

3,

THE UNIVERSITY OF DELAWARE

REGISTERED NURSE RECRUITMENT AND RETENTION:
AN ANALYSIS OF A SURVEY OF
DELAWARE DEPARTMENT OF HEALTH AND SOCIAL SERVICES
REGISTERED NURSES

An Internship Report Submitted to the
Faculty of the College of Urban Affairs
and Public Policy and the Department of
Political Science in Partial Fulfillment
of the Requirements for the Degree of
Master of Public Administration

(

by
Lance R. Groff

Newark, Delaware
May, 1988

2

CONTENTS

List of Tables	iii
List of Figures	iv
PREFACE	v
EXECUTIVE SUMMARY	1
I. THE OBJECTIVE OF THE SURVEY AND ITS SELECTION	4
II. RECRUITMENT AND RETENTION AMONG DHSS RNS	7
Demographics	7
Recruitment and Retention	7
Turnover	8
III. EXAMINATION OF DHSS RNS AND THE FINDINGS	12
Review of the literature	12
Intent to leave and variables related to it	14
Salary	17
Benefits	19
Advancement opportunities	20
Staffing	21
Time with patients	23
Type of shift worked	23
Repetitiveness of the work	24
Work setting	25
Workload	26
Nursing as a career	26
Management training	27
Friends at work	28
Year licensed as a RN	28
Years with employer	29
Second job	29
Age	30
Children	31
Maternity leave	32
Level of professional training	32
Monetary inducements	33
Workweek improvements	33
Opportunity and variables related to it	35
Challenge	36
Appreciation/Prestige	37
Professional Treatment	37
Overtime	38
Time allocation	38

Factor analysis	40
Rewards	41
Communications and decision making	41
Time allocation	42
Shifts	43
Challenge	43
Supervisor	44
Autonomy	44
IV. A COMPARISON OF DHSS RNs AND NON-DHSS RNs	45
Demographics	45
Job characteristics	47
Job satisfaction items	47
Summary	53
V. CONCLUSIONS	55
VI. RECOMMENDATIONS FOR DHSS RECRUITMENT & RETENTION	58
95% Salary level	58
Day care	58
9 month employment	58
Alternative career ladder	59
VII. RECOMMENDATIONS FOR FURTHER ANALYSIS	60
Logit analysis	60
Exploratory analysis	60
Non-DHSS analysis	61
Follow-up survey	61
Comparison with teachers	61
References	
Appendix A: 1987 Registered nurse survey	

LIST OF TABLES

1.	Comparison of national and Delaware registered nurses demographics	7
2.	Characteristics of DHSS RNs	7
3.	Likelihood of leaving DHSS for another employer in the next five years	15
4.	Kendall's Tau-c scores for variables significantly related to intent to leave and perceived likelihood of finding a better job in nursing	16
5.	Distribution of years of employment with DHSS	29
6.	Factor scores for satisfaction/dissatisfaction variables	40
7.	DHSS and non-DHSS RNs demographics	45
8.	DHSS and non-DHSS RNs demographics II	46
9.	DHSS and non-DHSS RNs job characteristics	47
10.	Comparison of DHSS and non-DHSS RNS satisfaction levels with different aspects of nursing	47

LIST OF FIGURES

1.	Distribution of likelihood of leaving in the next five years for another employer for DHSS RNs	15
2.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with salary	17
3.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with benefits	19
4.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with advancement opportunity	20
5.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with the amount of staffing	21
6.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with time spent with patients	23
7.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with type of shift worked	23
8.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with the repetitiveness of the work	24
9.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with the work setting	25
10.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with the workload	26
11.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with nursing as a career	26
12.	Frequency for DHSS RNs on the reform; management training	27
13.	Perceived likelihood of finding a better job in nursing for DHSS RNs	35
14.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with the amount of challenge	36
15.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with appreciation/prestige	37
16.	Frequency for DHSS RNs on satisfaction/dissatisfaction level with professional treatment	37
17.	Frequency for the amount of overtime worked by DHSS RNs	38

PREFACE

In the summer of 1987 there were sixty-two vacant registered nurse positions within the Delaware Department of Health and Social Services health care system. This figure represented approximately one-sixth of the allotted nursing complement. DHSS's delivery of health care was severely affected by this large vacancy rate. It was necessary to take action to alleviate this problem, but the question was what type of action(s).

As an intern working for DHSS, this author proposed that a mail-survey be conducted to ascertain the attitudes and perceptions of registered nurses in Delaware and, more importantly, the attitudes and perceptions of DHSS registered nurses. DHSS approved this proposal for two reasons. First, DHSS recognized that it was important to attain data on registered nurses within Delaware and the DHSS health care system. Second, this author had previously worked on a similar survey with Dr. Jeffrey A. Raffel at the University of Delaware that examined the attitudes and perceptions of Delaware teachers for the purpose of increasing Delaware's ability to retain and recruit teachers. (Raffel, 1987), and thus the author had experience in the areas of survey design and analysis.

The following is the report resulting from the survey.

Executive Summary

In August, 1987 the Census and Data System at the University of Delaware conducted a mail survey for the Delaware Department of Health and Social Services. The focus of the survey was on registered nurses' attitudes towards their jobs in the state of Delaware. This report is an analysis of the results from this survey and specifically an analysis of the DHSS registered nurses.

Job satisfaction and intent to leave among DHSS RNs

Of the seventy-eight identified DHSS RNs in the survey, forty-five percent stated that they were likely or very likely to leave DHSS for another nursing job in the next five years. The following variables were found to be significantly related to the intent to leave:

Salary- Slightly over half of the DHSS RNs reported dissatisfaction with the salary they received. It would seem that the key issue for DHSS is salary competitiveness. If DHSS can remain fairly competitive in terms of salary, then this might eliminate salary as part of the process of deciding to leave DHSS for a RN position in another health care agency.

Benefits- Approximately one-third of DHSS RNs reported dissatisfaction with the benefits they received. There is no doubt that raising the level of satisfaction with benefits would help retain DHSS RNs. The question that needs to be further explored is what benefits do DHSS RNs perceive as possessing and what additional benefits do they desire.

Advancement Opportunity- Almost ninety-percent of DHSS RNs reported dissatisfaction with their advancement opportunity. Any mechanism that is set-up to abate this problem should not only address the question of advancement but also address the question of advancement without having to progress into a supervisory position.

Time spent with patients- Fifty-percent of DHSS RNs reported dissatisfaction with the amount of time they spend with the patients. Since this was one of the primary reasons that RNs entered nursing, an effort should be made to ensure as much patient contact as possible.

Management training for supervisors- Fifty-four percent of DHSS RNs felt that management training would help a lot in attracting people into nursing. The problem illustrated by this result is that often nursing supervisors are promoted through the ranks and have little supervisory experience.

Year licensed as a registered nurse- The median year of licensure reported for DHSS RNs was 1965. A 1984 national survey found that seventy-two percent of the RNs had been licensed since 1970. This would seem to indicate that DHSS has neither been attracting nor retaining young RNs. This was further supported by the age distribution of DHSS RNs and non-DHSS RNs. DHSS had a significantly lower percentage of RNs under twenty-nine than non-DHSS RNs.

Children- The presence of children was found to be significantly related to intent to leave. Forty-two percent of DHSS RNs have children and thirty-eight percent of these RNs have children under six years old. The enactment of a day care program, along with other programs, may give DHSS a temporary comparative advantage in the local labor market. This comparative advantage would hopefully attract more RNs to DHSS and then the strength of the other improvements would enable DHSS to retain them.

Recommendations

The following are some suggested recommendations for DHSS.

95% Salary Minimum- A plan that would maintain DHSS RN salaries within at least 95% of the area RN salaries.

Day Care Facilities- A plan that would establish day care facilities on various DHSS sites or reimburse RNs for alternative day care.

9 Month Hiring - A plan to hire RNs on a nine-month basis. This would allow them to spend the summers with their children.

Career Ladder- The creation of a career ladder that is competency and seniority based and would allow RNs to remain in positions other than having to progress into supervisory

positions.

Suggestions for further research are as follows.

Perform logit analysis on the items related to intent to leave.

Perform exploratory analysis to explain the differences between DHSS and non-DHSS satisfaction levels.

Perform a similar study to this one for non-DHSS RNs.

Perform a follow-up survey of DHSS RNs once the policy changes have taken place.

OBJECTIVE

The female dominated public service professions are facing a crisis. These professions are experiencing an increasing inability to recruit and retain qualified personnel. The two fields where this is most apparent are in health and education. Teacher shortages and nursing shortages have been identified.

In Delaware concerns about the nursing shortage led to this study. The Department of Health and Social Services (DHSS) operates five institutions and twelve state service centers that require nurses. In 1987, these facilities were short sixty-two nurses. There was great concern that Delaware's nursing shortage be addressed.

Concern for the shortage was not limited to Delaware health officials. In the past year we have been bombarded with newspaper articles, television programs, and speeches about the nursing shortage. Everyone from nursing directors down to the common man on the street has ideas on how to solve the problem. These solutions, while they may prove to be effective, often are independent of systematic understanding of the views of nurses.

The objective of this study was to design a survey questionnaire that ascertained registered nurses' attitudes in the state of Delaware. The questionnaire was to be distributed to a sample of registered nurses licensed in Delaware, encompassing both active and inactive registered nurses. Once the data was collected and coded, the purpose of this study was to assist in developing policy for nursing recruitment and

retention within the DHSS health care system. It was also intended that the findings from this survey be used as a measurement tool of registered nurses' attitudes and overall level of satisfaction within Delaware health care agencies.

SAMPLE SELECTION

With the assistance of the Census and Data System of the College of Urban Affairs and Public Policy at the University of Delaware, a systematic sample was drawn of the registered nurses in Delaware. The sample was further broken down into three groups: active registered nurses, registered nurses who work for DHSS, and registered nurses who have let their licenses lapse. The sample of the active and inactive registered nurses was drawn from a listing obtained from the Delaware Licensing Board, and the DHSS sample was drawn from a listing of personnel with the Department of Health and Social Services and then verified against the Board's listing. Out of these listings 1017 registered nurses were chosen, then sent a written questionnaire with a cover letter signed by the Secretary of DHSS, Thomas P. Eichler. One mailing of the survey was sent out with a follow-up mailing that consisted of a postcard as a reminder. The initial mailing consisted of 1017 questionnaires with 659 sent to the active registered nurses, 156 sent to the state nurses and 202 sent to the inactive nurses.

In all, 453 questionnaires were returned during the research period for a response rate of 45 percent. The count of the returned questionnaires included surveys returned by the Post

Office, deceased nurses, nurses refusing to fill out the survey and active registered nurses no longer working in the profession. Of the returned questionnaires, 402 of them were usable. The usable return rate of the three groups breaks down as follows: Active nurses, 296 out of 659 for a 45 percent return rate; DHSS nurses, 78 out of 156 for a 50 percent return rate; inactive nurses, 20 out of 202 for a 10 percent return rate. (These were later dropped from this analysis due to the small number and lack of pertinence to the question of retention and recruitment). The overall response rate of 45 percent compares favorably with other mail surveys, where the response rate rarely exceeds 50 percent.

The average response rate makes any conclusions drawn from this sample very tenuous. As with any survey, it is subject to certain limits of interpretation due to such things as sampling error and unintentional bias. This should be kept in mind when using this data to develop policy and modify existing procedures. (A greater amount of confidence can be applied to the DHSS section of the sample because at this time there are currently two-hundred ninety-five registered nurses/public health nurses working for DHSS. Thus the response size of seventy-eight represents twenty-six percent of DHSS's nursing complement.)

DHSS REGISTERED NURSES

DEMOGRAPHICS

Registered nurses who work for DHSS, as a group, do not differ significantly from the 1984 nationwide sample of registered nurses. (See Table 1) The only statistically significant differences with the national sample are that DHSS registered nurses are less likely to have children and to possess an associates degree.

DHSS registered nurses are predominately female, married, caucasian, as likely to have as not have children, and possess RN training primarily from degree or BSN programs. A majority of these nurses received their training in Delaware or an adjacent state with a median date of licensure of 1965. The average DHSS RN is 40 to 44 yrs old with 7.5 years of experience with the DHSS. Two-thirds of DHSS RNs reported household incomes of \$35,000 or more. (Table 2)

RECRUITMENT AND RETENTION

The nursing shortage has a number of ramifications for the delivery of health care by DHSS. If DHSS is not able to recruit more registered nurses and is unable to retain the registered nurses presently working for DHSS, then the level of health care in the DHSS health care system will deteriorate. This deterioration will manifest itself in many forms including: poor responses to the patient needs, overworking of the current staff

TABLE 1
COMPARISON OF SAMPLE CHARACTERISTICS OF REGISTERED NURSES

	DHSS NURSES (N=78)	1984 U.S. DHHS REPORT (N=32,100)
MALE	1.3	3.0
FEMALE	98.7	97.0
MARRIED	77.6	78.4
WITH CHILDREN UNDER SIX	10.3	15.1
WITH CHILDREN SIX AND OVER	29.5	28.3
CHILDREN IN BOTH GROUPS	7.7	11.1
NO CHILDREN	52.6	42.0
WHITE	93.4	90.3
BLACK	5.3	3.9
OTHER	1.3	5.7
DIPLOMA NURSE	47.4	47.7
ASSOCIATES	16.7	24.1
BSN	29.5	23.6
MASTERS	6.4	3.8
PHD	0.0	0.1

TABLE 2
OTHER CHARACTERISTICS OF DHSS NURSES
(N=78)

STATE EDUCATION RECEIVED IN

DELAWARE	55.1%
ADJACENT STATE	21.8%
REGION	7.7%
OTHER	15.4%

MEDIAN YR LICENSED	1965
--------------------	------

AGE

LESS THAN 25 YRS	1.4%
25-29 YRS	5.6%
30-34 YRS	19.4%
35-39 YRS	11.1%
40-44 YRS	20.8%
45-49 YRS	16.7%
50-54 YRS	11.1%
55-59 YRS	5.6%
60-64 YRS	6.9%
65 PLUS YRS	1.4%

HOUSEHOLD INCOME

\$20-22,500	4.2%
\$22,500-25	11.3%
\$25-27,500	5.6%
\$27,500-30	4.2%
\$30-35,000	7.0%
\$35-40,000	14.1%
\$40-50,000	11.3%
OVER \$50,000	42.3%

MEDIAN LENGTH OF	7.5
YEARS WITH THE STATE	

and further shortages caused by this condition, possible loss of accreditation, possible litigation, and a further deterioration of the public's and registered nurses' perceptions of DHSS.

As has been shown, registered nurse retention/recruitment is of an utmost importance to DHSS. Retention and recruitment are both important areas, but it can be argued that retention is the more important of the two. If DHSS cannot retain nurses once they are recruited, then the money and effort spent on recruitment were naught. If DHSS is also able to successfully retain a core nursing staff, then this success in retention could lead to the adaptation of policies to attract nurses to DHSS. Hence it is of the utmost importance to ascertain what factors lead to retention and the opposite of retention, turnover, among the nursing staff.

TURNOVER

Turnover is the voluntary termination by an employee from their employer. A high turnover rate can seriously hamper the delivery of an effective health care system by an organization. This problem of a high turnover rate is most evident in the nursing staff, who are the most highly trained professionals whose presence is continuous in a health care setting. (In 1986 58% of the national hospital personnel were RNs. (American Journal of Nursing, 1987)) Hence the ideal situation is to have a central core of experienced nurses on every shift. With a moderate to high turnover rate this is impossible. Experienced

nurses are spread thinly over the shifts, therefore compromising patient care and effectiveness.

Turnover not only effects a hospital's effectiveness but also its fiscal capacity. This is due to the cost of replacing the nurses lost to turnover. In 1978 it was estimated that the cost for replacing a registered nurse was about two-thousand dollars and that figure only included orientation, training, and processing costs. (Munro, 1983a, 350) It then logically follows that if turnover can be reduced, it would free funds that could be better utilized elsewhere.

"Turnover strikes at the foundation of organizational control. Norms specifying work to be done cannot be obeyed unless an organization can maintain its members. ... And the greater the expenditures of scarce resources to maintain its membership, the more an organization must neglect the work necessary to produce its basic output." (Price and Mueller, 1981, 5) For DHSS this means that not only is patient care compromised by nursing turnover, but also the ability of DHSS to respond to the myriad of federal regulations becomes difficult.

The above illustrates the importance of ascertaining what leads to turnover and hence controlling the registered nurse turnover rate within DHSS. Ideally this would be done with a before and after survey which would allow the comparison of the attitudes RNs who left DHSS and RNs that did not. Unfortunately within the framework of this study, turnover data was not available. Therefore it was not possible to determine the

factors that led to separation from the state.

"It is argued that employee turnover is ultimately determined by a combination of behavioral intent to leave and the availability of alternative job opportunities. Although research support for this contention is mixed, much of the discrepancy appears to result more from inadequate methodology than from any repudiation of the basic hypothesis...". (Steers and Mowday, 1981, 246)

"There is a sizable body of literature ... which supports the idea that intent to stay has a negative impact on turnover, that is, the stronger the intent to stay, the less the likelihood of turnover." (Price & Mueller, 1981, 12) One study found that "75 percent of the workers who intended to stay with their present employers were still working with the same employers two years later. Fifty-nine percent of the workers who intended to leave actually left. Intent, whether to stay or leave, is related to subsequent behavior.". (Price & Mueller, 1981, 12)

"Opportunity's positive impact on turnover is supported by a substantial body of literature... The review by March and Simon (1956), probably the most influential statement about the determinants of turnover, well illustrates this. They state (p.101) that 'when jobs are plentiful, voluntary movement is high; when jobs are scarce, voluntary turnover is small.'". (Price & Mueller, 1981, 13)

The analysis below is directed at the two factors that significantly contribute to turnover, intent to leave and

opportunity, and their relationship to the demographic and nursing attributes of DHSS registered nurses.

FINDINGS

REVIEW OF THE LITERATURE

A review of the literature concerning turnover produced a number of factors that have been linked to turnover. Measures of these factors, whenever possible, have been included in the survey. However, few models have been developed for explaining turnover. The ones that have been developed, (Price 1981, 1977), (Mobley, 1982), and (Mowday et. al., 1982), seem to have a number of weaknesses:

1. A number of the models have only a one-way flow towards turnover. Yet it is obvious that a number of variables contain a two-way flow, e.g. low job satisfaction increases one's search behavior which may further decrease one's job satisfaction through the comparison of the "better" jobs in the job market.

A one-way flow also implies that once one is on the path towards turnover, there are no possible alternatives but turnover. However, there a number of ways to rectify a bad work situation other than leaving it, e.g. providing feedback that may remedy the situation.

2. A number of models view turnover as the only possible outcome once a person is considering turnover. This disregards other withdrawal behavior such as absenteeism, sabotage, etc. These factors are very important when an employee has no opportunities outside of the organization.
3. Opportunity is a very important factor in all the

models, but little research has been directed towards an individual's job search behavior. Search behavior may be one of the most significant factors influencing opportunity and hence turnover.

4. Often simple (e.g. correlations) statistics are used to test the various models. While this type of testing may be informative and possibly valid, they do not allow for a determination of spurious relationships. Nor have the correct statistical methods been used in many areas. Seldom is multivariate analysis conducted. When it is, it is often in the form of multiple regression which may not be the most appropriate form in examining turnover.

5. The models often ignore the interconnections between the attitudinal variables. For example, one would expect that satisfaction with financial rewards would be closely linked with promotional opportunities. Also the importance of and the grouping of various attitudinal variables may be different depending on the occupation being studied. One would expect registered nurses' attitudes to be different from engineers, perspective. Therefore, one would expect that sometimes the specific data would drive the final formation of the final model. Yet researchers ignore such differences. researchers.

The above is not to say that some type of conceptual framework should not be used when examining turnover, but the discussion's purpose was to highlight the possible pitfalls when

one examines this subject. One needs at least a very basic model to know what questions to ask and/or explore. The method used in this study was to include measures of the factors that seemed germane to turnover and examine them by using simple statistics. (This does open the study to the above criticisms, but the time constraints would not allow otherwise.)

A review of the nursing turnover literature produced a number of related surveys and articles. Unfortunately only a small number of the surveys upon which these articles were based utilized a random sample. These surveys are: Munro 1983a, Munro 1983b, Gulack 1983, Hallas 1980, Link 1987a, and Link 1987b. The other surveys referenced in future discussions are based upon magazine polls or other non-random samples. This does not necessarily invalidate the presented findings, but one must be leery when drawing any conclusions based on these non-random surveys.

INTENT TO LEAVE

Intent to leave is the likelihood perceived by an individual that he/she will not continue to participate in a given organization. The opposite of intent to leave, intent to stay, is often used as one measure of "commitment". Commitment has been found to be significantly related to subsequent turnover. Commitment is viewed as the strength of an individual's affiliation with and participation in a particular organization, Commitment can be further broken down into three factors: a)

belief and acceptance of an organization's goals and values b) a willingness to expend considerable effort on behalf of the organization c) strong desire to continue membership in the organization. (Price and Mueller, 1981) Intent to stay is a measure of the third factor.

Commitment is chosen over job satisfaction in analyzing turnover because commitment has been found to be more stable over time than job satisfaction. Commitment is slowly developed over time as the relationship between employee and employer is strengthened, but job satisfaction will vary over time depending on the work environment (e.g. pay, supervision).

The survey questionnaire covered the third aspect of commitment by asking DHSS registered nurses "How likely are you to do each of the following within the next 5 years? If now a nurse, accept a nursing position with another employer?" The possible responses were; very likely, somewhat likely, somewhat unlikely, and very unlikely. The distribution of the responses is shown in Table 3 and Figure 1.

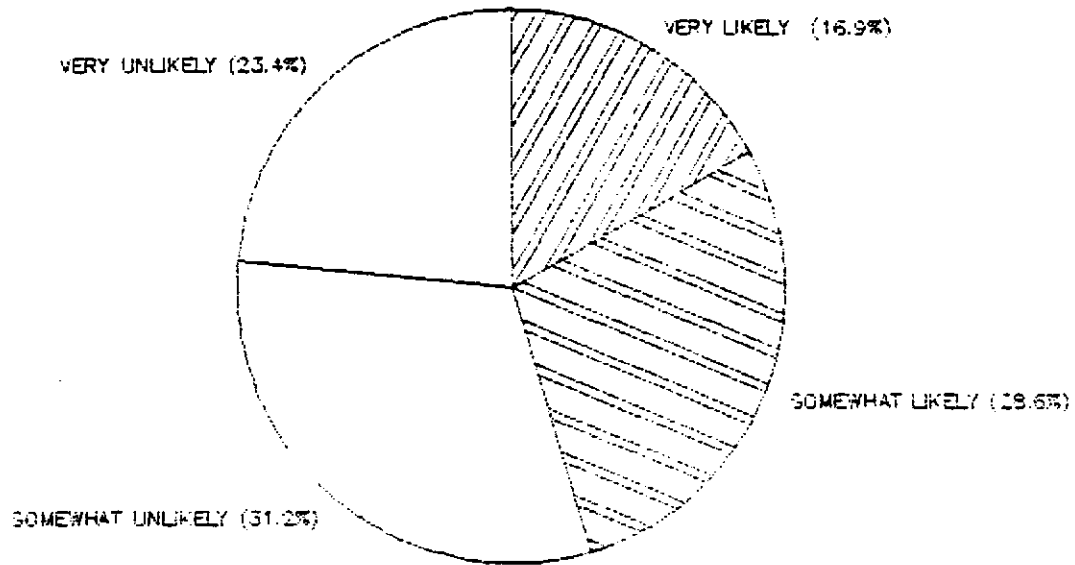
Approximately forty-six percent of DHSS registered nurses perceived that they were somewhat or very likely to leave DHSS in the next five years. This could potentially be disastrous for DHSS's health care system. In addition to the thirty-five nurses citing a likelihood of leaving, there presently exist sixty-two vacancies within the system. Therefore, over the next five years it is likely that the DHSS will have to fill, at the minimum, ninety-six nursing positions to reach a full RN complement. This

TABLE 3

LIKELIHOOD OF LEAVING FOR ANOTHER EMPLOYER
IN THE NEXT FIVE YEARS
(N=78)

VERY LIKELY	16.9%
SOMEWHAT LIKELY	28.6%
SOMEWHAT UNLIKELY	31.2%
VERY UNLIKELY	23.4%

Figure 1
LIKELIHOOD OF LEAVING FOR ANOTHER
EMPLOYER IN THE NEXT FIVE YEARS



would be a Herculean task.

The question now becomes what underlies the desire to stay or leave for DHSS registered nurses. The approach used was to obtain measures of association between intent to leave and other variables. Measures of association are defined as "Indexes that attempt to quantify the relationship between variables in a cross-classification...". (Norusis, 1986, B-99) The two specific measures used were chi-square, for nominal measures, and Kendall's tau-c, for ordinal variables. The level of significance chosen for both statistics was $\leq .05$. This level of statistical significance indicates that there is a five percent chance that a non-significant relationship between the two variables is in fact significant.

Crosstabulations between intent to stay and all nominal variables yielded no results that were significant. (Nominal variables are variables that coded such that the values given to the various categories serve merely as labels. e.g. place of employment)

Crosstabulations between intent to stay and all ordinal variables, using Kendall's tau-c, generated a number of variables that were significantly related to intent to leave. These variables and their tau-c scores are listed in Table 4.

The Kendall's tau-c score derived from crosstabulations is similar to a correlation statistic with a range of -1 to +1. A negative sign indicates that the higher the intent to leave score, the lower the independent variable's score tends to be. A

TABLE 4

KENDALL'S TAU-C SCORE FOR THE SIGNIFICANT VARIABLES
WHEN INTENT TO LEAVE AND FINDING A BETTER JOB IN NURSING
ARE CROSSTABULATED WITH ORDINAL VARIABLES
(N=78)

	INTENT TO LEAVE TAU-C SCORE	BETTER JOB TAU-C SCORE
V12-SALARY	-0.22	-0.19
V13-BENEFITS	-0.27	-0.16
V15-ADVANCEMENT OPPORTUNITY	-0.20	-0.18
V19-STAFFING	-0.18	ns
V20-TIME WITH PATIENTS	-0.18	ns
V21-TYPE OF SHIFT WORKED	-0.14	ns
V23-REPETITIVENESS	-0.19	ns
V24-WORK SETTING	-0.18	ns
V25-WORKLOAD	-0.16	ns
V27-NURSING AS A CAREER	-0.28	ns
V33-MANAGEMENT TRAINING	-0.17	ns
V54-FRIENDS AT WORK	-0.31	-0.22
V70-YEAR LICENSED	0.24	ns
V84-YEARS WITH EMPLOYER	-0.29	-0.24
V98-SECOND JOB	0.15	ns
V108-AGE	-0.25	ns
V110/KIDS-CHILDREN	0.26	ns
V123-MATERNITY LEAVE	0.23	ns
DEGREE-EDUCATION	0.15	ns
EXPECT2/ATTRACT2-MONETARY	0.27	ns
ATTRACT5-WORKWEEK	0.15	ns
V5-CHALLENGE	ns	0.21
V9-APPRECIATION/SUPPORT	ns	-0.24
V14-PROFESSIONAL TREATMENT	ns	-0.17
V91-OVERTIME	ns	0.17
V92/V95-TIME ALLOCATION	ns	0.17

positive sign indicates that the higher the intent to leave score, the higher the independent variable's score tends to be.

Significant variables

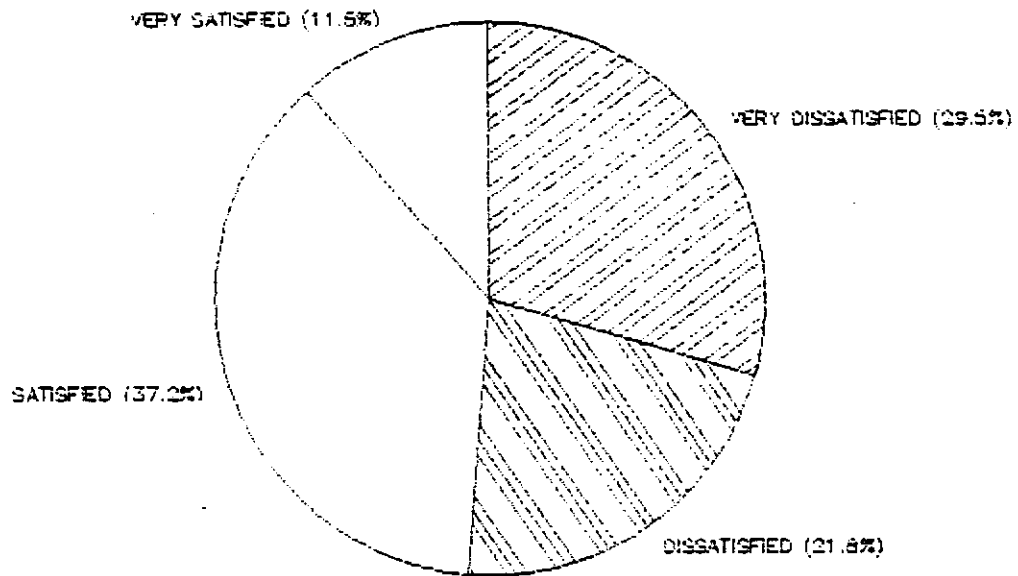
V12-Level of satisfaction with salary

The tau-c score (-.22) indicates that as satisfaction with salary increases, the likelihood of leaving in the next five years decreases. Figure 2 shows the distribution of the level of satisfaction/dissatisfaction indicated by DHSS RNs. Slightly over half of the DHSS RNs cited dissatisfaction with the salary they received.

Salary level has long been a point of contention between registered nurses and administrators. The findings of a recent nursing magazine poll of registered nurses illustrates this point. In this poll fifty-nine percent of the RNs reported that salaries and benefits had not increased because of the nursing shortage. In contrast to this, fifty-eight percent of the national nursing executives expressed that salaries and benefits have increased due to the nursing shortage. (Nursing 88, 1988)

A few nursing articles express that "Nurses cannot be bought. ... If the salaries at a hospital are competitive with others in the community, money is not the main reason for a high turnover rate." (Alt, Brown, & Wilson, 1982, 52) The evidence seems to dispute this observation. A study conducted in 1980 by RN magazine found that among registered nurses who had left the profession, thirteen percent cited salary as the main reason.

Figure 2
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V12-SALARY RECEIVED



(Hallas, 1980) However, in contrast to this, a December, 1983 study by the same magazine did not cite salary as a major factor in reasons registered nurses left the profession. Though it did state "As a rule of thumb, if a nurse is relatively underpaid, she is more likely than average to take a leave from the profession." (Gulack, 1983, 33)

A 1987 poll found that when RNs were asked what things were most important in evaluating their present jobs, 51 percent cited salary. (Nursing 88, 1988) Other articles reporting on the issue of salary and its relation to the nursing shortage state that RNs face "...an astonishing litany of ills, most notably... poor pay" (RN, 1986, 55) Therefore, with over fifty percent of DHSS RNs being dissatisfied with their salary, this is a major problem. A 1983 article found that the mean satisfaction score, for the nurses surveyed, on salary was 2.96 (on a one to four scale with four being very satisfied) as compared to DHSS's mean satisfaction score of 2.31. (Munro, 1983b) A 1980 study found that 17.5 percent of the respondents were very satisfied with their salary. This compares to DHSS's 11.5 percent. In this same study 47.7 percent of the respondents listed inadequate salary as a "crucial" problem in nursing. (Donovan, 1980)

In their 1981 study of nursing turnover, Price and Mueller found no significant relationship between turnover and satisfaction with pay, but felt that this was due to measurement error and not because pay was not significant. (Price and Mueller, 1981)

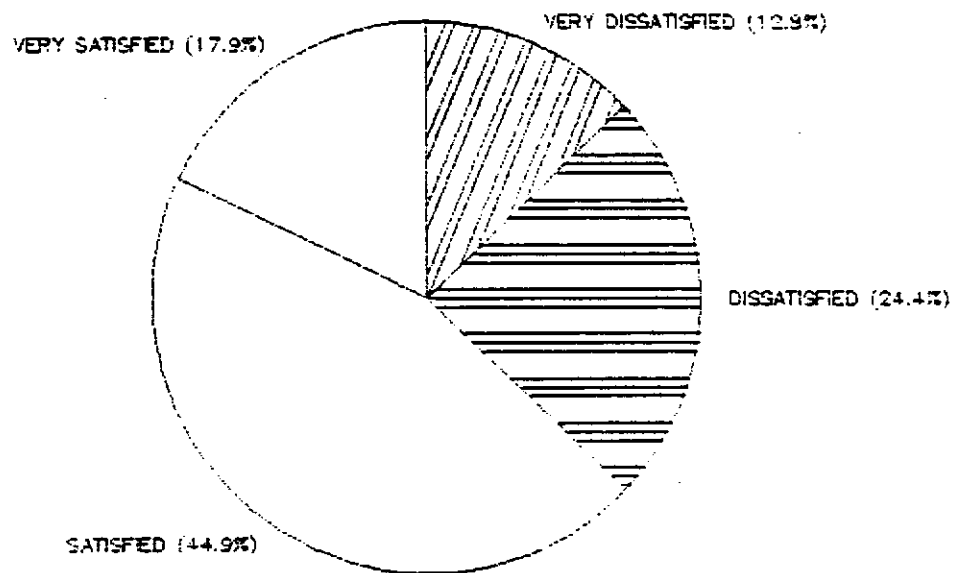
The 1983 American Academy of Nursing's report on magnet hospitals reported that "The majority of nurses report that their salaries are competitive with those of other hospitals in their areas." (AAN, 1983, 23) A 1987 poll found that RNs who were very satisfied with their present jobs worked in facilities whose salaries and benefits had increased due to the nursing shortage. (Nursing 88, 1988)

Dr. Charles R. Link, an economist at the University of Delaware, in his study of the labor supply of registered nurses reported some significant findings: "increasing wages is unlikely to be a 'low cost' way of eliciting greater effort from the stock of currently trained RNs. On the other hand restraining wages or at least wage increases, probably will not significantly decrease the work effort of RNs during slack periods..." Dr. Link concluded that shortages "are unlikely to be significantly allayed by increasing the wages to entice more effort from the current stock of nurses..." However, he does point out that increases in RN salaries may lead to increased enrollments in nursing programs, hence a overall increase in the stock of registered nurses. (Link, 1987a, 11)

V13-Benefits ____

The tau-c score (-.27) indicates that as the level of satisfaction with benefits decreases, the intent to leave increases. Figure 3 shows the distribution of satisfaction/dissatisfaction with benefits. Slightly over one-third of the

Figure 3
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V13-BENEFITS



DHSS's RNs reported dissatisfaction with the benefits they received.

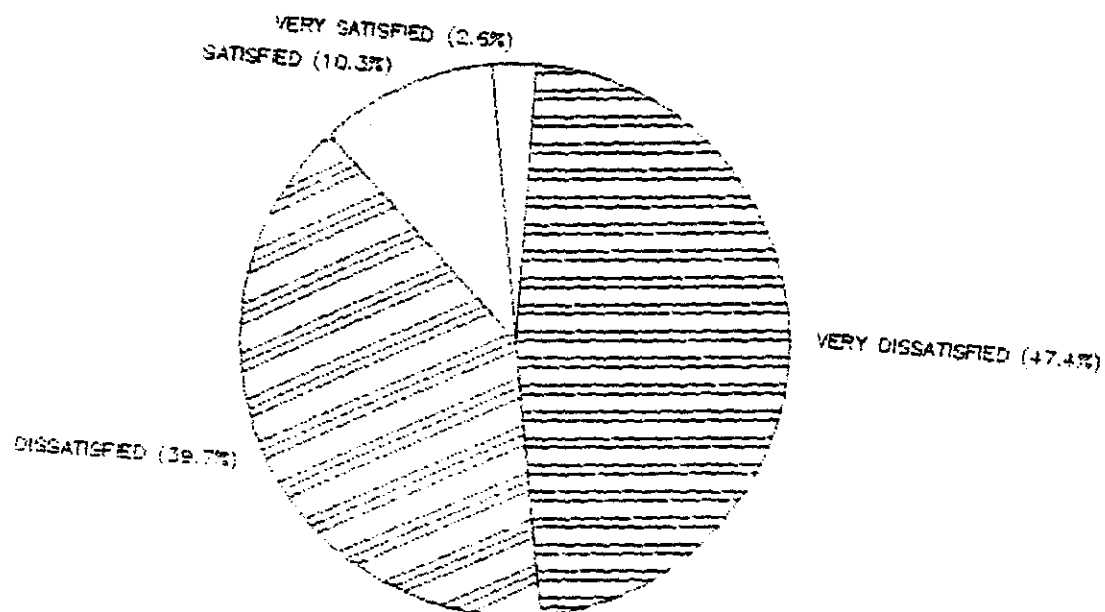
A 1983 national study found that the surveyed registered nurses exhibited a mean score of 2.96 on satisfaction with fringe benefits compared to DHSS's mean score of 2.68. (Munro, 1983b) A 1984 study found that registered nurses view benefits as important, reporting a mean of 2.96 on a one to four scale on the importance of benefits as a factor when considering employment at a institution. (Larson et. al., 1984) A 1987 poll found that 53 percent of the RNs polled felt that benefits were important in evaluating their present jobs. (Nursing 88, 1988) RNs at "magnet hospitals" were satisfied with the benefits they receive from the hospital. (AAN, 1983).

The issue here would seem to be that DHSS needs to raise the level of satisfaction with benefits. If this is done it may alleviate some of the dissatisfaction expressed about benefits by one-third of nurses. To do this, further analysis is needed on what benefits DHSS RNs perceive they have and what additional benefits they desire.

V15-Advancement opportunities

The tau-c score (-.20) indicates that as satisfaction with advancement opportunity (career ladder) increases, the intent to leave decreases. Figure 4 shows that almost ninety percent of DHSS RNs reported dissatisfaction with their advancement opportunity. Even more startling was that almost half of the

Figure 4
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V15-ADVANCEMENT OPPORTUNITY



DHSS RNs cited that they were "very dissatisfied" with their advancement opportunity.

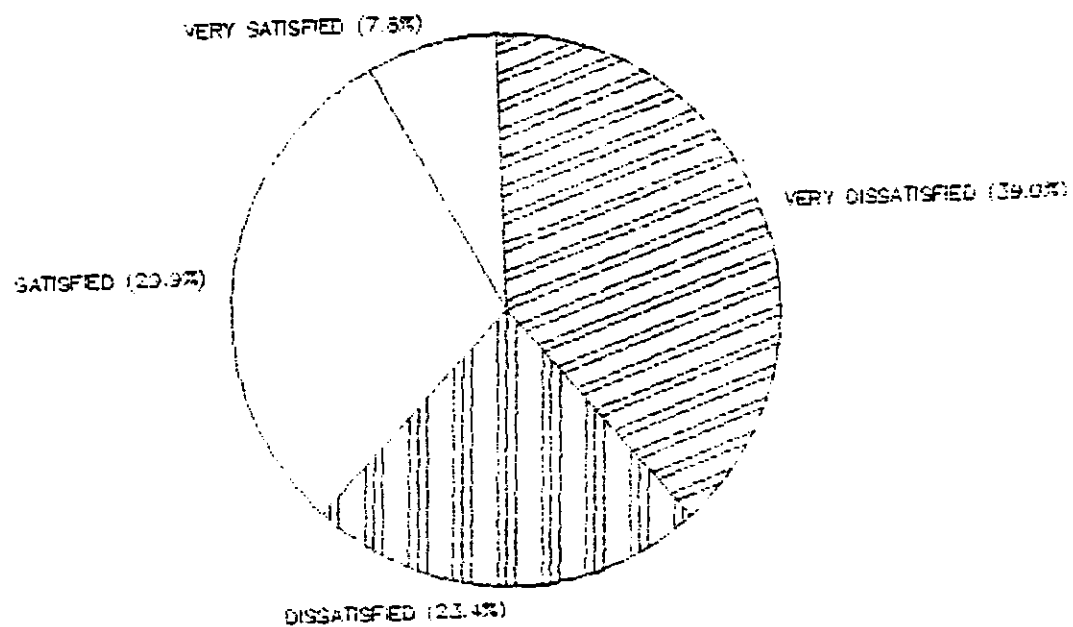
Surveys outside of Delaware have found a higher level of satisfaction with advancement opportunity. A 1980 national RN study reported that 16.8 percent of the polled RNs were happy with their advancement opportunity (compared to a 2.6 percent for DHSS.). This same study found that 39.7 percent of the RNs felt that no chance for advancement was a "crucial" problem.

(Donovan, 1980) The AAN report found "Throughout the data there is an obvious emphasis on career development. Clinical ladders that are competency based..." (AAN, 1983, 97) A 1987 poll found that 41 percent of the RNs polled felt that advancement opportunities were very important in evaluating their present job. (Nursing 88, 1988)

Not all studies have established such a link. Price and Mueller's study on nursing turnover found no significant relationship between advancement opportunities and intent to stay. (Price and Mueller, 1981)

It would seem that setting up a career ladder mechanism would be of an utmost importance to DHSS. Any mechanism that is set-up to abate the problem should not only address the question of advancement, but also address the question of advancement without having to progress into supervisory positions. This is to reward and accommodate nurses who are excellent nurses but who desire to remain in positions where they can continue to have patient contact.

Figure 5
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V19—THE AMOUNT OF STAFFING



V19-Staffing

The tau-c score (-.18) indicates that as the satisfaction with staffing increases, the intent to leave decreases. Figure 5 indicates that 62.3 percent of DHSS RNs reported dissatisfaction with the amount of staffing provided. In contrast only 7.8 percent of the DHSS RNs reported that they were very satisfied with the level of staffing.

A 1987 poll of RNs reported that the most important factor when RN's present job was evaluated was a sufficient nursing staff. (Nursing 88, 1988) A 1986 RN report found that: "The problem mentioned more than any other is short staffing." This response is in relation to what makes nurses angry. (RN, 1986, 55) A 1980 RN report on registered nurses who left the profession found that short-staffing was frequently cited as a major problem in nursing. (Hallas, 1980)

The AAN study on magnet hospitals reported that "The staff nurses indicate that the staffing patterns in their settings, including adequacy, quality and composition of the nursing staff, represent an important organizational variable that contributes significantly to nurse retention." (AAN, 1983, 21)

Staffing, the nursing shortage, and turnover are highly interrelated. Inadequate staffing creates work overload, which creates turnover, which creates nursing shortages, which creates staff shortages. This will not be a easy cycle to break. This does not even approach the question of an all-RN staff, which some nurses want and what some "magnet" hospitals attribute to

their success. (AAN, 1983)

It should be no surprise that DHSS RN's are upset with staffing considering the number of RN vacancies. It is possible that once other area of dissatisfaction are improved this may no longer be an issue. This is because inadequate staffing creates work overload, but this feeling of overload may be abated if other conditions are improved. e.g. salaries.

V20-Time with patients

The tau-c score (-.18) indicates that as satisfaction with the time spent with patients increases, the intent to leave decreases. Fifty percent of DHSS RNs reported dissatisfaction with the amount of time they spend with the patients. (Figure 6)

A 1980 study on registered nurse "dropouts" found that 35 percent of the nurses who had left the profession cited increased demands resulting in lack of patient contact. (Hallas, 1980)

Time spent with patients is related to paperwork, time spent in meetings, etc. While only time spent with patients was significantly related to intent to leave, the others are still important. Time spent with patients is a manifestation of one of the primary reasons nurses entered the nursing profession (unless they had totally unrealistic expectations.). Since this is one of the primary reasons nurses entered nursing, an effort should be made to ensure as much patient contact as possible.

V21-Type of shift worked

Figure 6
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V20—TIME SPENT WITH PATIENTS

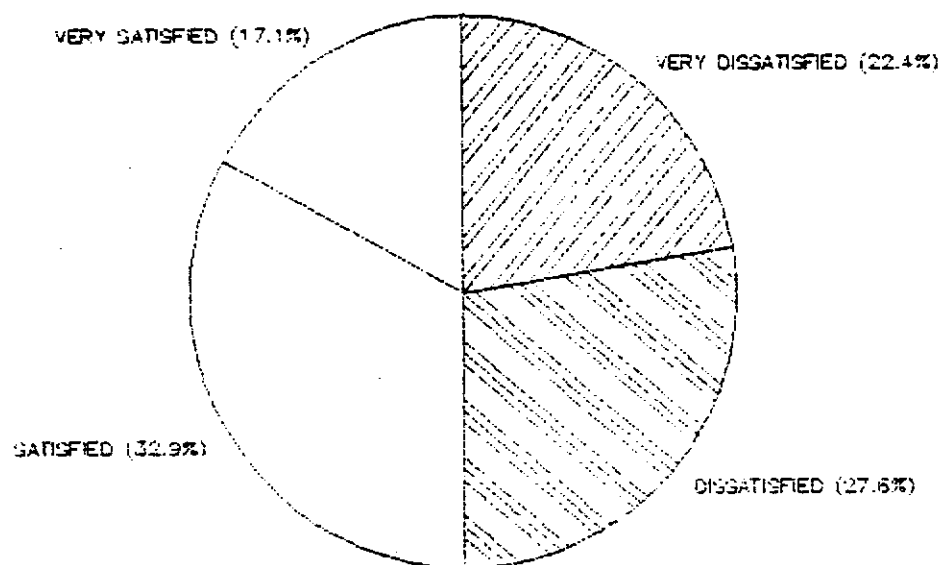
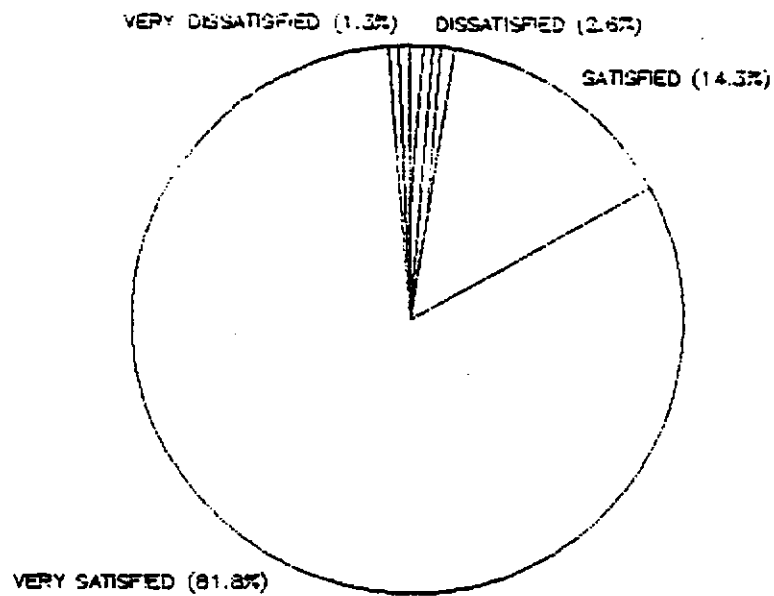


Figure 7
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V21-TYPE OF SHIFT WORKED



The tau-c score (-.14) indicates that as satisfaction with the type of shift worked increases, the likelihood of leaving decreases. In figure 7 the responses of DHSS RNs are shown. Approximately 96 percent of DHSS RNs reported satisfaction with the shift they worked and over eighty percent reported being very satisfied.

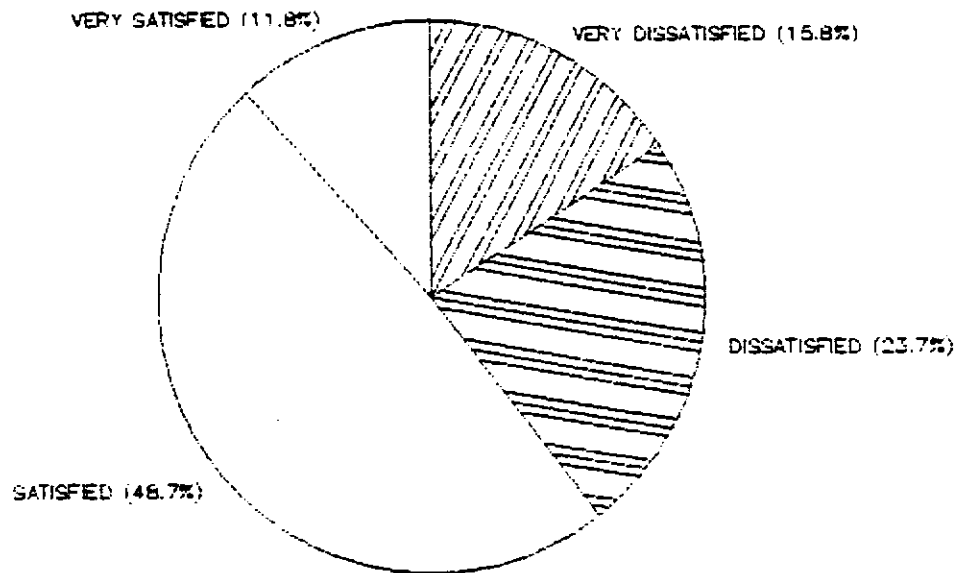
A 1982 RN magazine survey indicated that over half of the RNs polled would prefer a three day/thirty-six hour or four day/forty hour work week. Thirty-eight percent of the part-time nurses preferred shifts shorter than eight hours. (Gulack, 1982) The AAN report contended that "Without question , one of the most important factors in attracting and retaining nurses in the magnet hospitals is the attention that is paid to the scheduling of hours of work." (AAN, 1983, 91)

Satisfaction with the type of shift worked may be significantly related to intent to leave in general, but it does not appear to be a problem for DHSS. This indicates that either the job done by supervisors on scheduling is accommodating the RNs needs or that the vacant positions that exist are in the undesirable shifts. In either case it is important to maintain the current level of satisfaction with shifts, hence preventing it from becoming another point of discontent for DHSS RNs.

V23-Repetitiveness of the work

The tau-c score (-.19) indicates that as satisfaction with the repetitiveness of the work increases, the intent to leave

Figure 8
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V23-REPETITIVENESS OF THE WORK



decreases. Figure 8 shows the distribution on this variable. Approximately forty percent of DHSS RN's reported dissatisfaction with this aspect of the job.

Repetitiveness has been found to be significantly related to turnover. (Price & Mueller, 1981) A question for further analysis is which came first; boredom with the job, therefore intent to leave, or intent to leave, and therefore the feeling of just going through the motions.

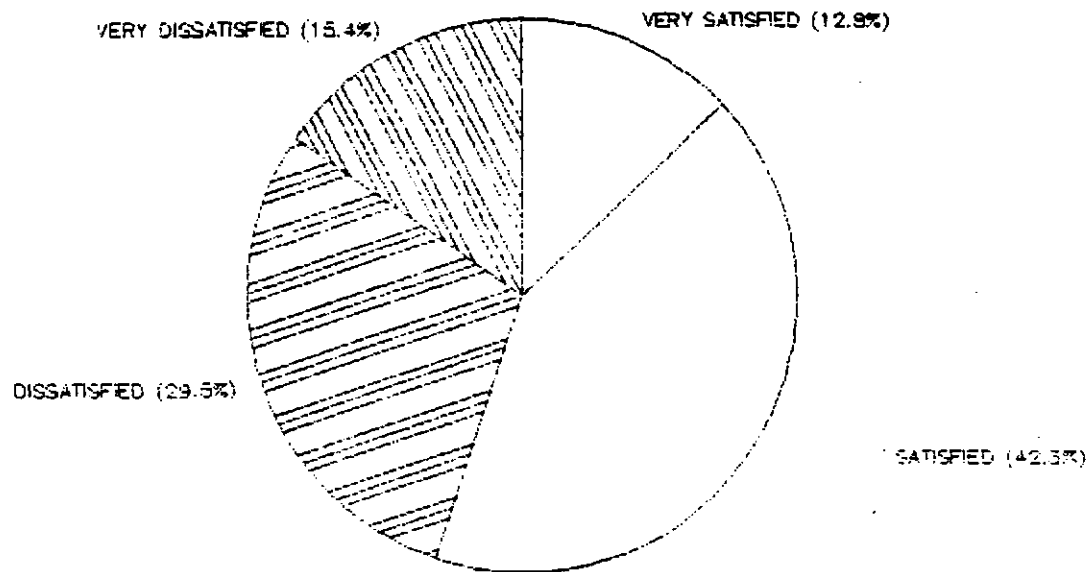
V24-Work setting

The tau-c score indicates that as satisfaction with the work setting increases, the intent to leave decreases. Figure 9 illustrates that almost forty-five percent of DHSS RNs reported dissatisfaction with the physical quality of their work setting.

A 1983 study found that the mean score of RN's surveyed was 2.98 on work setting compared to a mean score of 2.56 for DHSS. (Munro, 1983b) The AAN report comments that "Quite obviously a well maintained physical plant contributes to the nurse's impression that a particular hospital is a good place to work." (AAN, 1983)

The reported percentage of dissatisfaction with the DHSS work setting needs to be kept in proper perspective. The perspective is that the major facility for comparison is the Christiana hospital, a new and modern facility. This area may not be one where DHSS can remain competitive, nor need to. The important thing may be to insure that DHSS's facilities do not

Figure 9
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V24—THE WORK SETTING



fall far behind other area health care agencies in the modernity of their facilities. In other words if DHSS was to upgrade its physical facilities, it must not have any effect on turnover, but if it was to allow its conditions to worsen, it could drastically effect turnover and recruitment.

V25-Workload

The tau-c score (-.16) indicates that as the satisfaction with workload increases, the intent to leave decreases. Figure 10 reveals that almost fifty percent of DHSS RNs reported dissatisfaction with their workload. A survey conducted by RN magazine in 1980 found that 49.4 percent of the nurses polled listed excessive demands as a "crucial" problem. (Donovan, 1980)

Further examination is needed into this factor. What may be going on here is that a myriad of underlying factors, including staffing, nursing shortage, type of care given, etc., are affecting the responses.

V27-Nursing as a career

The tau-c score (-.28) indicates that as satisfaction with nursing as a career increases, intent to leave decreases. Figure 11 shows that thirty-two percent of the DHSS RNs cited dissatisfaction with nursing as a career.

A review of the literature indicated that nurses on a whole were happy with their career choice, and it was the work conditions that facilitated the desire to leave. The data here

Figure 10
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V25-THE WORKLOAD

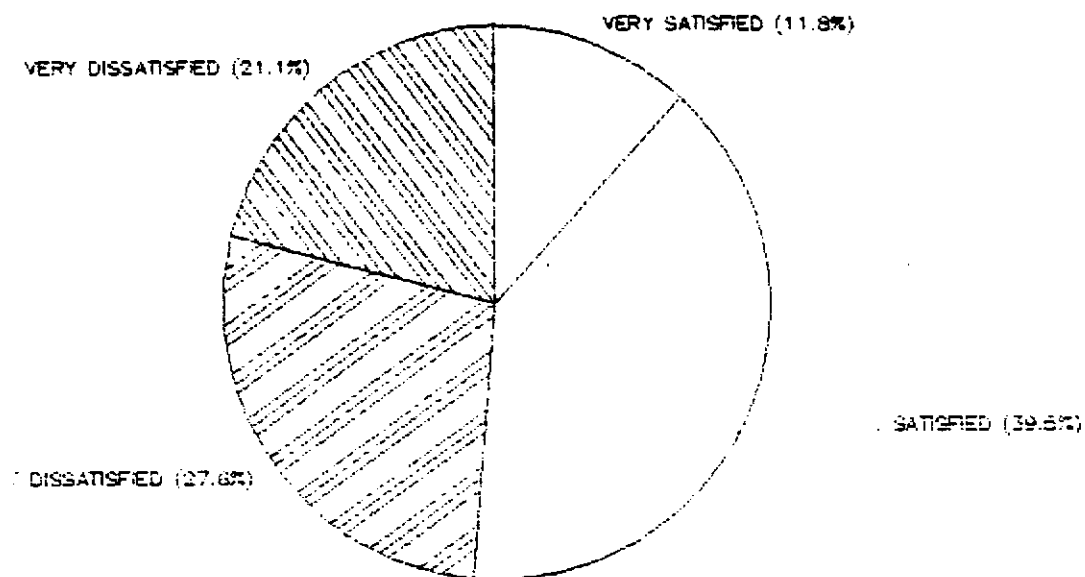
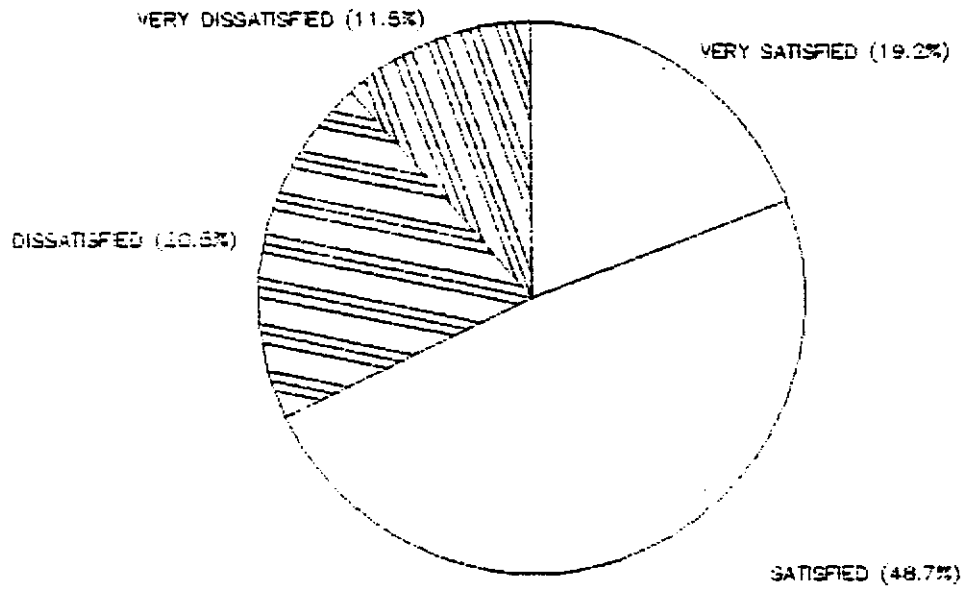


Figure 11
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V27-NURSING AS A CAREER



indicates that one-third of the RNs felt they may have chosen the wrong career. (A 1987 poll found that 33 percent of the polled RNs would not choose nursing as career if they had to do it all over again. This question can be viewed as another measure of career satisfaction. (Nursing 88, 1988)) It is possible that dissatisfaction with other factors has simultaneously led to dissatisfaction with nursing as a career and therefore increasing the intent to leave. (Keep in mind that the question of nursing as a career is most likely a catch all for a large number of attitudes and characteristics.)

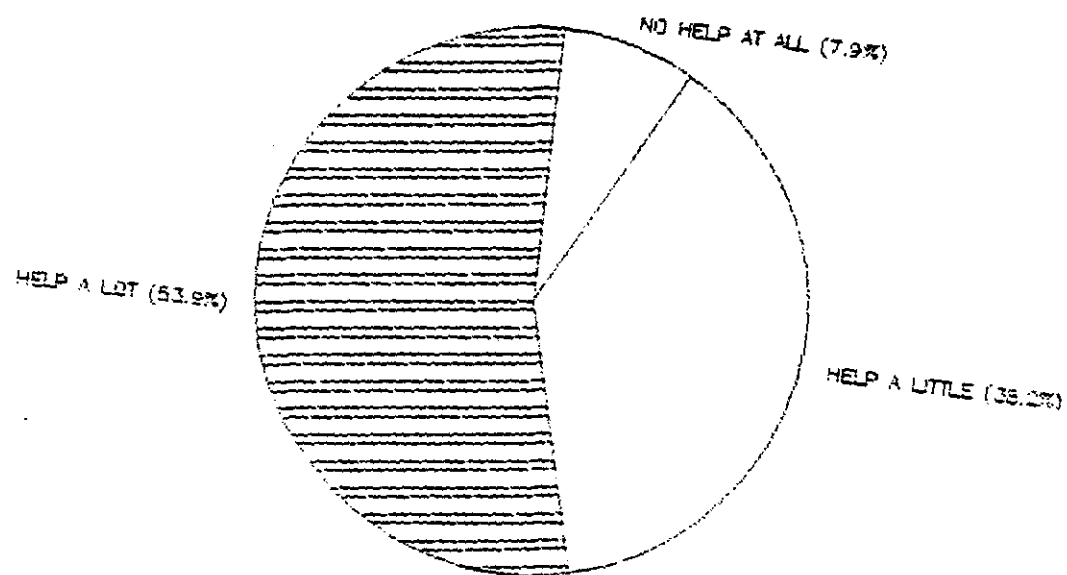
V33-Reforms-Management training for supervisors

The tau-c score (-.17) indicates that as the perceived "help" gained by providing management training to supervisors increases, the intent to leave decreases. Figure 12 illustrates that approximately fifty-four percent of DHSS RNs felt that management training would help a lot.

The AAN study of magnet hospitals found that "Management development is also seen as important. The director emphasize the need for quality middle managers and provide appropriate programs for assessment and training in this area. Staff nurses are frequently eager to participate in these offerings and view management training as a form of recognition." (AAN, 1983, 97)

The problem illustrated by this variable is that often nursing supervisors are promoted through the ranks and have little or no supervisory experience. Therefore there is no

Figure 12
REFORM—
MANAGEMENT TRAINING FOR SUPERVISORS



guarantee that these RNs will be good supervisors nor have any grasp of management/leadership techniques. This is a very inefficient situation and is compounded by the fact that supervisors are frequently pulled out of touch with the "floor nurses". It also must be remembered that nurses are professionals and in general professionals prefer less management unless it is performed effectively.

V54-Friends at work

The tau-c score ($-.31$) for this variable is not as clear cut as the others. This is because the variable V54 is a yes or no question. What the tau-c score indicates is that DHSS RNs with friends at work reported that they were less likely to leave than RNs without friends.

Within DHSS, approximately sixty-nine of the RNs responded yes to the question of "Do you have close friends among the people you work with?". This variable is a partial measure of the amount of integration into the work setting. People who fail to have friends at work often have not adjusted to the system and are more likely to withdraw from said system than people who have friends at work.

V70-Year licensed as a registered nurse

The tau-c score ($.24$) indicates that as the year a DHSS RN was licensed increases (towards 1987), the more likely they are

to expect to leave in the next five years.

On the one hand this indicates that the younger and more recently licensed RNs are more likely to leave, but this is counterbalanced by the fact that if you do not recruit younger RNs, the existing staff will gradually become smaller due to age. The median year of licensure reported by DHSS RNs was 1965, compared to 1984 national figures which reported that 72.2% of the registered nurses had graduated since 1970. This would seem to indicate that DHSS has neither been attracting nor retaining young RNs.

V84-Years with employer

The tau-c score (-.29) indicates that as the years with DHSS increases, the intent to leave decreases. The median years of employment with DHSS for the surveyed RNs is 6.5 years. What this does not show is that thirty-five percent of the RNs have over ten years with DHSS. (Table 5)

The tau-c score supports the view that commitment is an attitude that is facilitated slowly overtime. The question that arises here is whether or not the nurses with more experience are more committed to DHSS or that because of the time they have "in" DHSS, they cannot afford to leave due to the loss of some of their retirement benefits.

TABLE 5
DISTRIBUTION OF YEARS OF EMPLOYMENT WITH DHSS
(N=78)

TWO YEARS OF LESS	25.6%
3-5 YEARS	21.8%
5-10 YEARS	18.0%
11 YEARS OR MORE	34.6%

V98-Holding a second job

The tau-c score (.15) indicates that DHSS RNs who hold second jobs reported being more likely to leave than DHSS RNs who do not hold second jobs.

It is debateable whether or not the conditions at DHSS fueled their desire to leave which caused the need for a second job or whether their financial conditions pushed the need for a second job which then caused a comparison between the two jobs, with DHSS coming out on the losing side. The taking of a second job also lessens the risk of a RN quitting their primary job by providing them with an escape avenue that does not result in unemployment.

Only thirteen percent of the surveyed DHSS RNs, however reported holding a second job.

V108-Age

The tau-c score (-.25) indicates that as the age of the RN increases, the intent to leave decreases. The median age for DHSS RNs is in the forty to forty-four year old category. What is alarming about the age of DHSS RNs is that only 6.8 percent of DHSS RNs are less than thirty years old.

The trend of the tau-c score supports the hypothesis that commitment is gained over time. Also the desire for change may decrease as one gets older and the feeling of "can't afford to leave" increases with age. The median age of DHSS RNs lends partial support to this argument. The median age of DHSS RNs

also has other implications. DHSS is generally not attracting young RNs. To the extent they are, they are not retaining them. This may indicate that DHSS is no longer competitive in the local registered nurse market.

V110-KIDS-Children and the number of children

The tau-c score for these variables (.26) indicate that with the presence of children and the larger the number of children, the likelihood of leaving increases. Over forty percent of DHSS RNs reported having children and 37.8 percent of these RNs reported having children under six years old.

A 1983 RN survey indicated that sixty percent of the full time registered nurses, who had left the profession, left for family responsibilities. (Gulack, 1983)

According to Dr. Link "The 1984 results show that maximum potential gains in hours of 20-25 percent and participation probabilities by up to 14 percent are possible if the negative impacts on labor force behavior of children under age six are removed. Since approximately 25 percent of the RNs in 1984 had at least one child under age 6, hospitals might be able to obtain more labor market effort from RNs either by providing child care facilities in the hospital or fringe benefits allowing RNs to place their children in a child care plan outside the hospital." (Link, 1987a, 18)

If day care was offered it would lend support to approximately sixteen percent of the RNs who work for DHSS. (A

(point for further exploration is whether these nurses are full or part-time.) The enactment of a day care program, along with other programs, may give DHSS a temporary comparative advantage in the local labor market. This comparative advantage would attract more RNs to DHSS and then hopefully the strength of other improvements would enable DHSS to retain them.

V123-Maternity leave

The tau-c score (.23) indicates that DHSS RNs who reported they had maternity leave with assured return to employment were less likely to leave than RNs who do not possess this benefit.

(This alludes back to the question of family responsibility and the presence of children. The problem here is that only seventy-five percent of DHSS RNs listed this as a benefit. This may indicate a lack of dissemination of information on the benefits available to DHSS RNs. (Unless, of course, there is some sort of differential treatment among the RNs in terms of benefits.) If this is the problem, it signifies a need for a more efficient flow of information on the benefits available to DHSS RNs.

Degree-Level of professional training

The tau-c score (.15) indicates that as the level of professional training increases, the intent to leave also increases.

(Price and Mueller in their study of nursing turnover

hypothesized that "Individuals with general training would seem to have less intention to stay with the employer...". (Price and Mueller, 1981, 20) This hypothesis was borne out by their data. General training (i.e. educational level) had a significant effect on intent to leave and actual turnover.

Of the DHSS RNs surveyed, 29.5 percent had BSN degrees and 6.4 percent had a masters degree in nursing.

Expect2 and Attract2-Monetary inducements

The tau-c score (.27) indicates that DHSS RNs who mentioned monetary inducements as reasons why their career did not turn out as expected or as a way to make nursing a more attractive profession were more likely to leave than DHSS RNs who did not. 39.7 percent of DHSS RNs mentioned these variables.

These two variables reinforce the earlier findings on satisfaction/dissatisfaction with salary. Other than just salary, other monetary related items were mentioned. e.g. improved benefits.

Attract5-Workweek

The tau-c score (.15) indicates that DHSS RNs who mentioned improvements in the workweek as a way to make nursing a more attractive profession have a higher intention of leaving.

This runs counter to the level of satisfaction with the shift worked. Only 3.9 percent of DHSS RNs mentioned dissatisfaction with the shift they worked while 15.4 percent of

DHSS RNs mentioned workweek improvements. One possible explanation for this is that while a majority of DHSS RNs were satisfied with this item, they also realized that a RN's varied workweek may deter other people from becoming RNs. Another possible reason may be the nature of the recoding of this open ended variable, which encompassed more than just shift worked, may have caused this situation. The third possibility is that while both shift worked and workweek were found to be significantly related to intent to leave, one or both of them were the result of a spurious relationship.

OPPORTUNITY

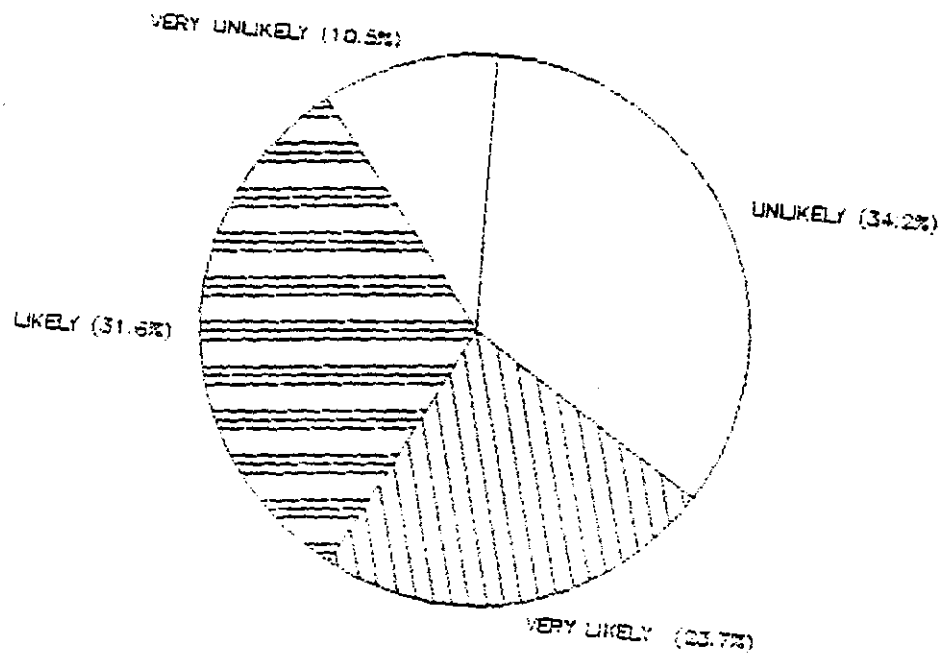
Opportunity is viewed as the perceived existence of alternative job opportunities within the job market. Alternative job opportunities effect job turnover in a number of ways: A proliferation of alternative jobs causes an individual to be more rigorous in their evaluation of their current job. Opportunity is also related to intent to leave and intent to leave is related to opportunity and both are related to turnover. (Intent to leave and perceived opportunity were found to be significantly related to each other with a tau-c score of .24) Intent to leave facilitates a more active search of the job market and a more active search of the job market facilitates intent to leave.

The place of opportunity within a turnover model is open to debate. Mobley (1977) has suggested that alternative opportunities affect intent to leave which then effects turnover. Others suggest that opportunity is directly related to turnover and is not funneled through intent to leave.

In the survey questionnaire, opportunity was represented by the question "How likely is it that you could find a better job in the nursing profession?" 55.3 percent of the DHSS polled felt they could find a better job in nursing. (Figure 13) This is a higher figure than the forty-four percent who intended to leave in the next five years. The additional eleven percent may represent the RNs who could find a better job but have too much time invested in DHSS to leave.

The responses to this question were cross-tabulated with

Figure 13
LIKELIHOOD OF FINDING A BETTER JOB
IN NURSING



other variables to obtain tau-c scores. Only the variables which were not significant when cross-tabulated with intent to leave were included in the following discussion. This is because any variables that were found to be significantly related to both intent to leave and a perceived better job have already been discussed. Table 4 lists what variables were significant for either intent to leave or a better job in nursing or both. (A possible point for further research is the combination of intent to leave and a better job in nursing into one measurement.)

Significant variables

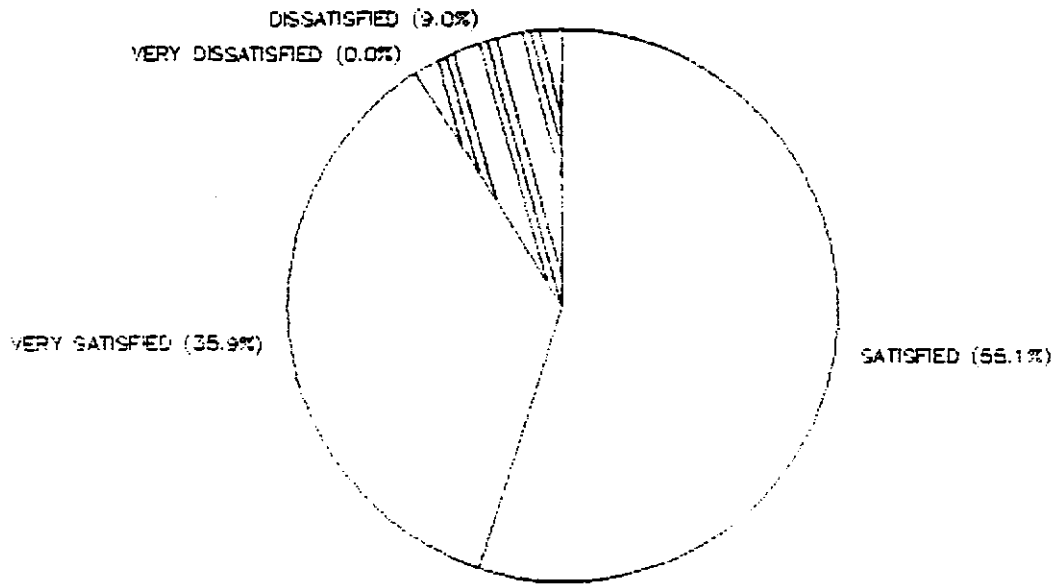
V5-Challenge

The tau-c score (.21) indicates that as satisfaction with the challenge in the job increases, the perceived likelihood of finding a better job in nursing increases. Figure 14 shows that nine percent of DHSS RNs reported dissatisfaction with the amount of challenge in their job.

A 1983 article cited that the mean satisfaction score for "challenge" was 3.33. (Munro, 1983b) This compared to a mean satisfaction score of 3.27 for DHSS RNs. In contrast, a 1980 RN article found that 38.8 percent of the RNs polled felt that insufficient challenge was a "crucial" problem in nursing. (Donovan, 1980)

The tau-c score, while indicating a positive relationship between increased satisfaction with challenge and likelihood of finding a better job in nursing, is most likely not a

Figure 14
LEVEL OF SATISFACTION/DISSATISFACTION
WITH VS-CHALLENGE



statistically reliable measurement. This is due to the small number of DHSS RNs dissatisfied with the amount of challenge in their job. In addition, the nine percent that were dissatisfied with the amount of challenge were only somewhat dissatisfied.

V9-Appreciation and prestige

The tau-c score (-.24) indicates that as satisfaction with appreciation and prestige increases, the perceived likelihood of finding a better job in nursing decreases. Figure 15 indicates that approximately sixty-eight percent of DHSS RNs reported dissatisfaction with the appreciation and prestige they receive.

V14-Professional treatment

The tau-c score (-.17) indicates that as satisfaction with treatment compared to other professionals increases, the perceived likelihood of finding a better job in nursing decreases. Figure 16 shows that just over sixty-five percent of DHSS RNs reported dissatisfaction with the professional treatment they receive.

The AAN reported "Nursing has proven its worth. It is a powerful force and seen as necessary for the survival of the hospital. This positive image obtains among administrators, patients, the larger community and, most important, nurses themselves." (AAN, 1983, 95)

Among DHSS RNs one assumes that the points of comparison for many of the RNs are the hospital administrators and various other

Figure 15
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V9-APPRECIATION/PRESTIGE

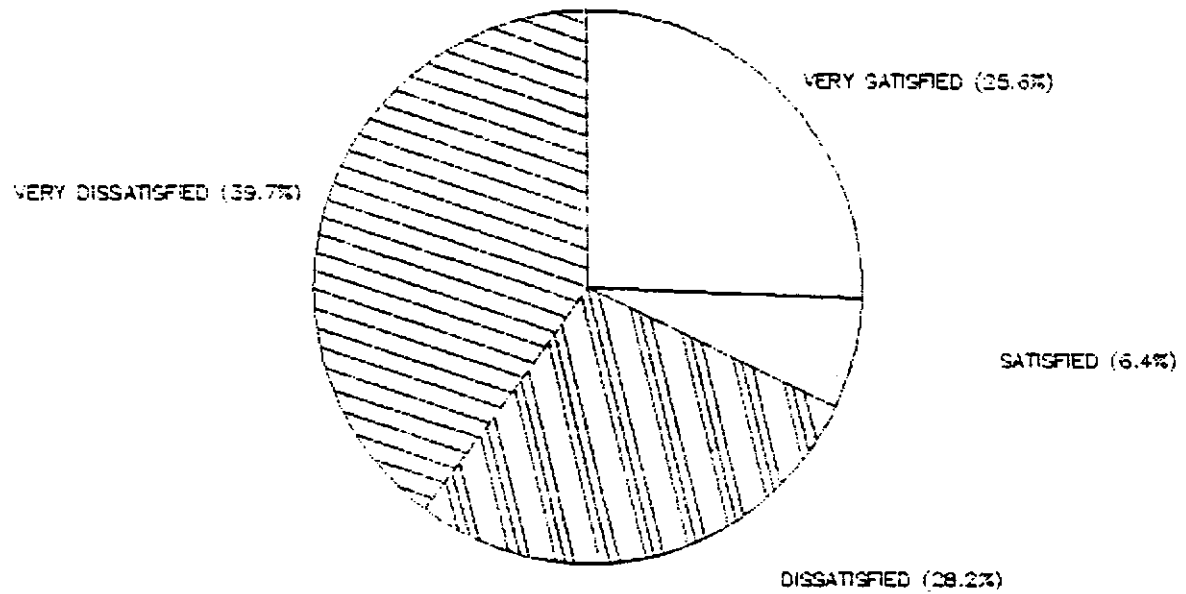
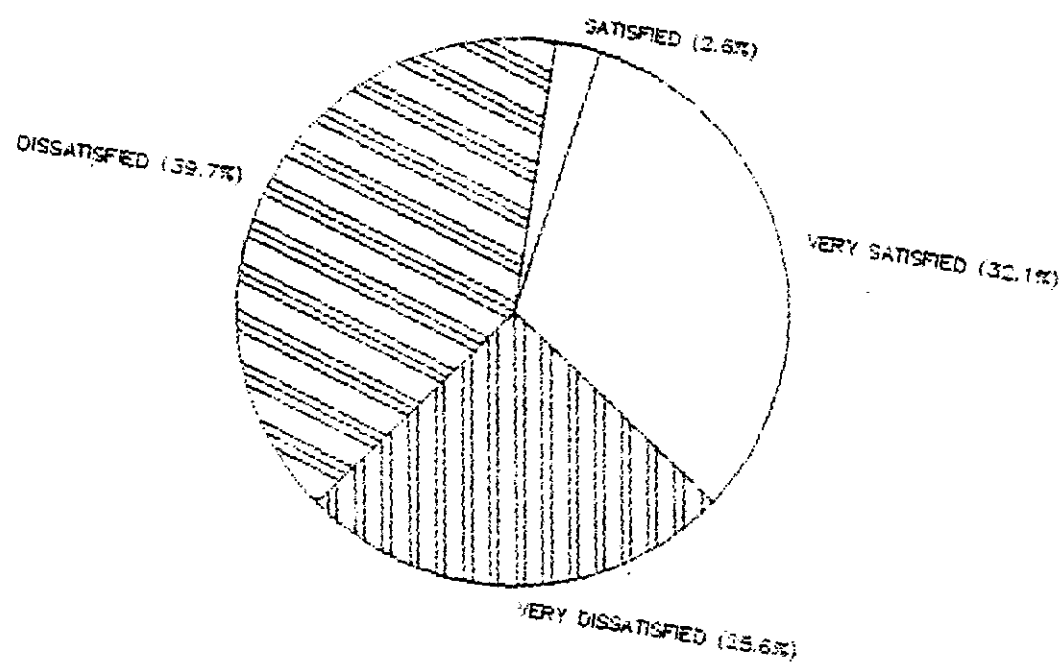


Figure 16
LEVEL OF SATISFACTION/DISSATISFACTION
WITH V14-PROFESSIONAL TREATMENT



professionals within DHSS. The question then becomes, what do the DHSS RNs feel they are not receiving in terms of professional treatment compared to other professionals.

V91-Amount of overtime worked per week

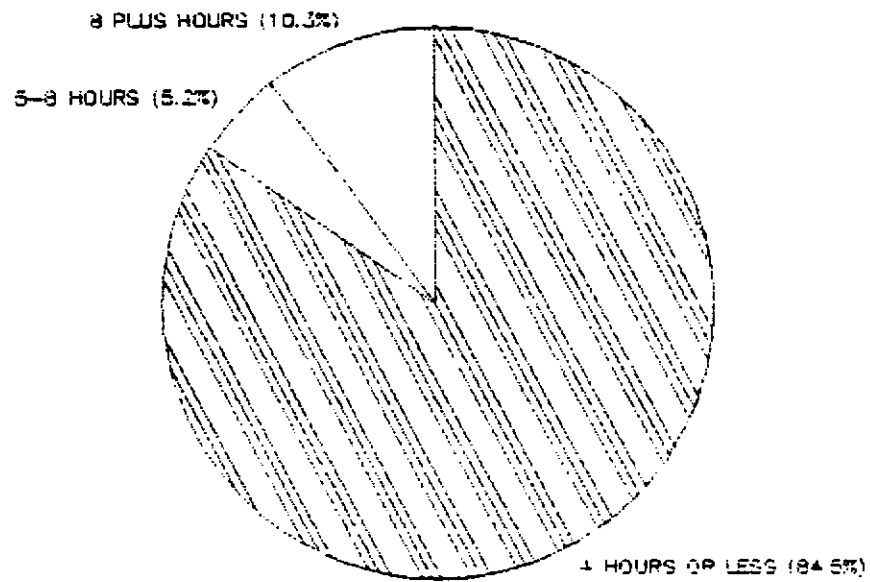
The tau-c score (.17) indicates that as the amount of overtime per week goes up, RNs are more likely to perceive that a better job in nursing could be found. Figure 17 shows that 85.8 percent of DHSS RNs reported working four hours or less of overtime per week. It is likely that RNs work overtime for two reasons; financial reasons and to provide the patients with the care the RNs feel they need. This is supported by the fact that salary, workload, staffing, and time with patients were also significantly related to intent to leave. It seems that RNs who work overtime are not having their financial and/or professional needs satisfied and thus are biding their time until they can find a better nursing job.

V92-V95-Time spent in meetings and time spent on other items

The tau-c score (.17) indicates that as time spent in meetings and time spent on other chores increases, the perceived likelihood of finding a better job in nursing increases. This is just a manifestation of the reversal of time spent with patients. In other words time spent on these items deters from one of the primary reasons of entering nursing: to take care of patients. While some time must be spent at other aspects of work, an

Figure 17
AMOUNT OF OVERTIME PER WEEK

7



attempt should be made to minimize it.

Factor analysis

The previous discussion illustrates that a number of variables are related to intent to leave and the perceived likelihood of finding a better job in nursing. A majority of these variables were variables measuring the level of dissatisfaction /satisfaction with certain aspects of nursing. It would help the analysis to know how these variables interrelate among themselves and how they relate to the dissatisfaction/satisfaction variables that were not significantly related to intent to leave or perceived opportunity. To help ascertain this a factor analysis was performed.

"The basic assumption of factor analysis is that underlying dimensions, or factors, can be used to explain complex phenomena. Observed correlation between variables result from this sharing of factors." (Norusis, 1986, B-42) In other words factor analysis allows one to examine the responses to the twenty-three items of satisfaction simultaneously and determine the factors which account for the different patterns of RN responses. Through factor analysis, the items that seem to be the underlying factors can be identified. (e.g. x and y are both related but underlying factor, z, is really the key.)

A factor analysis of the twenty-three satisfaction variables was performed with a varimax rotation of the principle components. The factor loadings are in Table 6 and the loadings indicate the strength of the variables within the factor in

TABLE 6
 FACTOR SCORES FOR SATISFACTION/DISSATISFACTION VARIABLES
 FOR DHSS RNS
 (N=78)

FACTOR 1-REWARDS -----	FACTOR LOADING
APPRECIATION/PRESTIGE	0.62
SALARY	0.82
BENEFITS	0.77
PROFESSIONAL TREATMENT	0.69
ADVANCEMENT OPPORTUNITY	0.70
WORK SETTING	0.47
NURSING AS A CAREER	0.43
 FACTOR 2-COMMUNICATIONS/DECISION MAKING -----	
JOB EXPECTATIONS	0.75
INFLUENCE DECISIONS	0.54
APPRECIATION/PRESTIGE	0.46
SUPPORT/FEEDBACK	0.73
COMMUNICATIONS	0.69
SUPPLIES	0.54
 FACTOR 3-TIME WITH PATIENTS -----	
TIME WITH PATIENTS	0.83
EDUCATIONAL OPPORTUNITY	0.49
RECORDKEEPING	0.80
REPETITIVENESS OF JOB	0.68
 FACTOR 4-SHIFTS -----	
STAFFING	0.72
TYPE OF SHIFT WORKED	0.90
WAY SHIFTS ARE SCHEDULED	0.63
 FACTOR 5-CHALLENGE -----	
CHALLENGE IN JOB	0.70
INFLUENCE DECISIONS	0.40
NURSING AS A CAREER	0.64
 FACTOR 6-SUPERVISOR -----	
JOB DONE BY SUPERVISOR	0.69
WORKLOAD	0.77
 FACTOR 7-AUTONOMY -----	
AUTONOMY	0.78
WAY SHIFTS ARE SCHEDULED	0.49

relation to the other responses within the factor.

Factor 1-Rewards

The variables in this factor are; (satisfaction /dissatisfaction with) appreciation/prestige, salary, benefits, professional treatment, advancement opportunity, physical quality of the work setting and nursing as a career.

All these variables were significantly related to intent to leave and/or finding a better job in nursing. The factor analysis indicates that the responses on monetary rewards are interrelated. The factor analysis also indicates that appreciation/prestige, professional treatment, advancement opportunity and nursing as a career were related to financial rewards. The inclusion of physical quality of work setting in this factor would seem to indicate that a quality work setting indicates that management cares about its nurses and that it is another reward.

Factor 2-Communications and decision making

The variables in this factor are;(satisfaction/ dissatisfaction with) expectations about the job, ability to influence decisions, appreciation/prestige, support/feedback from administrators, level of communication among the staff and supplies.

All these variables relate to the transfer of information within the work setting. Only appreciation/prestige which was

also related to factor one, was significantly related to intent to leave or perceived likelihood of finding a better job in nursing. This may indicate that DHSS is doing a good job on communications or that these variables are just not a factor on turnover for DHSS RNs. The inclusion of appreciation/prestige in this factor indicates that both monetary rewards and the communication level are important in increasing satisfaction with this variable. The inclusion of supplies would seem to indicate that the availability of supplies is related to the amount of communication within the work setting. e.g. a poor communications environment makes it very difficult to get across the need for supplies.

Factor 3- Time allocation

The variables included in this factor are; educational opportunities, time spent with patients, time spent on recordkeeping, and the repetitiveness of the job. Repetitiveness and time spent with patients were significantly related to intent to leave or perceived likelihood of finding a better job in nursing.

The last three variables are closely interrelated. Record keeping detracts from time with patients and is the most likely the explanation for repetitiveness of the job.

A 1986 article cites that one of the things that makes RNs angry is excessive paperwork. (RN, 1986) A 1980 article cited that 41 percent of the registered nurses polled felt that too

much paperwork was a "crucial" problem. (Donovan, 1980)

There seems to be no obvious reason, at least to this researcher, why educational opportunity loaded into this factor and not the monetary factor.

Factor 4- Shifts

The variables in this factor are; the way shifts are scheduled, staffing and type of shift worked. Type of shift worked and staffing were both related to intent to leave. A relationship between these three factors is to be expected. What this indicates that the satisfaction on the amount of staffing provided is related to the shift worked and how that shift was scheduled.

Factor 5-Challenge

The variables in this factor are; the amount of challenge in the job, ability to influence decisions and nursing as a career. Challenge was related to opportunity and nursing as a career was related to intent to leave.

The factor scores indicate that nursing as a career is related to both monetary rewards and the challenge factor. The affect of decision making seems to indicate that nurses enter the nursing profession with the expectation of making decisions. The inclusion of the amount of challenge indicates that RNs enter nursing partially for the challenge and that challenge is related to the way decisions are made. What is surprising is that the

amount of autonomy on the job did not load into this factor.

Factor 6-Supervisor

The variables in this factor are; the job done by the immediate supervisor and the workload. Workload was significantly related to intent to leave. This would seem to indicate that supervisors have a great deal of influence on the determination of the workload and that they are partially evaluated by the RNs on this capacity.

Factor 7-Autonomy

The variables in this factor are; the level of autonomy on the job and the way shifts are scheduled. Neither one of these variables was significantly related to intent to leave or opportunity. This would seem to indicate that DHSS RNs feel that autonomy is not related to making decisions on the job but rather to the ability to influence the way shifts are scheduled.

Seven factors were identified from the satisfaction variables in the survey. These factors indicate broad areas that DHSS should package its efforts. However, one must keep in mind that some of the factor loadings on these factors were not very high, e.g. .7 or better. Therefore, any policy directives should not be based on these factors alone.

COMPARISON OF DHSS RNs AND NON-DHSS RNs

The previous section illustrated what leads DHSS RNs to consider leaving DHSS or what contributes to their perception of better opportunities in nursing. This is a very helpful tool in retention policies, but it does not give any point of reference within the state of Delaware. A point of reference would help one understand the previous findings. To obtain this point of reference a comparison is needed between DHSS and non-DHSS registered nurses.

DEMOGRAPHICS

The demographics were very similar for both groups (Table 7). Both groups were predominantly female and caucasian. There were large differences in the age distribution of the groups. DHSS has more RNs in the 40 to 49 year old group and less in the 29 and under year old group. This would support the hypothesis of DHSS not being competitive in the RN market in the past few years. The large number of 40-49 year old supports the hypothesis that the reason the intent to leave percentage is less that the better job percentage was because the DHSS RNs have too much invested to leave.

Both groups have a high percentage of married RNs. In terms of yearly salary DHSS had a large percentage of their RNs in the \$20,000 to \$25,000 range while non-DHSS were more evenly distributed with a larger percentage in the lower income groups.

TABLE 7
DHSS RNS AND NON-DHSS RNS DEMOGRAPHICS

	DHSS (N=78)	NON-DHSS (N=296)	
MALE	1.3%	3.1%	
FEMALE	98.7%	96.9%	
AGE			

29 YRS OR LESS	6.9%	18.7%	*
30-39 YR OLD	28.8%	33.2%	
40-49 YR OLD	39.7%	27.0%	*
50-59 YR OLD	17.8%	16.0%	
60 PLUS YRS	6.9%	5.1%	
MARRIED	80.3%	78.9%	
NOT MARRIED	19.7%	21.1%	
INDIVIDUAL INCOME			

\$15,000 OR LESS	14.7%	23.2%	
\$15-\$20,000	4.0%	11.8%	*
\$20-\$25,000	52.0%	22.5%	*
\$25-\$30,000	17.4%	26.3%	*
\$30-\$40,000	10.7%	12.1%	
\$40-\$50,000	1.3%	2.8%	
\$50,000 PLUS	0.0%	1.4%	
FAMILY INCOME			

\$15,000 OR LESS	1.4%	1.4%	
\$15-\$20,000	0.0%	2.9%	
\$20-\$25,000	15.5%	5.3%	*
\$25-\$30,000	9.8%	14.3%	
\$30-\$40,000	21.1%	20.7%	
\$40-\$50,000	11.3%	15.7%	
\$50,000 PLUS	40.8%	39.9%	
WHITE	93.4%	96.3%	
BLACK	5.3%	2.4%	
OTHER	1.3%	1.3%	
CHILDREN			

UNDER SIX	10.3%	12.8%	
SIX AND PLUS	29.5%	25.7%	
BOTH GROUPS	7.7%	8.1%	
NO CHILDREN	52.6%	53.4%	

*=STATISTICALLY SIGNIFICANT

(This was probably due to the fact that the non-DHSS sample had a significantly larger number of part-timers.)

In terms of household income, both groups were fairly equal and with a preponderance of the RN households earning over \$50,000 per year. The larger percentage of DHSS RNs in the \$20,000 - \$25,000 range seems to indicate that a large percentage of the single RNs (19.3%) earn salaries in this range as compared to single non-DHSS RNs whose salaries seem to range over the spectrum.

Approximately twenty percent of both groups have children that are under the age of six (day care age.)

Both groups of RNs possess an education which primarily consists of a diploma or a BSN (Table 8). Over half of both groups of RNs gained this education in Delaware and another twenty percent gained their education in an adjacent state. There was a significant difference in the median year of licensure for DHSS and non-DHSS nurses. This alludes back to the age distribution and the competitiveness question.

The primary reason the surveyed RNs decided to originally come to Delaware was because Delaware was home or due to the employment of their spouse in Delaware. Very few nurses came to Delaware because it was the best job offer and none came to Delaware because it had high salaries.

This indicates that Delaware may not be competitive in the regional job market for nurses. These responses also indicate that if Delaware is to maintain its current level of health care,

TABLE 8
DHSS RNS AND NON-DHSS RNS DEMOGRAPHICS II

	DHSS (N=78)	NON-DHSS (N=296)
DEGREE		

DIPLOMA	48.7%	43.7%
ASSOCIATES	15.4%	16.6%
BSN	29.5%	32.8%
MASTERS	6.4%	6.1%
PHD	0.0%	1.0%
WHERE RECEIVED EDUCATION		

DELAWARE	53.8%	58.0%
ADJACENT STATE	21.8%	21.0%
REGION	7.7%	9.8%
OTHER	16.7%	11.2%
MEDIAN YEAR LICENSED	1965	1973
WHY NURSE IN DELAWARE		

SPOUSE'S JOB	35.9%	37.8%
DE IS HOME	44.9%	41.8%
BEST JOB OFFER	1.3%	3.8%
CHOOSE TO LIVE IN DE	10.3%	9.4%
HIGH SALARIES	0.0%	0.0%
OTHER	7.7%	7.7%

it must maintain its economic growth in order to attract RNs through the employment of their spouses.

Job characteristics

The majority of the RNs polled worked full-time, but DHSS had a larger percentage of full-time RNs (Table 9). Both groups have been employed by their current employer for an average of approximately six years. The predominant shift worked was the day shift with DHSS RNs working more day shifts than the non-DHSS nurses. The average amount of overtime for both groups was approximately three hours per week.

There were significant differences in the distribution of how the RNs spent their time. The one significant difference was that DHSS RNs spent a far lesser amount of time taking care of their patients than their non-DHSS counterparts. This difference could be a time bomb for DHSS. As you will recall time spent with patients was significantly related to intent to leave. Also spending time with patients is one of the major reasons RNs entered nursing. Therefore DHSS RNs are not having one of their primary needs fulfilled in comparison to non-DHSS RNs. While there was slight numerical differences on other variables, none were significant.

Job satisfaction items

Table 10 shows the comparison of responses of DHSS RNs and non-DHSS RNs with various aspects of nursing. (All these items

TABLE 9
DHSS RNS AND NON-DHSS RNS JOB CHARACTERISTICS

	DHSS (N=78)	NON-DHSS (N=296)	
FULL TIME	76.9%	61.1%	*
PART TIME	20.5%	31.1%	
OTHER	2.6%	7.8%	
MEDIAN YEARS WITH EMPLOYER	6.5	6.0	
SHIFT WORKED			

DAY	71.8%	50.4%	*
EVENING	12.8%	13.1%	
NIGHT	5.1%	6.0%	
DAY/EVE	5.1%	12.8%	
DAY/NIGHT	0.0%	5.0%	
EVE/NIGHT	1.3%	1.1%	
OTHER	3.8%	11.7%	
TIME SPENT IN: (MEAN PCT)			

MEETINGS	9.3%	6.3%	
WITH PATIENTS	39.2%	54.1%	*
RECORD KEEPING	34.7%	29.6%	
OTHER	16.8%	10.1%	
HOLDS 2ND JOB	13.0%	14.9%	
OVERTIME PER WEEK (MEAN)	3.3 HRS	3.1 HRS	

*=STATISTICALLY SIGNIFICANT

TABLE 10
COMPARISON OF DHSS RNS AND NON-DHSS RNS
ON SATISFACTION WITH ASPECTS OF NURSING
(PERCENT SATISFIED OR VERY SATISFIED)

	DHSS (N=78)	NON-DHSS (N=296)	
CHALLENGE	81.0%	88.0%	
EXPECTATIONS	83.3%	82.4%	
INFLUENCE	49.4%	47.2%	
AUTONOMY	76.7%	70.3%	
APPRECIATION/PRESTIGE	32.0%	43.9%	*
SUPPORT	41.1%	35.8%	
COMMUNICATIONS	62.8%	66.5%	
SALARY	48.7%	46.3%	
BENEFITS	62.8%	47.6%	*
TREATMENT	34.7%	18.5%	*
CAREER ADVANCEMENT	12.9%	26.7%	*
EDUCATION OPPORTUNITIES	14.1%	47.9%	*
SUPERVISOR	78.2%	58.6%	*
SHIFTS SCHEDULING	83.3%	56.1%	*
STAFFING	37.7%	36.9%	
TIME WITH PATIENTS	50.0%	60.6%	
SHIFT WORKED	96.1%	80.7%	*
RECORD KEEPING	26.0%	38.2%	*
REPETITIVENESS	60.5%	53.8%	
PHYSICAL SITE	55.1%	79.6%	*
WORKLOAD	51.3%	57.2%	
SUPPLIES	35.9%	68.8%	*
NURSING AS A CAREER	67.9%	64.8%	

* STATISTICALLY SIGNIFICANT

were significantly related to intent to leave for non-DHSS RNs.)

V5-Amount of challenge in your job

There was significant statistical difference between the two group's responses. Both groups show cited a high degree of satisfaction with the challenge in their job.

V6-Information on job expectations

No significant difference. Both groups were satisfied with the information they receive about what is expected from them on the job.

V7-Ability to influence decisions which affect you

No significant difference. Approximately fifty percent of both groups felt they have no input on the decisions that effect them.

V8-Level of autonomy possessed in the RNs job

No significant difference. Both groups were fairly satisfied with their level of autonomy. The nursing literature makes a large argument for dissatisfaction with this aspect of nursing, but Delaware RNs do not seem overly dissatisfied with this aspect of nursing.

V9-The appreciation and prestige associated with nursing

DHSS RNs were significantly different on this item from non-

DHSS nurses. DHSS RNs reported less satisfaction with this item than their non-DHSS counterparts. Part of this may have been the stigma of being a state worker (e.g. "Its good enough for government work" type statements.) This also could be related to the type of care given which may not be as "exciting" as the other types.

V10-Support and feedback received from the administration

No significant difference. Over half of both groups reported being dissatisfied with this aspect of nursing.

V11-The level of communications among the staff at work

No significant difference. Both groups responded that they were fairly satisfied with the level of communications among the staff. When this variable is looked at in light of V6, V7, and V10, there is a definite pattern. The reported level of satisfaction with information coming down from the upper levels and the intra-level communications was much higher than the information flow going up from the lower levels to the upper levels. This would indicate that neither group was satisfied with the amount of input they have on the decision making process. As you recall, registered nurses are the most continuously present professionals in most health care agencies and thus feel they should have some impact on what goes on.

V12-Salary you receive

No significant difference. This was definitely not what was expected. This may indicate that even if DHSS salary levels were raised to the point of non-DHSS (if they are not already there), the majority of the DHSS RNs would still be dissatisfied with the salary they receive.

V13-Fringe benefits

DHSS RNs were significantly more satisfied with the fringe benefits they received than the non-DHSS RNs. The question then is what does DHSS offer that the other agencies do not and can this benefit package be used as a marketing tool. A question that needs to be further explored is the effect of part-time non-DHSS RNs and their benefit package.

V14-The way nurses are treated compared to other professionals

DHSS RNs were significantly more satisfied with this item than non-DHSS RNs. This may be due to the problem of doctor-nurse relationships which non-DHSS RNs are more exposed to. Even DHSS RNs were not overly satisfied with this aspect of nursing.

V15-The career advancement opportunities set up for nurses

DHSS RNs were significantly less satisfied with this aspect than non-DHSS RNs. Neither group was very satisfied with the career ladders that were currently in place. What needs to be further explored is what underlies the difference between DHSS RNs and non-DHSS RNs.

V16-The educational opportunities offered through work

DHSS RNs were very significantly less satisfied with this aspect of nursing compared to non-DHSS RNs. This may reflect dissatisfaction with both outside educational opportunities and on site in-service education. Also RNs may feel that they need to continue to update their education to maintain their level of professional competency.

V17-The job done by your immediate supervisor

DHSS RNs were significantly more satisfied with the job being done by their immediate supervisor than non-DHSS RNs. It may be that DHSS supervisors were much better than their counterparts or it could be that DHSS RNs are venting their anger towards the administration and not the supervisors.

V18-The way shifts are scheduled

DHSS RNs were significantly more satisfied with the way shifts were scheduled than the non-DHSS RNs. This may have been due to the fact that a overwhelming majority of the DHSS RNs worked the day shift.

V19-The amount of staffing provided

No significant difference. One would have expected that with the proliferation of vacancies at DHSS, DHSS RNs would have been much more upset with this aspect of nursing, but they were

not. This is not to say it is not a problem. Approximately two-thirds of both the groups were dissatisfied with the amount of staffing provided.

V20-The amount of time you spend with the patients

No significant difference. As this is one of the primary reasons RNs enter nursing, the satisfaction levels were alarming. As you will recall fifty percent of DHSS RNs were dissatisfied with this aspect of nursing and sixty-one percent of the non-DHSS RNs were dissatisfied. This is what RNs were trained for and a large percentage of them are not getting the time they desire with the patients.

V21-The type of shift you work

DHSS RNs were significantly more satisfied with the shift they worked than non-DHSS RNs. This alludes back to the question of the way shifts were scheduled and that DHSS RNs primarily worked day shifts.

V22-The amount of time spent on record keeping and clerical duties

DHSS RNs were significantly less satisfied with this aspect of nursing. On the average DHSS RNs spent more time doing paperwork than their non-DHSS counterparts.

V23-The repetitiveness of your work

No significant difference. Slightly more RNs were satisfied

with this item than were dissatisfied.

V24-The physical quality of your work setting

DHSS RNs were significantly less satisfied with this aspect of nursing. This is no surprise considering a large part of the non-DHSS RNs work at Christiana hospital (30%) and it is most likely being used as a point of reference for DHSS RNs.

V25-Your workload

No significant difference. Even with the vacancy problem at DHSS, DHSS RNs did not have significantly different levels satisfaction with their workload than non-DHSS nurses.

V26-The availability of supplies

DHSS RNs were significantly less satisfied the with supplies available to them.

V27-Nursing as a career

No significant difference. Approximately two-third of the RNs polled were happy with their career choice.

Summary

The comparison of the various satisfaction levels indicates that DHSS may not be as bad off as was perceived and may have some points to market. DHSS was more positively perceived by its RNs than other employers were by their RNs of doing a superior job in

scheduling, supervising, the way RNs are treated compared to other professionals and benefits. Areas that were cited as needing improvements were the physical work site, appreciation/prestige DHSS RNs receive, educational opportunities, and most importantly, career ladder.

CONCLUSIONS

The survey results indicate mixed signals for the state of nursing within DHSS compared to Delaware nurses employed by other health care agencies. On the positive side, DHSS RNs had higher satisfaction levels in the areas of scheduling, the treatment of RNs compared to other professionals, and benefits. On the negative side, DHSS RNs had lower satisfaction levels in the areas of educational opportunities, appreciation/prestige, physical work site, and career ladders. Of the negative items appreciation/prestige, physical work site and career ladder were significantly related to intent to leave or perceived alternative opportunities. The satisfaction/dissatisfaction level with appreciation/prestige was significantly related to opportunity but not to intent to leave. Ergo this seems to be a manifestation of the attitude held by state workers that the public holds them in low esteem and if they worked in a non-state job, they would be held in higher esteem. The satisfaction/ dissatisfaction level with the physical work site was only significantly related to intent to leave. This may be an area that DHSS cannot drastically improve due to the prohibitive cost of capital projects. The satisfaction/dissatisfaction level with the career ladder was significantly related to both intent to leave and opportunity. This indicates that this an area that DHSS needs to improve, especially in light of the fact the 87 percent of DHSS RNs were dissatisfied with this aspect of nursing.

Salary, an area that is often suggested as a "quick fix" for

the nursing crisis, did not yield results that were expected. Salary, to no surprise, was found to be significantly related to intent to leave and opportunity. Hence DHSS will have to address this issue if it is to retain its nurses and attract new ones. What was surprising was that there was no significant difference between the satisfaction/dissatisfaction level of DHSS RNs compared to non-DHSS RNs on the salary issue. This seems to indicate that not only is there a perception of pay inequalities within the profession, but that the whole profession as a unit is discontented with its salary level. Thus this not only is an area that needs to be addressed by DHSS, but by the entire health profession.

A variable that appears time and time again through out the report is age. Age and related variables, e.g. years with employer and year of licensure, were all significantly related to intent to leave. This finding supports other studies on turnover that indicate that at younger ages, employees are more likely to leave the organization. What is of importance for DHSS is the RN age distribution. DHSS RNs are significantly older than non-DHSS RNs with a majority of DHSS RNs in the 40-49 year old bracket. (Also DHSS's RNs have a median year of licensure of 1965 as compared 1973 for non-DHSS RNs.) This indicates that DHSS will lose its RNs to retirement earlier than other health care agencies in Delaware. Hence it will have to attempt to lure other RNs from their current jobs. Also it will have to obtain a disproportionate share of the decreasing pool of newly graduated

nurses to maintain its nursing complement at the current level. The statistics indicate that DHSS has been very unsuccessful in doing this in the past. Any future plan implemented by DHSS must place heavy emphasis on attracting and retaining young RNs.

A number of recommendations can be derived from the body of the report and the above conclusions. This author limited the subsequent recommendations to what he felt were politically and economically viable given the existing constraints. By no means should these recommendations be considered an all inclusive list.

RECOMMENDATIONS

The following are some suggested recommendations for DHSS based on the analysis of the survey data.

95% Plan- This is a program set-up to maintain DHSS's RN salary levels, at minimum, at 95% of the local area's average. (The effectiveness of this plan may depend on extending this to the regional area, e.g. the area from which DHSS obtains its supply of RNs.) While this may not greatly effect older RNs, it is most likely that salary is of a greater importance to young RNs and therefore this action will have a significant impact on the recruitment of younger RNs. As you will recall, DHSS had a significantly smaller number of young RNs than non-DHSS facilities.

Day Care Plan- This is a plan that would set-up an on-site day care facility for DHSS RNs or would reimburse RNs who use alternative day care facilities. Not only would this facilitate DHSS RNs who have pre-school age children, but also it could become a powerful recruitment tool.

9 Month Employment Plan- This would be a plan where RNs, if they so desire, are hired on a nine-month basis from September to May. Part of this program would be the retention of certain benefits during the summer and no break in time towards retirement.

(Salaries would be pro-rated for a nine month period.) This would allow RNs who have young school age children to spend time with them in the summer.

Alternative Career Ladder- A career ladder would be set-up that would allow RNs to progress in salary and position while not progressing into a supervisory position. This career ladder should be based on both seniority and competency. It should not be based on the number of workers supervised nor seniority alone.

Recommendations for further analysis

Time and money did not permit full exploitation of the survey data, and therefore a more complete analysis. Below are listed some recommendations for further analysis.

1. Perform a Logit analysis on the variables that were found to be significantly related to intent to leave. This analysis would yield the relative strengths of each variable on intent to leave and the overall effect.

The establishment of the relative strength of each variable in relationship to intent to leave would identify the variables that effect intent to leave the most with when they are incrementally adjusted, therefore identifying areas that financial resources should be concentrated.

2. Perform exploratory data analysis on what characteristics determine the differences in satisfaction levels between DHSS RNs and non-DHSS RNs. This analysis would lend itself to further and more finely tuned recruitment and retention policies.

The analysis performed in this report only touched the surface of the survey data. Further analysis would help identify the interconnections between various variables and intent to leave. Also both RN groups could be analyzed, not as whole as done in this report, but in various demographic groups. Any further research may yield some insight into the nursing problem.

3. Perform a similar analysis to the DHSS study on non-DHSS RNs. This is because the nursing shortage is not only of a vital importance to DHSS but also to the state of Delaware.

The level of health care within Delaware is effected by the nursing shortage. It affects the health and well-being of Delaware residents, but also it may have economic repercussions. The state of health care delivery in Delaware is of importance to any perspective industry wishing to locate or expand into Delaware. Hence with the proper analysis programs to alleviate the overall RN shortage in Delaware could be developed.

4. Perform a follow-up survey to DHSS RNs. This should be performed after the implementation of new policies by DHSS. The results form this survey should then be compared to the existing survey to determine what effect the various policies have had.

This would allow DHSS to determine the effect of its various programs and whether or not the dollars spent were spent efficiently.

5. Compare the results from this survey with the results of the Delaware teacher's survey (Raffel, 1987). (Two professions in turmoil.)

This would give a comparative perspective to the nursing crisis in relation to another profession that is in turmoil.

Bibliography

- Aiken, L., 1987. "Nurses for the Future: Breaking the Shortage Cycles." American Journal of Nursing (December, 1987) 87,12:24-28.
- Alt, J., Brown, D. L., and Wilson, F. 1982. "We Bit The Bullet." RN (January, 1982) :52.
- American Academy of Nursing 1983. Magnet Hospitals. Kansas City, MO:American Nurses Association.
- Donovan, L. 1980. "What Nurses Want (And what they are getting)." RN (April, 1980) :22-30.
- Gulack, R. 1982. "Wanted: Longer (and shorter) Shifts...Plus a little choice in the matter." RN (June, 1982) :35-39.
- Gulack, R. 1983. "Why nurses leave nursing." RN (December, 1983) :32-37.
- Hallas, G. G. 1980. "Why nurses are giving it up." RN (July, 1980) :17-21.
- Larson, E., Lee, P. C., Brown, M. A., and Shorr, J. 1984. "Job Satisfaction: Assumptions and Complexities." Journal of Nursing Administration (January, 1984) :31-38.
- Link, C. R. 1987a. "Labor Supply of Registered Nurses: 1960-1984." University of Delaware (May 27, 1987).
- Link, C. R. 1987b. "Returns to Nursing Education: 1960-1984." University of Delaware (March 3, 1987).
- March, J. G. and Simon, H. A. 1958. Organizations. New York, NY: Wiley.
- Mobley, W. 1977. "Intermediate Linkages in the Relationship between Job Satisfaction and Employee Turnover." Journal of Applied Psychology (1977) 62:237-240.
- Munro, B. 1983a. "Job Satisfaction among Recent Graduates of Schools of Nursing." Nursing Research (November/December, 1983) 32,6:350-355.
- Munro, B. 1983b. "Young Graduate Nurses: Who Are They and What Do They Want?" Journal of Nursing Administration (June, 1983) :21-26.
- Norusis, M. J. 1986a. SPSS/PC+ advanced statistics. Chicago, IL: SPSS inc.
- Norusis, M. J. 1986b. SPSS/PC+. Chicago, IL: SPSS inc.

Nursing 88 1988. "Nursing Shortage Poll Report." Nursing88
(February, 1988) 18,2:33-41.

Price, J., and Mueller, C. W. 1981. Professional Turnover: The Case of Nurses. New York, NY: SP Medical and Scientific Books.

Raffel, J. A. 1986. Teaching in Delaware: An Analysis of Current and Former Teachers' Views. Newark, DE: College of Urban Affairs and Public Policy, University of Delaware.

Raffel, J. A. with the assistance of L. R. Groff 1987. Teachers For Delaware: Augmenting Teacher Recruitment and Retention In Delaware. Newark, DE: College of Urban Affairs and Public Policy, University of Delaware.

RN. 1986. "What really makes nurses angry." RN (January, 1986) :55-60.

Sandroff, R. 1980. "The Shortage: How it's changing nursing What you can expect." RN (November, 1980) :55-59, 86-90.

Sanger, E., Richardson, J., and Larson, E. 1985. "What Satisfies Nurses Enough to Keep Them?" Nursing Management (September, 1985) 16,9:43-46.

Steers, R. M., and Mowday, R. T. 1981. "Employee Turnover and Post-Decision Accommodation Processes." In L. L. Cummings and B. M. Shaw (Eds.). Research in Organizational Behavior. Greenwich, Conn.: JAL Press, 1981, 1981. Pp 237-249.

U.S. Department of Health and Human Services. 1986. "1984: The Registered Nurse Population." DHHS Publication No. HRP -0906938.



STATE OF DELAWARE
OFFICE OF THE SECRETARY
DEPARTMENT OF HEALTH AND SOCIAL SERVICES
NEW CASTLE, DELAWARE 19720
PHONE: (302) 421-6705

August 3, 1987

Dear Registered Nurse,

As you are aware, one of the major problems facing the nursing community in the State of Delaware is with nursing recruitment and retention. To properly assess this problem, more information is needed. Therefore, we are conducting a survey of present and former nurses registered in Delaware to ascertain their attitudes toward nursing. This survey is just a small part in a range of initiatives enacted by the State to respond to this crisis.

Your name has been selected from a random sample of members of the nursing profession and we hope that you will be willing to participate by filling out the enclosed questionnaire. When you have completed the questionnaire, please use the self-addressed stamped envelope to return it to the College of Urban Affairs by August 24, 1987. The College of Urban Affairs at the University of Delaware has been contracted to conduct the survey.

We hope that you will consider this totally confidential survey important enough to fill out and to join with us in trying to solve the problems of nursing recruitment and retention. If you have any questions concerning the survey, please contact Phyllis Raab at the College of Urban Affairs. Her telephone number is (302)451-1704.

Thank you so much.

Sincerely,

A handwritten signature in cursive script that reads "Thomas P. Eichler".

Thomas P. Eichler
Secretary

TPB:lkM

DELAWARE NURSES SURVEY

AUGUST 1987

Thank you for your participation in the Delaware Nurses Survey. Please respond to this survey based upon your own experience. All of your responses will be treated confidentially and no individual will be identified in any report of the data. The reference number will be used to check the representativeness of the sample and to allow us to followup on non-respondents.

Please return your completed survey to the College of Urban Affairs at the University of Delaware. A postage-paid preaddressed envelop is enclosed for your convenience.

Thank you again for your help.

DO NOT WRITE YOUR NAME ON THIS SURVEY.

1. Listed below are some phrases associated with nursing. Please indicate your level of satisfaction or dissatisfaction with each as it relates to your current or most recent nursing position. Please check ONE appropriate response for each statement.

	<u>Very</u> <u>Satisfied</u>	<u>Somewhat</u> <u>Satisfied</u>	<u>Somewhat</u> <u>Dissatis</u>	<u>Very</u> <u>Dissatis</u>
A. The amount of challenge in your job	_____	_____	_____	_____
B. How well informed you are about what is expected from you on your job	_____	_____	_____	_____
C. Your ability to influence decisions which affect you	_____	_____	_____	_____
D. The level of autonomy you have in your job	_____	_____	_____	_____
E. The appreciation you receive and the prestige associated with nursing	_____	_____	_____	_____
F. The support/feedback you receive from administrators	_____	_____	_____	_____
G. The level of communications among the staff at work	_____	_____	_____	_____
H. The salary you receive	_____	_____	_____	_____
I. Your fringe benefits	_____	_____	_____	_____
J. The way nurses are treated compared to other professionals	_____	_____	_____	_____
K. The career advancement opportu- nities set up for nurses	_____	_____	_____	_____
L. The educational opportunities offered through work	_____	_____	_____	_____
M. The job done by your immediate supervisor	_____	_____	_____	_____
N. The way shifts are scheduled	_____	_____	_____	_____
O. The amount of staffing provided	_____	_____	_____	_____
P. The amount of time you spend with the patients/clients	_____	_____	_____	_____
Q. The type of shift your work	_____	_____	_____	_____

	<u>Very</u> <u>Satisfied</u>	<u>Somewhat</u> <u>Satisfied</u>	<u>Somewhat</u> <u>Dissatis</u>	<u>Very</u> <u>Dissatis</u>
R. The amount of time you spend on record keeping and clerical duties	_____	_____	_____	_____
S. The repetitiveness of your work	_____	_____	_____	_____
T. The physical quality of your work setting	_____	_____	_____	_____
U. Your workload	_____	_____	_____	_____
V. The availability of supplies	_____	_____	_____	_____
W. Nursing as a career	_____	_____	_____	_____

2. These are some reforms that might be adopted to attract good people into nursing. Please indicate how much each would help. Check ONE appropriate response per item.

	<u>Help</u> <u>A Lot</u>	<u>Help A</u> <u>Little</u>	<u>No Help</u> <u>At All</u>
A. Providing compensation to beginning nurses comparable to other professions that require similar training	_____	_____	_____
B. Reducing the amount of time nurses spend on non-nursing duties	_____	_____	_____
C. Providing fully paid day care facilities	_____	_____	_____
D. Going to a four day work week with ten hour shifts	_____	_____	_____
E. Providing more flexible scheduling	_____	_____	_____
F. Giving nursing supervisors management training	_____	_____	_____
G. Setting up a progressive career ladder for nurses so they may advance upward, but would not have to go into administration	_____	_____	_____

3. How likely are you to do each of the following within the next 5 years?

	<u>Very Likely</u>	<u>Somewhat Likely</u>	<u>Somewhat Unlikely</u>	<u>Very Unlikely</u>
A. If now a nurse, accept a nursing position with another employer	_____	_____	_____	_____
B. Leave the nursing profession	_____	_____	_____	_____
C. Leave the job market	_____	_____	_____	_____
D. If not now a nurse, reenter the nursing profession	_____	_____	_____	_____

4. How likely is it that you could find a better job in the nursing profession?
☐ Very likely ☐ Fairly likely ☐ Not too likely ☐ Very unlikely

5. How likely is it that you could find a better job that is not in the nursing profession?
☐ Very likely ☐ Fairly likely ☐ Not too likely ☐ Very unlikely

6. Have you ever left the nursing profession for any length of time?
☐ Yes ☐ No (IF NO, SKIP TO QUESTION #12)

7. What was the length of time you were gone? _____ years

8a. What was the name of the employer you left? _____

b. What was your position? _____

9. What were the reasons you left nursing? _____

10. Have you returned to the nursing profession?
☐ Yes ☐ No (IF NO, SKIP TO QUESTION #12)

11. If you returned to nursing, what were the reasons? _____

12. Please circle 'Yes' or 'No' in response to the following questions.

A. Do you have close friends among the people you work with?	Yes	No
B. Do you belong to any of the nursing professional associations?	Yes	No
C. Do you generally attend meetings of the above association(s)?	Yes	No
D. Would you recommend nursing as a career?	Yes	No

13. Did nursing as a career turn out as you expected?

☐ Yes ☐ No IF NO, Why not? _____

14. What could be done to make nursing a more attractive profession?

15. How much professional schooling in nursing have you had?

☐ Diploma school ☐ Masters degree
☐ Associate degree ☐ Doctorate degree
☐ Baccalaureate degree ☐ Other _____

16. In what state(s) did you receive your nursing education? _____

17. When were you first licensed as a registered nurse? 19____

18. What type of health agency are you currently employed in?

☐ I am not currently working in the health profession
☐ Private hospital
☐ Physician's office
☐ Industry
☐ Nursing home
☐ State agency
☐ Health care group (e.g. HMO, Blue Cross/Blue Shield, VNA)
☐ School
☐ VA hospital/Federal government agency
☐ Education
☐ Other (please specify) _____

19. In what area of nursing do you work?

☐ I am not currently working in a nursing position
☐ Medical surgery
☐ Obstetrics and gynecology
☐ Emergency
☐ ICU
☐ OR-recovery and L & D
☐ Psychiatric
☐ Geriatrics
☐ General duty nurse
☐ Supervisory position
☐ School nurse
☐ Nurse educator
☐ Other (please specify) _____

20. Where are you employed? _____ (State) _____ (County)

21. What is the name of your current employer? _____

22. How long have you been employed by your current employer? _____ years

23. What is your current employment status?

- ☐ Full-time
☐ Full-time, but seeking part-time
☐ Part-time
☐ Part-time, but seeking full-time
☐ Other (please specify) _____

24. Describe the following work characteristics:

- A. The length of your work week _____ days
 B. The length of your work day/shift _____ hours
 C. The shift you work on _____ shift
 D. The average amount of overtime you work each week _____ hours

25. What percent of your time do you routinely spend on the following?

- A. Attending meetings _____ percent
 B. Attending to patients/clients _____ percent
 C. Doing record keeping and clerical tasks _____ percent
 D. Other _____ percent

 Total 100 percent

26. If you work in a hospital setting, how many patients are you responsible for? _____ patients

27. What was the ONE main reason you ORIGINALLY decided to come to Delaware to work as a nurse?

CHECK ONLY ONE

- ☐ Employment of spouse in Delaware
☐ Delaware is home, I never really considered going elsewhere
☐ Best job offer from Delaware
☐ Preferred to live in Delaware
☐ High salaries in Delaware
☐ Other (please specify) _____

28. Are you currently working in any other job in addition to your primary job?
☐ Yes ☐ No (IF NO, SKIP TO QUESTION #31)

29. If you work in an additional job, what type is it?

- ☐ Nursing ☐ Sales ☐ Clerical
☐ Other (please specify) _____

30. How many hours a week do you work in the additional job? _____

31. What things would most increase your satisfaction with your present primary job?

32. What is your sex? ☐ Female ☐ Male
33. What is your age? _____
34. What is your present marital status? ☐ Married ☐ Not Married
35. Do you have any children under 18? ☐ Yes ☐ No
- 35b. IF YES, what are their ages? _____
36. Which of the following income categories best describes your income derived from your primary job before taxes?
- | | |
|--|---|
| <input type="checkbox"/> I am not currently employed | <input type="checkbox"/> \$25,001 to 27,500 |
| <input type="checkbox"/> \$15,000 or less | <input type="checkbox"/> \$27,501 to 30,000 |
| <input type="checkbox"/> \$15,001 to 17,500 | <input type="checkbox"/> \$30,001 to 35,000 |
| <input type="checkbox"/> \$17,501 to 20,000 | <input type="checkbox"/> \$35,001 to 40,000 |
| <input type="checkbox"/> \$20,001 to 22,500 | <input type="checkbox"/> \$40,001 to 50,000 |
| <input type="checkbox"/> \$22,501 to 25,000 | <input type="checkbox"/> \$50,001 or more |
37. Which of the following income categories best describes your total 1986 household income from all sources, before taxes. Please include all sources of income to all members of the household (e.g. spouse's income if married).
- | | |
|---|---|
| <input type="checkbox"/> \$15,000 or less | <input type="checkbox"/> \$27,501 to 30,000 |
| <input type="checkbox"/> \$15,001 to 17,500 | <input type="checkbox"/> \$30,001 to 35,000 |
| <input type="checkbox"/> \$17,501 to 20,000 | <input type="checkbox"/> \$35,001 to 40,000 |
| <input type="checkbox"/> \$20,001 to 22,500 | <input type="checkbox"/> \$40,001 to 50,000 |
| <input type="checkbox"/> \$22,501 to 25,000 | <input type="checkbox"/> \$50,001 or more |
| <input type="checkbox"/> \$25,001 to 27,500 | |
38. Which of the following fringe benefits are offered by your employer?
CHECK ALL THAT APPLY
- ☐ Basic health insurance
 - ☐ Major medical/comprehensive health insurance
 - ☐ Dental insurance
 - ☐ Disability insurance
 - ☐ Life insurance
 - ☐ Maternity leave with assured return to employment
 - ☐ Retirement benefits
 - ☐ Tuition reimbursement
 - ☐ Attendance at professional meetings
 - ☐ Clinical specialty certification
 - ☐ Professional membership fees
 - ☐ Child care/day care
 - ☐ Other _____
39. To what racial or ethnic group do you belong?
- | | | | |
|--|---|-----------------------------------|---|
| <input type="checkbox"/> White/Caucasian | <input type="checkbox"/> Black | <input type="checkbox"/> Hispanic | <input type="checkbox"/> Asian/Oriental |
| <input type="checkbox"/> American Indian | <input type="checkbox"/> Other (Please specify) | _____ | |

THANK YOU VERY MUCH FOR YOUR TIME AND COOPERATION.