURSES

APPENDIX D

PRACTICE RESPONSIBILITY OF ALL OCCUPATIONAL HEALTH NURSES

N - 174						
Item	Do All (1)	Delegate (2) Some	Delegate (3) All	No Responsi- bility	(4)	N/A or Missing
<u>NONADMINISTRATIVE RESPONSIBILITY:</u>						
Health Prevention and Promotion	67	57	2	10		38
Crisis Care--Work Related	57	53	6	11		47
Crisis Care--Non-Work Related	46	46	7	13		62
Health Surveillance	47	67	5	14		41
Employee Assistance	41	60	10	18		45
Using Community Resources	82	45	4	4		39

ADMINISTRATIVE RESPONSIBILITY:

Environmental Surveillance	14	57	7	39		57
Program Development	63	46	1	19		45
Occupational Health Dept. Mgmt.	75	42	0	14		43
Mgmt. of Oth. Health Dept. Empl.	33	16	2	28		95
Consultation	75	28	0	16		55

APPENDIX E
ASPECTS OF OCCUPATIONAL HEALTH NURSING
THAT ARE MOST SATISFYING/REWARDING

APPENDIX EASPECTS OF OCCUPATIONAL HEALTH NURSING
THAT ARE MOST SATISFYING/REWARDING

<u>Label</u>	<u>SATISFYING</u>		<u>Missing</u>	<u>N/A</u>
	<u>Yes</u>	<u>No</u>		
Admin. of the Occupational Health Program	31	113	10	20
Attending Meetings	1	143	10	20
Being an Advocate for Patients	33	111	10	20
Consulting with Managers	11	133	10	20
Counseling--Job Related	13	131	10	20
Counseling--Personal Matters	19	125	10	20
Doing Environmental Surveillance	5	139	10	20
Gaining Rapport with Patients	29	115	10	20
Handling Emergencies	35	109	10	20
Health Teaching	68	76	10	20
Improving Compliance with Health and Safety Programs	19	125	10	20
Improving Early Return to Work Programs	26	118	10	20
Individual Patient Care	63	81	10	20
Making Effective Referrals to Community Health Resources	25	119	10	20
Prevention--Keeping People Healthy	73	71	10	20
Professional Independence	60	84	10	20
Record Keeping	4	140	10	20
Working in a Business Setting	19	125	10	20
Working with Other Health and Safety Professionals	29	115	10	20
Other	4	140	10	20

APPENDIX F

ASPECTS OF OCCUPATIONAL HEALTH NURSING THAT ARE MOST FRUSTRATING

APPENDIX FASPECTS OF OCCUPATIONAL HEALTH NURSING THAT ARE MOST FRUSTRATING

<u>Label</u>	<u>Value</u>	<u>Frequency</u>	<u>Cumulative Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
N/A	-7	20	20	12.12	12.12
Working Conditions	1	2	22	1.21	13.33
No Authority	2	11	33	6.67	20.00
Keeping Current	3	8	41	4.85	24.85
Inadequate Materials	4	2	43	1.21	26.06
Paper Work	5	18	61	10.91	36.97
Other Personnel	6	3	64	1.82	38.79
Employee Non-Compl.	7	8	72	4.85	43.64
Employee Abuse	8	16	88	9.70	53.33
No Time	9	15	103	9.09	62.42
Government Regs	10	2	105	1.21	63.64
Management	11	5	110	3.03	66.67
Lack of Support	12	17	127	10.30	76.97
Preparing Budgets	13	1	128	0.61	77.58
Missing Hospital	14	2	130	1.21	78.79
Background Prep	15	4	134	2.42	81.21
Other	16	12	146	7.27	88.48
Nothing	17	15	161	9.09	<u>97.58</u>
	18	4	165	2.42	100.00

APPENDIX G

MOST ATTRACTIVE ASPECTS OF OCCUPATIONAL HEALTH NURSING

APPENDIX GMOST ATTRACTIVE ASPECTS OF OCCUPATIONAL HEALTH NURSING

<u>Label</u>	<u>Value</u>	<u>Absolute Frequency</u>	<u>Relative Frequency (Percent)</u>	<u>Adjusted Frequency (Percent)</u>	<u>Cumulative Frequency (Percent)</u>
Job Security	1	1	0.6	0.6	0.6
Patient Care	3	2	1.1	1.2	1.8
Trauma Care	4	3	1.7	1.8	3.5
Independence Challen	5	30	17.2	17.5	21.1
Prevention Teaching	6	11	6.3	6.4	27.5
Advancement	7	5	2.9	2.9	30.4
Good Salary and Bene	8	29	16.7	17.0	47.4
Tired Hospital	9	10	5.7	5.8	53.2
Broad Scope	10	32	18.4	18.7	71.9
Work Setting	11	7	4.0	4.1	76.0
Healthy People	12	6	3.4	3.5	79.5
Other	13	10	5.7	5.8	85.4
	14	24	13.8	14.0	99.4
	25611	1	0.6	0.6	100.0
	-9	<u>3</u>	<u>1.7</u>	<u>Missing</u>	100.0
	TOTAL	174	100.0	100.0	

Valid Cases: 171

Missing Cases: 3

ABSTRACT

ABSTRACT

Title: A Description of Professional Preparation, Practice Responsibilities and Job Satisfaction among Occupational Health Nurses

Author: Betsy Leigh, RN, BSN

Approved: Joyce Calling, PhD. R.N. F.A.A.N. Advisor

This study explored the relationships among professional preparation, practice responsibilities and job satisfaction of 174 occupational health nurses. Data were from a study which had surveyed occupational health nurses in the Northwest.

Of the 174 nurses in the study, the majority (79%) were employed full time, were female (93%), were over 40 years of age and had worked in occupational health between 5 and 20 years. Nurses stated they had either an associate degree (21%), baccalaureate degree (20.7%), or diploma (36%) in nursing. Only 13.2% declared their highest degree was a masters in nursing or public health. Respondents were working in a variety of positions, but the majority (55%) stated they were staff nurses, while 19% were supervisors, 11.5% were consultants, and the remaining 13.5% described themselves as directors, administrators, nurse practitioners, or educators.

There were suggestions in the literature there would be positive relationships among the professional preparation, practice responsibilities, and job satisfaction of occupational health nurses. No statistically significant findings, however, were obtained among the study variables. The following trends were noted:

1. Advanced professional preparation was positively related to a higher extent of practice responsibility ($r = .1013$, $p = .25$).
2. Advanced professional preparation was negatively related to job satisfaction ($r = -.009$, $p = .92$).
3. A higher extent of practice responsibility was negatively related to job satisfaction ($r = -.009$, $p = .92$).

Further analyses were done on the 53 occupational health nurses in the study who had less than 5 years of practice experience. These findings were similar to the previous findings despite differences in the percent who had more educational preparation from those in the larger group.

Data in the original study were collected in a form which made it difficult to analyze only the variables of interest. Secondly, most respondents were from Washington and Oregon, which limited the generalizability of findings. The study, however, is the first to be

conducted in this area and offers some direction about further studies of this population of nurses. One recommendation is that further information be gathered regarding the study variables using an interview format by telephone to illicit more qualitative data. Many changes are occurring in the scope of practice of occupational health nursing, and it will be of value to understand specifically what content areas are needed in educational programs to adequately meet the responsibilities of the future.