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Individual and work-related variables contributing to hospital nurses’ participation or non-participation in available clinical career ladder programs

Thornhill, Sarah Kay Alford, Ph.D.
The Louisiana State University and Agricultural and Mechanical Col., 1991
INDIVIDUAL AND WORK-RELATED VARIABLES CONTRIBUTING TO HOSPITAL NURSES' PARTICIPATION OR NON-PARTICIPATION IN AVAILABLE CLINICAL CAREER LADDER PROGRAMS

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctorate of Philosophy

in

The School of Vocational Education

by

Sarah Kay Alford Thornhill
B. S., University of Tennessee, 1974
M. S., University of Southern Mississippi, 1978
August 1991

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The accomplishment of one's educational goals in life permits one to reflect on the persons who helped make that dream a reality. Several persons deserve to share in this major life accomplishment.

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# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ...................................... ii

TABLE OF CONTENTS .................................... iv

LIST OF TABLES ........................................ xvi

ABSTRACT .............................................. xviii

CHAPTER I ................................................ 1

    INTRODUCTION ...................................... 1

    Statement of the Problem .......................... 4
    Purpose ........................................... 5
    Questions ........................................ 6
    Significance of the Study ....................... 8
    Definition of Terms .............................. 8

CHAPTER II ............................................ 11

    REVIEW OF RELATED LITERATURE .................. 11

    Introduction .................................... 11

    Nursing Shortage: Historical Perspective .... 12

        Before 1950s .................................. 12
        During the 1950s .............................. 13
        During the 1960s .............................. 13
        The 1970s and Clinical Ladders .............. 14
        During the 1980s .............................. 15
        Nursing Shortage of 1990s ................. 17

    Underlying Theoretical Framework for
        Clinical Ladders ............................. 19
        Motivational Theory .......................... 20

    Job Enrichment and Job Satisfaction
        Studies ....................................... 23
Studies of Hospital Nurses

Characteristics ........................................ 32

Job Enrichment and Job Satisfaction Through

Clinical Ladders ......................................... 36
Rationale and Purpose .................................. 36
Design and Implementation .............................. 38
Outcomes of Clinical Ladders ........................... 39

Current Clinical Ladder Program

Concerns .................................................. 43

Summary ................................................... 47

CHAPTER III ............................................. 50

METHODOLOGY ............................................ 50

Research Design .......................................... 50
Population and Sample ................................... 50
Instrumentation .......................................... 53

Instrument: Part I ........................................ 54
Instrument: Part II ...................................... 56

Nurse Manager Job Rating Form (JRF)

Measurement ............................................. 58

Instrument: Part III ...................................... 58

Instrument Field Test .................................... 59
Data Collection Procedure .............................. 60
Summary of Actual Responses ........................... 63
Data Analysis ............................................. 66

CHAPTER IV ............................................... 69

FINDINGS ................................................... 69

v

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Respondents Individual and Work-Related

Characteristics .................................. 69

Question One .................................... 69
  Age Group by Participation Status .......... 70
  Gender by Participation Status .......... 71
  Ethnic Group by Participation Status ....... 71
  Educational Level by Participation Status .... 72
  Clinical Nursing Practice Area by Participation Status .... 73
  Clinical Shift Schedule by Participation Status .... 74
  Clinical Hours per Shift by Participation Status .... 75
  Patient Care Delivery Method by Participation Status .... 76
  Years Clinical Nursing Experience by Participation Status .... 77
  Years of Clinical Experience Present by Participation Status .... 79

Question Two .................................... 80
  Age Group by Participation Status .......... 81
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender by Participation Status</td>
<td>81</td>
</tr>
<tr>
<td>Ethnic Group by Participation Status</td>
<td>81</td>
</tr>
<tr>
<td>Educational Level by Participation Status</td>
<td>81</td>
</tr>
<tr>
<td>Clinical Nursing Practice Area by Participation Status</td>
<td>81</td>
</tr>
<tr>
<td>Clinical Shift Schedule by Participation Status</td>
<td>82</td>
</tr>
<tr>
<td>Clinical Hours per Shift by Participation Status</td>
<td>82</td>
</tr>
<tr>
<td>Patient Care Delivery Method by Participation Status</td>
<td>82</td>
</tr>
<tr>
<td>Mean Years of Clinical Nursing Experience by Participation Status</td>
<td>82</td>
</tr>
<tr>
<td>Mean of Years Present Clinical Nurse Position</td>
<td>83</td>
</tr>
<tr>
<td>Respondents Perceptions of Nurse Job by (JDS) Scores</td>
<td>84</td>
</tr>
<tr>
<td>Question Three</td>
<td>84</td>
</tr>
<tr>
<td>Mean on JDS Subconcepts by Participation Status</td>
<td>85</td>
</tr>
<tr>
<td>JDS Job Characteristics Mean Scores</td>
<td>85</td>
</tr>
</tbody>
</table>
JDS Critical Psychological States Means .......... 86
JDS Affective Outcomes Means . 86
JDS Context Satisfaction
  Mean ..................... 86
JDS Growth Need Strength
  Mean ..................... 87
JDS Motivation Potential Mean
  Score ..................... 87

Question Four ..................... 90

Comparison of Respondents' JDS Subconcept Means by
  Participation Status .......... 91
JDS Job Characteristics . . . 91
JDS Critical Psychological
  States ................. 91
JDS Affective Outcomes .... 92
JDS Context Satisfaction . . 92
JDS Individual Growth Need
  Strength ................. 92
JDS Motivating Potential
  Score ..................... 92

Respondents Perception of Clinical Ladder
  Programs ................. 95
Question Five ..................... 95

viii
Perceptions of Clinical Ladder
Programs by Factor Areas and Participation Status .... 95
Intrinsic/Extrinsic Outcomes for Nurses and Hospital ... 95
Clinical Nurses Need for Clinical Ladder .......... 96
Criteria Preferred for Clinical Ladder Program Advancement .......... 96
Clinical Ladder Perceptions Summary ............... 96
Question Six ..................................... 100
Comparison Mean Score
Perceptions of Clinical Ladder Programs by Factor Areas and Participation Status ...... 100
Intrinsic/Extrinsic Outcomes for Nurses and Hospital ... 100
Clinical Nurses Need for Clinical Ladder .......... 101
Criteria Preferred for Clinical Ladder Program Advancement .......... 101
Summary Perceptions Clinical

Ladder ............... 101

Respondents and Nurse Managers Perceptions
of Job .................. 102

Question Seven ...... 102

Comparison of Overall Means
of Clinical Nurses' JDS Job
Characteristics and
Nurses' Manager JRF .... 103

Discriminating Variables by Participation Status .... 104

Question Eight ......... 104

Means, Standard Deviations, and F-ratios Between Groups for Discriminating Variables . . 105

Pooled Within-Groups Correlation Matrix: Discriminating Variables ........ 112

Summary Data for Stepwise Discriminant Analysis .................. 113

Classification of Cases ........ 115

CHAPTER V ................. 119

SUMMARY, FINDINGS, CONCLUSIONS, AND
RECOMMENDATIONS .................. 119

Summary .................... 119

Purpose and Study Questions ........ 119

Procedures .................. 120

x

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Findings ................................ 122
Respondents Individual and Work-Related
Characteristics Question One ........ 122
Individual Characteristics
Findings ......................... 122
Work-Related Characteristics
Findings ......................... 122
Respondents Individual and Work-Related
Characteristics Question Two .... 123
Individual Characteristics
Findings ......................... 123
Work-Related Characteristics
Findings ......................... 124
Respondents Perceptions of Nurse Job
by JDS Concepts Question Three .... 125
JDS Job Characteristics Findings . 125
JDS Affective Outcomes Findings . 125
JDS Context Satisfaction Findings . 125
JDS Individual Growth Need
Strength Findings ................ 126
JDS Motivating Potential
Score (MPS) Findings .............. 126
JDS Summary Findings .............. 126
Respondents Perceptions of Nurse Job
by JDS Concepts Question Four .... 127
JDS Job Characteristics Findings . 127
JDS Affective Outcomes Findings . 127

xi
JDS Context Satisfaction Findings . 128
JDS Individual Growth Need
  Strength Findings . . . . . . 128
JDS Motivating Potential
  Score (MPS) Findings . . . . 128
Respondents Perceptions of Clinical
  Ladders as Job Enriched
  Question Five . . . . . . . . 128
Intrinsic and Extrinsic Outcomes
  Factor Area Findings . . . . 128
Need for Clinical Ladders
  Factor Area Findings . . . . 129
Criteria for Advancement
  Factor Area Findings . . . . 129
Respondents Perceptions of Clinical
  Ladders as Job Enriched
  Question Six. . . . . . . . . 130
Intrinsic and Extrinsic
  Factor Area Findings . . . . 130
Need for Clinical Ladders
  Factor Area Findings . . . . 130
Criteria for Advancement
  Factor Area Findings . . . . 130
Respondents and Nurse Managers
  Perceptions of the Clinical Nurse
  Job Question Seven . . . . . 130
  Findings . . . . . . . . . . . 130

xii
Variables Which Discriminate Between Nurses' Participation Status in Clinical Ladders Question Eight

Findings

Conclusions and Recommendations

Respondents Individual and Work-Related Characteristics Questions One and Two

Individual Characteristics

Conclusions

Work-Related Characteristics

Conclusions

Recommendation

Respondents Perceptions of Nurse Job by JDS Scores Questions Three and Four

JDS Job Characteristics

Conclusions

JDS Affective Outcomes Conclusions

JDS Context Satisfaction

Conclusions

JDS Individual Growth Need Strength Conclusions

JDS Motivation Potential Score MPS

JDS Summary Conclusions

Recommendations
Respondents Perceptions of Clinical Ladder Programs Questions Five and Six ........................................ 137
Intrinsic and Extrinsic Factors
Conclusions ........................................ 137
Need for a Clinical Ladder
Program Conclusions .................................. 138
Criteria for Advancement
Factor Conclusion ..................................... 138
Recommendation ...................................... 138
Respondents and Nurse Managers
Perceptions of the Nurse
Job Question Seven .................................... 139
Conclusion ............................................. 139
Discriminate Variables Between Participation Status Question
Eight ...................................................... 139
Conclusion ............................................. 139
Recommendation ...................................... 140
Summary of Recommendations for Practice .................................. 140
Recommendations for Future Research .................................... 141
REFERENCES ................................................................ 144
APPENDIXES ......................................................... 161
Appendix A - Job Diagnostic Survey Concepts and Subconcepts Defined ........................................ 161
Appendix B - Instrument Part I, Part II and Part III ............................................................. 166

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Appendix C - Nurse Manager Job Rating
     Form (JRF) ....................... 182
Appendix D - Initial Personal Communications
     December 27, 1990 .............. 188
Appendix E - Second Personal Communications
     1991 ............................ 192
Appendix F - Initial Instrument Cover Letter .... 195
Appendix G - Letter to Hospital Contact Nurse .. 197
Appendix H - Follow-up Letter to Nurse Managers . 199
Appendix I - Follow-up Instrument Cover Letter .......... 201
Appendix J - Follow-up Post Card ................. 203
Appendix K - Short Form Instrument Nonrespondents ........ 205
Appendix L - Work Related Characteristics Information .......... 209
     Table L-1. Clinical Nursing Practice Area
               by Participation Status .... 210
     Table L-2. Years Clinical Nursing Experience ........... 213
     Table L-3. Years Clinical Nursing Experience Current Position . . . 215
Appendix M - Pooled Within-Groups Correlation
     Matrix: Discriminating Variables . 216
VITA ........................................... 229
LIST OF TABLES

Table 1. Random Sample Selection by Nurse Group
  Strata ................................... 53

Table 2. Subjects' Response Rate by Hospital and
  Participation Status ................... 65

Table 3. Age Group by Participation Status ........ 70

Table 4. Gender by Participation Status .......... 71

Table 5. Ethnic Group by Participation Status .... 72

Table 6. Educational Level by Participation
  Status .................................... 73

Table 7. Clinical Nursing Practice Area
  and Participation Status ............... 74

Table 8. Clinical Shift Schedule by
  Participation Status ................... 75

Table 9. Clinical Hours Per Shift by
  Participation Status ................... 76

Table 10. Patient Care Delivery Method by
  Participation Status ................... 77

Table 11. Years Clinical Nursing Experience
  by Participation Status ............... 78

Table 12. Years of Clinical Experience Present
  Position by Participation Status ....... 80

Table 13. Mean Years of Clinical Nursing Experience
  by Participation Status ............... 83

Table 14. Mean of Years Present Clinical Nurse
  Position by Participation Status ....... 84

xvi

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Table 15. Job Diagnostic Survey (JDS) Subconcepts
Means by Participation Status .......... 88

Table 16. Comparison of JDS Subconcept Mean
by Participation Status ................. 93

Table 17. Respondents' Perceptions of Clinical
Ladder Programs by Factor Areas and
Participation Status .................... 97

Table 18. Comparison Mean Score Perceptions of
Clinical Ladder Programs by Factor
Areas and Participation Status ......... 102

Table 19. Comparison of Overall Means of Clinical
Nurses' JDS Job Characteristics
and Nurses' Manager JRF ............... 104

Table 20. Means, Standard Deviations, and F-ratios
Between Groups for Discriminating
Variables ............................ 106

Table 21. Summary Data for Stepwise
Discriminant Analysis .................. 114

Table 22. Classification of Cases ........... 116
ABSTRACT

One solution to overcome the shortage of hospital nurses is to establish and implement clinical career ladder programs. The purpose of this study was to examine hospital clinical nurses' perceptions of ladder programs as a job enrichment strategy and to determine individual and work-related variables contributing most to nurses' participation or nonparticipation in available clinical ladder programs. A random sample of 600 clinical nurses employed full time in five regional medical center hospitals located in Louisiana and Mississippi were the study subjects. Respondents were 106 (88.3%) of the 120 ladder program participants and 385 (80.2%) of the 480 nonparticipant nurses.

A three section instrument was used for data collection and analysis: perceptions of clinical ladder programs; the Job Diagnostic Survey (JDS); demographic information. Section one was researcher developed to measure nurses' perceptions of three factor areas of clinical ladder programs. The JDS measured the motivational potential of the clinical nurses' job according to selected core job dimensions. The demographic section identified clinical nurses' individual and work-related characteristics.

The Chi square and t-test statistical procedures revealed that subjects by ladder program participation status were more alike than different on the demographic characteristics of gender, ethnic group, educational level, nursing practice unit, patient care delivery method and
years' clinical experience. However, significant differences were reported between nurse groups by program participation status and the variables age, shift worked, hours worked per shift and years present clinical position.

A comparison between nurse groups by participation status and perceptions of clinical ladder programs showed significant differences in the factor areas of intrinsic and extrinsic outcomes, need for a ladder program and criteria for program advancement. Also, a t-test showed significant differences in the two groups' JDS means task identity, feedback from agents, growth need satisfaction and job security. Using discriminant analysis, a model was found that correctly classified 75.69% of hospital nurses by program participation status group.

The results suggest implications for nursing practice and future research studies of hospital clinical nurses and clinical ladder programs for job enrichment. A replication of this study to test the model was also recommended.
CHAPTER I
INTRODUCTION

Since 1986, advertisements for hospital clinical nurses have appeared in virtually every newspaper in the United States offering page after page of available jobs for nurses in hospital settings (McKibbin, 1990). This year marks the fifth year of a nationwide shortage of registered nurses (RNs), and finding reported in The American Nurse indicates the shortage is continuing and could potentially threaten our nation's health care delivery system ("Despite gains", 1991). The findings were also reported in U. S. Department of Health and Human Services (1988).

At least five recurring shortages of nurses have occurred since the post World War II era (Abdellah, 1990; McKibbin, 1990). The most significant nurse shortages occurred during 1950-59, 1961-62, 1967-69, 1980-82, and 1986. Vacancy rates are a standard indicator of a nurse shortage since they represent the portion of budgeted RN positions available but not filled. A nurse vacancy rate in excess of 10% typically indicates a serious shortage which may adversely affect the quality of patient care outcomes (McKibbin, 1990).

The nurse shortage identified in 1986 has not abated and is continuing as reflected in increasing vacancy rates. In 1989, hospital nurse vacancy rates were reported to average 12.7% (U. S. Department of Health and Human Services, 1990). This is an increase over a reported
hospital nurse vacancy rate of 11.3% in 1988 and 4.4% in 1983 (U. S. Department of Health and Human Services, 1988; American Hospital Association, 1990). In addition, nurse vacancy rates in other health care settings are similar to hospital rates (American Hospital Association, 1990). The National vacancy rates are 18.9% in nursing homes, 12.9% in home health agencies, and 10.5% in HMOs (American Nurses Association, 1990).

By the year 2000, it is projected there will be a hospital nurse shortage more severe than the present one (U. S. Department of Health and Human Services, 1990). The nation will require a projected 1,967,000 full time equivalent (FTE) Registered Nurses (RN) but only 1,624,000 FTE RNs will be available. The deficit of 343,000 FTE RNs represents a more severe nurse shortage than today. Based on these numbers, there would be a 17.4% hospital vacancy rate (the difference between RNs available and RNs required as a percent of the total requirements) compared to the 12.7% reported in 1989 (McKibbin, 1990).

Based on the present and projected need for hospital nurses "there is a compelling need to address the type of concerns that are raised by the current shortage of nurses" (McKibbin, 1990). Hospitals are the primary work site for more than two-thirds (67.9%) of America's two million registered nurses practicing nursing (U. S. Department of Health and Human Services, 1990). The careers of the majority of nurses are dependent on conditions of nursing.
practice in hospitals. One of nursing's greatest challenges is providing nurses the opportunities for individual and work related growth and independent achievement and recognition (Aiken, 1990).

Approaches used to study and explain factors contributing to the nurse shortage vary. To some, the nurse shortage is the result of insufficient supply of new graduate nurses (Aiken, Blendon, & Rodgers, 1981; Aiken, 1987). Others view the shortage as a result of increasing demands for nurses (U. S. Department of Health and Human Services, 1988), while others contend that supply and demand should be viewed together (Donley & Flaherty, 1989).

Another school of thought reports the nurse shortage cannot be explained from a purely economic perspective. "A fundamental redefinition of causes of and solutions to the nursing shortage is needed because the existing situation is difficult to explain from an economic perspective that examines labor shortage in terms of supply, demand and wage" (Prescott, Phillips, Ryan, & Thompson 1991). One possible solution to the shortage of nurses calls for the development of additional clinical career tracks in hospital nursing (Aiken & Mullinex, 1987; U. S. Department of Health and Human Services, 1988; Prescott, 1989).

Hassanein (1991) contends that, in an economic analysis of the nurse shortage, one way to overcome the nursing shortage is to establish and implement career ladder programs. He also recommends further research on the
effects of nurse career development on the nurse supply and demand. Offering clinical ladder programs to resolve the shortage of nurses is not new. In 1961, a 23.2% clinical nurse vacancy rate was the catalyst for hospitals to consider clinical ladders for nurses in an effort to recruit and retain nurses providing direct patient care (Lysaught, 1970; Task force on Health Manpower, 1967).

After 20 years, clinical nurses continue to experience limited advancement opportunities. This despite four panel recommendations, surveys of hospital nurses' needs, and nurse leaders suggested solutions to hospital nurse vacancy rates during the 1980's (McKibbin, 1990; "Misuse of R. N.'s", 1989, p. 1231; American Hospital Association, 1989; National Commission on Nursing, 1983). Clinical ladders should provide the means for nurses advancement and recognition of nurses providing direct patient care. However, in hospitals offering clinical ladder programs, there are varying degrees of program adoption and generally low participation by clinical nurses (Clifford & Horvath, 1990; McKibbin, 1990; Davis, 1989; "Misuse of R. N.'s", 1989; Wyatt Company, 1988; French, 1988; MacKay, Storey, MacLean, Misick, Glube, & Pereira, 1987; Jones, 1986; Joiner & Van Servellen, 1984).

Statement of the Problem

The viability of current clinical ladder program offerings as a solution to the nurse shortage continues unresolved. These program offerings have existed in
hospitals since the 1970s, yet the degree of program adoption and nurse participation continues to vary widely. The programs were proposed initially to address perceived clinical nurses' needs and also to facilitate hospital recruitment and retention efforts while decreasing nurse vacancy rates (Lysaught, 1970; Zimmer, 1972).

While the literature suggests that nurses derive benefits resulting from program participation, little is known about nurses who choose to participate or not participate in the available programs and if the proposed benefits are, in fact, realized. The broad issues addressed by this study are: What are nurses' perceptions of a clinical ladder as a desired job enrichment strategy? What contribution does nurses' individual and work-related variables contribute to nurses' participation in a clinical ladder program?

Purpose

The purpose of this study was to examine hospital nurses' perceptions of clinical ladder programs as a job enrichment strategy and to determine the contributions of selected demographic and work-related variables toward nurses' participation or nonparticipation in available clinical ladder program offerings.
Questions

The following research questions guided this study:

Question 1. What were the individual and work related demographic characteristics of clinical nurses' in hospitals with clinical ladder programs?

Selected characteristics for description included: clinical nursing practice area, nurses' educational level, years of clinical nursing experience, years in present clinical nurse position, clinical shift, hours per shift, unit patient care assignment method, age, gender, and ethnic group.

Question 2. Were there differences in hospital clinical nurses' individual and work related demographic characteristics between nurses who participated or declined to participate in available clinical ladder programs?

Question 3. What were hospital nurses' perceptions of the clinical nurses' job as measured by the Job Diagnostic Survey (JDS) (Hackman & Oldham, 1975)?

Specific JDS concepts and subconcepts measured were:

Job Characteristics

Skill variety
Task significance
Autonomy
Feedback from job
Feedback from agents
Dealing with others
Critical Psychological States
Experienced meaningfulness of the work
Experienced responsibility for work outcomes
Knowledge of results

Affective Outcomes
General satisfaction
Growth satisfaction
Internal work motivation.

Context Satisfaction
Job security
Pay
Co-workers
Supervision

Individual Growth Need Strength

Question 4. Were there differences in clinical nurses' perceptions of their job as measured by JDS between nurses who participated or declined to participate in the hospital's available clinical ladder program?

Question 5. What were hospital clinical nurses' perceptions of clinical ladders as a method to enrich their job?

Question 6. Were there differences in hospital clinical nurses' perceptions of clinical ladders as a method to enrich the clinical nurses' job by whether they were participating in a clinical ladder program?

Question 7. Was there a difference between clinical nurses' perceptions of their job as measured by the Job
Diagnostic Survey (JDS) and their nurse managers' perceptions of the clinical nurses' job as measured by the Job Rating Form (JRF) (Hackman & Oldham, 1975)?

Question 8. Were there variables which discriminated between nurses who participated or declined to participate in clinical ladder programs?

Variables examined for possible discrimination were included in questions 1, 3 and 5 of this study. They were: nurses' individual and work related demographic characteristics; nurses' perceptions of the clinical nurse job; and nurses' perceptions of clinical ladder programs.

Significance of the Study

The absence of research addressing the impact of clinical ladder programs when weighted against the cost of dollars to hospitals was the rationale for this study. The identification of selected variables and their contribution to nurses' participation in a clinical ladder program is potentially valuable to hospitals considering the offering of a clinical ladder program to recruit and retain clinical nurses. Assessing the impact of clinical ladder program offerings on meeting hospital nurses' intrinsic and extrinsic needs, a significant contribution toward resolving the continuing nurse shortage impacting the hospitals' rising nurse vacancy rates may be realized.

Definition of Terms

For the purpose of this study, the following terms are operationally defined:
Hospital is a regional medical center health care facility located in Louisiana or Mississippi offering a clinical ladder program. The hospital is a member hospital of the Gulf States Region of the Voluntary Hospitals of America. Hospital Clinical Nurse is a Registered Nurse with a current nursing licensure to practice nursing in Louisiana or Mississippi. The nurse is employed full time in a hospital with an available clinical ladder program.

Clinical Advancement Program (Clinical Ladder) is a horizontal development system used to develop, evaluate, and promote clinical nurses' desiring and intending to remain at the bedside providing direct patient care. The system is designed to provide rewards for specific criteria such as education, experience, and expert clinical skills. The system generally includes steps in salary related to increasingly comprehensive functions in clinical nurse roles. The program reflects the nursing department objectives, including retention of experienced nurses. Performance criteria are developed for each level and are used for nurse appointment and evaluation (American Hospital Association Division of Nursing, 1985).

Clinical Ladder Program Nurse Participant is a clinical nurse providing direct patient care in a hospital offering a clinical ladder program and participating in the hospital's available clinical ladder program.

Clinical Ladder Program Nurse Nonparticipant is a clinical nurse providing direct patient care in a hospital offering a
Clinical Nurse Perceptions of a Clinical Ladder Program are statements regarding clinical ladder programs which were derived from literature reviewed. The 22 item statements of clinical nurses' perceptions of clinical ladders were measured by responses to three categories of items.

Job Diagnostic Survey (JDS) is an instrument constructed to diagnose existing jobs prior to jobs changes and to evaluate the effects of job changes (Hackman & Oldham 1975, 1974). The specific concepts measured and definitions of theory-specified concepts and the relationships among them are defined in Appendix A.

Job Rating Form (JRF) instrument is a companion instrument to the Job Diagnostic Survey (JDS). The instrument measures the characteristics of the clinical nurses jobs as viewed by individuals who do not work on that job. This provides an indirect test of the objectivity of clinical nurse's descriptions of the characteristics of their jobs (Hackman & Oldham, 1975, 1974).
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

In recent history, the shortage of nurses has been examined largely from an economic perspective of supply and demand. Today, solutions to overcome the shortage of hospital nurses includes supply and demand factors, but an interplay with various others, including clinical career development for nurses providing direct patient care (Hassanein, 1991, p. 156).

This chapter will provide general information about the nursing shortage, and specific information about clinical career development programs as one solution to hospitals' nursing shortage for the past twenty years. The review helps establish a basis for the study of individual and work-related characteristics of hospital nurses currently participating or not participating in available clinical ladder program offerings. The focus areas of the literature review included the following: (a) nursing shortage: historical perspective, (b) clinical ladders as one solution to the hospital nursing shortage, (c) underlying theoretical framework for clinical ladders, (d) job enrichment and job satisfaction studies, and (e) job enrichment and job satisfaction through clinical ladders.

Literature reviewed for the study covers the period from 1970-1990. Clinical ladder programs were first
suggested in the early 1970s as one solution to the 1960s nursing shortage.

Nursing Shortage: Historical Perspective

"A nurse shortage is said to exist when the number of hours of labor that nurses are willing to provide under current labor market conditions is less than the number of hours that employers would like to purchase under these conditions" (Schoeman, 1988). Nurse shortages are not a new phenomena; cyclic patterns occurred first during World War I and World War II. Other cyclic nursing shortage patterns occurred during 1961-62, 1967-69, and 1980-1881. Most nurse shortage periods have been short in duration; however, a nurse shortage which began in 1986 continues into the 1990s and is predicted to continue into the next century (McKibbin, 1990).

Before 1950s

Young women were needed during World War I to care for American soldiers in Europe and were recruited from colleges and trained quickly. During World War II, a similar need for nurses was unmet; nurses were often graduated prior to completing their education and sent overseas. Furthermore, the Federal Cadet Nurse Corps was established to meet the nurse shortage during the War (Abdellah, 1990).

After World War II, the medical technology developed in battle became the expectation of American's seeking and providing health care. The demand for new treatments for disease and continued care for the wounded created a need
for more hospital beds. The Hill-Burton Act of 1946 authorized and supported the addition of hospital beds throughout the country. In addition, health insurance became available to the majority of employees after the war, thus increasing their access to health care.

During the 1950s

The 1950s' shortage of nurses, which followed the addition of large numbers of Hill-Burton funded hospital beds, created two federal assistance programs to resolve the shortage. The Acts were the Public Health Service Nurse Traineeships and the Federal-State Vocational Training Programs. These programs created new patient care roles called Licensed Practical Nurses and nurses aides (Moore & Simendinger, 1989).

During the 1960s

In 1962, the Surgeon General's Consultant Group on Nursing reported that changes in society and advances in science and medicine required nurse leaders. Special emphasis was placed on improving the use of nursing personnel and emphasizing the need for nursing research (Surgeon General's Consultant Group on Nursing, 1963). This report established the basis for the shortage during the 1960s. The 1965 Medicare and Medicaid legislation benefitted the elderly and countless poor by providing access to care by those who had, in many cases, neglected health care which. This increased the need for nursing services (McKibbin, 1990).
The National Commission of Community Health Services in 1967 addressed the problem of inadequate recruitment and retention of nurses for the delivery of quality patient care in hospitals (Task Force on Health Manpower, 1967). The group suggested the need for a system of clinical advancement that recognized the performance of registered nurses who excel in clinical practice.

**The 1970s and Clinical Ladders**

Moreover, a study from 1967-1969 conducted by the National Commission on Nursing and Nursing Education (NCSNNE) addressed the problem of inadequate hospital recruitment and retention efforts (Lysaught, 1970). This study explored the supply and demand for nurses, nursing education, roles, functions, and nurse careers. They predicted needed changes within nursing to meet future expected needs. This was essential since the inherent rewards of nursing practice were insufficient to motivate nurses to remain in their clinical careers. The NCSNNE study recommended "career patterns" in nursing, beginning with entry level graduates and then progressing by increasing degrees to advanced-level clinicians. This would reward and recognize clinical practice at the bedside as a means to strengthen hospitals' nurse recruitment and retention efforts.

Consequently, the 1970s period reflected the need to provide health care to all persons and nursing leaders' response to this need further tested the nurse shortage.
equation. The primary problem of health care delivery according to the Secretary of the Department of Health, Education, and Welfare in 1971 was the need to assure every person access to health services when and where needed at a cost that society could afford (Abdellah, 1990).

In 1975, the American Academy of Nursing issued a landmark report defining an organized system of health care to include six comprehensive facets of health care. Implementing the system further compounded the nursing shortage situation. The system advanced by the Academy included a full range of services, served a defined population, required organization and accountability, provided 24-hour health service accessibility and was linked with other health system services.

A report issued by the Institute of Medicine (1978) titled, *A Manpower Policy for Primary Health Care* defined primary health care as caring for the "whole person" and involving care provided by accountable health service providers. The nurse practitioner was recognized as a key provider and this further imbalanced the nurse shortage equation (Abdellah, 1990).

**During the 1980s**

In 1981, the National Commission on Nursing conducted hearings on the nursing shortage and identified major issues to address. One nurse shortage issue was the management of the nurses resources, including the mix of organizational factors required for nursing job satisfaction. Career
development was one of the factors cited (National Commission on Nursing, 1981).

Throughout the 1980s, health care systems experienced numerous changes. The clinical nurse utilization patterns moved to an all RN staff in an attempt to improve the quality of patient care. Hospitals became more budget conscious than in past years. In 1982-83, there were stricter reimbursement policies, such as Medicare's prospective payment system (PPS) based on diagnosis-related groups (DRGs).

As a result of these changes and the continuing nursing shortage, the 1980s were a time of several nurse shortage study reports. The principal study reports were Secretary's commission on nursing, final report, (U. S. Department of Health and Human services, 1988); Nursing and nursing education: Public policies and private actions (Institute of Medicine, 1983; National commission on nursing, summary report and recommendations (American Hospital Association, 1983); and Magnet hospitals: Attraction and retention of professional nurses (McClure, Poulin, Sovie & Wandelt, 1983).

Furthermore, foundations such as the Commonwealth Fund, The Pew Charitable Trusts, and the Robert Wood Johnson Foundation have become involved in the nurse shortage issue. The Tri Council, consisting of three national nursing organizations (American Association of Colleges of Nursing, American Organization of Nurse Executives, and National
League for Nursing), and the American Nurses' Association have developed action plans to address the nursing shortage. Nursing's international honor society, Sigma Theta Tau, has become actively involved in seeking solutions to the nurse shortage issue. Numerous recommendations for resolving the nursing shortages have resulted from the above study reports. The consensus of these reports are in agreement that changes are needed at all levels of health care (Ferguson, 1990).

**Nursing Shortage of 1990s**

McKibbin (1990) reports the current shortage, beginning in 1986 and continuing today, is due to its dynamic nature. Many factors have combined to increase the demand for nurses even with a shortage. What is adequate at one point may be inadequate at another; hence, constant monitoring is required. In addition to supply and demand factors, other compounding factors aid in explaining the current nurse shortage.

The need for nurses is not restricted to hospitals. Nurses are needed in many settings, including acute care hospitals, schools, prisons, nursing homes, hospice, ambulatory care agencies, and nurse education faculty. There are changes in the present health care system which include early patient discharge from acute care settings, thus requiring additional nursing care and assisting patients to manage chronic illnesses at home. The nurses' role in quality assurance and utilization review related to
quality patient care is expanding. The infection control nurse role is due to increasing infectious diseases such as AIDS reflect changes which impact the nurse shortage (Moore & Simendinger, 1989).

Hospitals must now compete with other health care agencies for available nurses (Joiner & van Servellen, 1984). Several identified factors could potentially impact hospital efforts to compete with other health care agencies for available nursing resources. In recent surveys by the American Nurses' Association (1990) and the American Hospital Association (1988), high nurse vacancy rates are not only occurring in hospitals but other health care settings as well.

Rapid social, economic, and political changes impacting health care affect hospitals' efforts to recruit and retain clinical nurses. These forces affect hospital administrators' cost containment initiatives. Clinical nurses' increased responsibilities and decision making have additional impact effecting retention. Nurses' role change is due to advances in patient care technology, increased patient acuity levels, and decreased patient care hospital days. Third, the need for clinical nurses has been further underscored by the Medicare Prospective Payment System (PPS), the increasing number of AIDS patients, and an aging population. Finally, the recruitment and retention efforts for clinical nurses have been negatively affected by declining birth rates, increasing number of females entering
other occupational fields, declining commitment to only one career across the life span, and expanding nurse career opportunities (Tonges, 1989).

Solutions offered to resolve the current nursing shortage require coordinated implementation to retain effectiveness (Hassanein, 1991). Hassanein further observes:

These suggestions include increasing RN wages and improving the current compressed salary ranges, freeing nurses from performing nonnursing duties, and attempting to improve nursing image as well as working conditions. In addition, establishing and implementing career ladder programs would help improve job satisfaction and promote RN growth (Hassanein, 1991, pp. 155-156).

These solutions parallel those supported by the American Nurses' Association ("Despite gains", 1991, p. 1231).

Underlying Theoretical Framework for Clinical Ladders

"The primary assumption behind the clinical ladder concept is that rewarding and recognizing nurses for their level of nursing practice, plus rewarding them for direct patient care, increases nurses' satisfaction and, consequently, motivation for further excellence" (Joiner & van Servellen, 1984, p. 67). Hence, motivation theories, job enrichment, and job satisfaction studies provide the
framework and rationale for clinical ladders, an example of job enrichment in hospitals.

**Motivational Theory**

Zimmer's (1972) rationale for a clinical ladder as a clinical career development strategy cited job dimensions derived from organizational theory pertinent to job satisfaction and clinical competence. Her proposed job enrichment strategy, a ladder for clinical advancement, considers human need theories and work-related theories of work motivation.


The Herzberg two-factor theory of satisfaction and motivation (1976, 1959) and the job characteristic theory of work motivation by Hackman and Oldham (1976) are behavioral approaches to job enrichment based on individual motivation theories. Herzberg's two-factor theory of satisfaction and motivation proposes the primary determinants of employee satisfaction are factors intrinsic to the work. These motivators are recognition, achievement, responsibility, advancement, and personal growth in competence. Work dissatisfaction is caused by hygiene factors extrinsic to
the work. The Herzberg theory specifies that a job will enhance motivation when the motivators are designed into the work and the outcome is an enriched job. This theory set the stage for a series of job enrichment studies at AT&T (Ford, 1979) which demonstrated that job enrichment can lead to beneficial outcomes for the employer and employee.

Herzberg's theory emphasizes the significance of the work itself as a factor in motivation and satisfaction of employees. However, critics note the theory does not provide for differences in employees' responses to jobs enriched or specify how determinations of readiness should be made (Hackman & Oldham, 1980).

The Job Characteristics Theory of Work Motivation focuses on the objective characteristics of employee jobs and the job itself. The theory began in 1965 when Turner and Lawrence examined the relationship between objective attributes of tasks and employee's reactions to their work. They concluded that employees from different cultural backgrounds reacted differently to their jobs. Furthermore, a job enriched through variety, autonomy and responsibility would have increased job satisfaction.

Expanding on Turner and Lawrence's work, Hackman and Lawler (1971) provided further evidence that measurable job characteristics are related to employee's attitudes and behaviors. The differences found in how subcultural groups responded to their jobs can be explained in terms of employee's growth need strength and development at work.
This individual difference theory is based on earlier motivation achievement theory by McClelland, Atkinson, Clark, & Lowell (1953), Murray (1938) which proposes that employees acquire achievement, affiliation, and power needs learned from their culture. Hence, employees with high needs for growth will respond positively to a job high in variety, task identity, autonomy, and feedback.

Hackman and Oldham (1976; 1975) further revised and extended job characteristics theory with emphasis on ways to use the theory in assessing the need for job enrichment and evaluation of the effect after the job is enriched. They developed intervening variables termed "critical psychological states" that were derived from core job dimension paths of feedback, autonomy, task variety, skill variety, and task significance. The psychological states of responsibility, knowledge of results, and meaningfulness of work contribute to employee job satisfaction, work performance, reduced absenteeism, and job turnover. The Job Diagnostic Survey developed by Hackman and Oldham (1975) measures variables defined in the theory.

While research studies support the job characteristics theory of work motivation, they do not provide a complete picture of the motivational effects of job characteristics. The theory can be viewed as a guide in planning and evaluating job enrichment changes (Hackman & Oldham, 1980).

Both motivation-hygiene theory and job characteristics theory deal with aspects of clinical nursing which can be
altered to create positive motivational incentives for nurses providing direct patient care. Zimmer (1972) concluded that recognition for clinical practice by a clinical career program will not result in nurses remaining in clinical practice but should be considered. The job characteristics theory by Hackman and Oldham (1976) considers work-related factors of job characteristics and employee individual motivation. The clinical ladder program, once implemented, enriches nursing practice and provides for more feedback. The changes in the nurse's core job characteristics should alter the "psychological states" and produce increases in job satisfaction, morale, and motivation.

Job Enrichment and Job Satisfaction Studies

One way to affect job satisfaction is through job enrichment programs. An attempt to improve employees' attitudes toward work is made by changing the character of work to fit the motivational needs of employees. Seeborg (1978) compared the impact on job attitudes when job enrichment was accomplished by workers, supervisors, and managers. He reported that the impact on job satisfaction was positive when employees participated in job enrichment but less when the immediate supervisor enriched the jobs. This research indicated attitudes were affected by objective job situation changes and by persons with the power to make the changes.
Orpen (1979) tested the Hackman and Oldham model of job design. He reported government agency employees whose jobs had been enriched experienced a significant increase in satisfaction while those without enriched jobs showed no increase. Keller and Holland (1981) reported job changes brought about by either promotions or lateral moves lead to positive changes in the job-dimensions' variety, autonomy, and feedback resulted in increased job satisfaction.

Elements required to prevent job dissatisfaction and employee turnover are reported by Porter and Lawler (1968). The core job dimensions of autonomy, variety, and responsibility are needed. Feedback is essential to job performance and satisfaction.

Factors other than the job redesign itself must be considered when planning for job changes. When job enrichment is implemented improperly, there is no effect on job satisfaction in a comparison of leader-member exchange training with job redesign efforts (Graen, Novak, & Sommerkamp, 1982). In a simulation study, White and Mitchell (1979) found positive social cues from co-workers affect satisfaction regardless of the objective characteristics of their jobs.

Hall, Goodale, Rabinowitz, and Morgan, (1978) initially found job satisfaction had a significant positive correlation with the job characteristics variety, autonomy, task identity, and feedback. However, when studied longitudinally, the changes in work satisfaction were not
associated with changes in the groups' perceived job characteristics. The group experiencing positive changes in job characteristics did not show increased job satisfaction.

Studies of nurses report findings that are consistent with suggestions that nurses find enriched jobs more satisfying, and that satisfied nurses view their jobs as more enriched. Roedel and Nystrom (1988) responded to Everly and Falcione's (1976) call to examine facets of nurses' job satisfaction and determine how satisfaction may relate to desirable characteristics of nursing jobs. The researchers measured job characteristics and job satisfaction of hospital registered nurses using the Job Diagnostic Survey (JDS) by Hackman and Oldham, (1974) and the Job Descriptive Index (JDI) by Smith, Kendall, and Hulin (1969). Three-fourths of the 135 nurses employed in a 200 bed community hospital with team nursing responded.

Findings reveal nurses did not differ significantly from the national norms in terms of autonomy, feedback from the job, or their motivating potential scores; however, nurses did score higher in skill variety and task significance, and lower in task identity. The general patterns of scores are similar to those reported by Joiner, Johnson, Chapman, and Cockrean, (1982). Nurses on the medical-surgical nursing unit averaged lower scores on both job characteristics and job satisfaction than nurses on other units.
Hospital nurses desire job enrichment according to several reports. A survey report titled "I Love My Work, I Hate My Job" reflects nurses' perceptions of hospital practice (Wyatt Company, 1988). Nurses like the work they do but dislike the environment within which the clinical practice occurs (Wyatt Company, 1988; Joiner & van Servellen, 1984).

Hay Group's national nurse study cited the need for job enrichment through clinical ladder offerings: "Nurses employed in hospital nursing remain in clinical nursing practice not because of compensations, but for reasons directly and indirectly related to agency environment, job, and the nurses perceived opportunities for personal and professional growth" (Hay Group, 1989; "Misuse of R.N.'s", 1989, p.1231). Aiken (1982) reports that nurses' desire to maintain some control over their practice, recognition for their expertise, and appreciation for their knowledge and experience. Studies further indicate that the quality of working life, recognition of their contributions to patient care, and professional autonomy are important to nurses (Joiner & van Servellen, 1984).

Clinical nurses are frustrated by a system that fails to offer opportunities for increased responsibility and autonomy (Alexander, Weisman & Chase, 1982). Crucial motivational factors for nurses are recognition of expertise, opportunity for advancement, and adequate rewards (Seybolt, Pavett, & Walker, 1978). Hospitals offering
clinical ladders would enable nurses through these motivational opportunities (Ginzberg, Patray, & Ostow, et al., 1982).

In 1983, the American Academy of Nursing identified magnet (model) hospitals that possessed characteristics similar to the corporate community best run companies (McClure, Poulin, Sovie, & Wandelt, 1983; Peters & Waterman, 1982). Staff nurses in those hospitals consider a clinical ladder an essential component of the staff nurse's professional development. The study concluded that ladder programs are "at varying stages of development and implementation in the magnet hospitals, with the concept fast becoming the norm and already an expectation of nurses".

Nurses are concerned about the intrinsic rewards that are associated with their nursing practice (Prestholdt, Lane, & Mathews, 1988). The decision to resign is a process which begins with a discrepancy between nurses' belief, expectations and actual work position outcomes. The most important category of beliefs relates to the practice of nursing and the extent to which a nurses' present position provides the intrinsic rewards associated with nursing practice.

When an employee's skills are being developed, there is less tendency to leave the organization (McEnery & McEnery, 1984). McCloskey (1974) studied the influence of rewards and incentives on staff nurses' turnover rate. She found
most nurses wanted advancement opportunities instead of promotion to the head nurse position and recognition of work from peers and supervisors. These psychological rewards were more important than the social and safety rewards. One method whereby administrators could increase the number of psychological rewards was through the introduction of clinical advancement programs related to level of practice (McCloskey, 1975).

The need for hospitals to enrich the clinical nurses' job by offering a clinical ladder is further supported in a recent turnover intentions study by Pooyan, Eberhardt, and Szigeti (1990). They reported the most significant predictor of turnover intention among the job satisfaction variables studied was satisfaction with promotion.

In summary, job enrichment is one method to improve employees' attitudes and increase job satisfaction. Research reported raises questions as to whether job satisfaction is affected by employees' perceptions of their changed job or by the changing job characteristics (Bullock, 1984).

In most hospital nurse studies, job satisfaction was used as one variable to examine other outcome variables such as nurse turnover or intent to resign from the present nurse position.

Nurses report the reasons they leave nursing are power and control conflict, lack of autonomy, dissatisfaction with working conditions, low pay, and low status in job
satisfaction (Wolf, 1981; Wandelt, Pierce, & Widdowson, 1981). Most satisfaction research studies in the field of nursing examine work satisfaction and dissatisfaction. Interpersonal relations followed by the intrinsic factors correlate with nurses' job satisfaction according to Everly and Falcione (1976). Four independent factors were perceived by East Coast hospital nurses as important to job satisfaction. The factors were interpersonal relationships, work itself, opportunities for advancement and recognition for experience.

Patterson and Goad (1987) in a study of nurses who recently changed jobs reported that 57% would not have changed jobs if their wants such as child-care services, better educational benefits, and recognition for a job well done had been met. The flat earnings related to the experience profile and the nonrewards for advanced education and clinical experience tend to foster turnover (Wilensky, 1988; Aiken, 1987; Link, 1987).

Factors which influence nurses' job satisfaction are changing. In a 1980 survey that describes job factors of importance to nurses, salary ranked as the highest factor (Wandelt, Pierce, & Widdowson, 1981). However, in a 1988 survey, salary ranked only fifth among the top ten dissatisfies in nursing (Huey & Hartley, 1988).

Bailey (1980) identified factors rated as satisfiers (if present) or dissatisfies (if absent) in a survey of intensive care unit nurses. Nurses indicated patient care
and interpersonal relationships were sources of satisfaction but were stressors when perceived as inadequate. Only personal knowledge and skill to perform were identified as satisfaction only sources while management is only a stressor.

Predictors of satisfaction according to Neumann (1973) are patient care, intrinsic job factors, and supervision. Organization factors contributing to satisfaction according to Perry (1978) are supervisory support, responsibility, and promotion. Two studies report the job characteristic autonomy is a major source of work satisfaction (Slavitt, Stamps, Piedmont, & Haase, 1978; Seybolt, Pavett & Walker, 1978). Satisfaction among nurses can be influenced by the quality of care nurses give (Wandelt, Pierce, & Widdowson, 1981). The challenge of work itself, work importance, and work conditions were determinants of job satisfaction among a randomly selected national sample of recent nursing school graduates (Munro, 1983).

Smith (1983) identified motivator and hygiene factors contributing to job satisfaction for nurses. Working conditions was the most valued hygiene motivator for RNs, and recognition was the chief factor listed for nurses who were dissatisfied with their position. Females valued recognition more than males.

Godfrey (1978), in a mailed questionnaire to seventeen thousand nurse subscribers of Nursing '78, identified job related factors contributing to nurses' dissatisfaction.
They were obstacles to motivation, such as lack of appreciation, ineffective communications, conflicts with superiors and physicians. Additionally factors that prevent nurses from giving the desired patient care including short staffing, inadequate supplies and equipment, and poor physical environment were identified as obstacles.

McCloskey (1974) reported that the psychological rewards were more important than salary and other incentives. McCloskey concluded that external rewards while important to recruitment, are less a factor in retention. McCloskey (1974) further concluded that the most important rewards that would keep nurses at their jobs are educational opportunities to attend programs and continue formal studies, career advancement opportunities, and recognition for their work from peers and supervisors.

Predictors of job satisfaction are also cited as predictors of dissatisfaction reported in a study by Cronin-Stubbs (1977). Newly graduated staff nurses from two different hospitals varied in their responses on four independent dimensions. Achievement was noted most often in association with both satisfaction and dissatisfaction while recognition was a factor in satisfaction only. Dissatisfaction among the new graduates was attributed to responsibility, competence, commitment, contentment of allied personnel, interpersonal relations with subordinates, and general working conditions.
Job satisfaction is central to most psychological approaches to understanding the workplace. The general consensus is that job satisfaction is an affective response to work whether positive or negative. The term connotes the grouping together of many facets of work and can be measured by many job satisfaction instruments. The meaning of job satisfaction in the two-factor theory views satisfaction and dissatisfaction as separate continuums (Bullock, 1984).

According to Joiner and van Servellen (1984), job satisfaction studies in hospital nursing are difficult to interpret since the term has not been adequately defined. Several frameworks and operational definitions are used to identify job satisfiers and dissatisfiers; however, the authors offer some tentative conclusions. The extrinsic rewards are primarily dissatisfiers. Some intrinsic rewards are primarily satisfiers or can be either satisfiers or dissatisfiers.

Studies of Hospital Nurses Characteristics

According to a 1988 national sample survey of registered nurses, the age level distribution is increasing (U. S. Department of Health and Human Services, 1990). In 1988, 15.6% of the 2,033,032 nurses were under the age of 30 and in 1984, 20% were under 30 years old. Today, large increases are noted in the 30 and 40 year age group. Based on these population changes and others, it is projected that by the year 2020, the current 26.8% of employed nurses over
50 is likely to double. The average age, by educational level in 1988, was 28.7 for associate degree graduates compared to 23.8 for baccalaureate and 22.2 for diploma graduates.

The survey further reports that most of the nation's registered nurses are female, white, non-Hispanic. Males comprise 3.3% of the total number of all registered nurses and only 7.6% of the 2 million nurses are from racial and ethnic minority backgrounds. Forty percent of the RN population have diploma degrees while 25% were associate degree graduates and 27% were baccalaureate degree graduates (U. S. Department of Health and Human Services, 1990).

Survey data specific to hospitals reported the number of nurses employed in hospitals account for 67.9% of all nurses. Among hospital nurses, 48.2% of these nurses care for medical surgical patients while 18.9% were critical care nurses. Younger nurses are more likely to be employed in hospitals than older ones. Almost ninety percent of the nurses in the age group of under 25 to 29 were employed in the hospital. Over three-fourths of the associate degree graduates and 71% of the baccalaureate degree nurses were employed in hospitals (U. S. Department of Health and Human Services, 1990).

Nurses, regardless of age and years of experience, are similar in their work related desires. They want an increased variety of work, greater participation in work-related decisions, improved communication about work, and
greater advancement opportunities (Price & Mueller, 1981). Staff nurses want administrative support, adequate salaries, and a sense of being an important member of the health care team (Huey & Hartley, 1988).

On the other hand, some studies report that older nurses differ from the younger nurse. The older nurses' value to organizations is their tendency toward decreased turnover, increased job satisfaction, and increased organizational commitment (Neil & Snizek, 1988; MacKay, Storey, MacLean, Misick, Glube, & Periera, 1987; Zahra, 1985). Young (1989) reports the older nurse seeks autonomy, decision-making authority, job title recognition, salary and benefits commensurate with their experience, expertise and age. To meet these needs of older nurses, rewards of direct patient care nursing roles must provide benefits such as, career advancement opportunities for nurses with 10, 15, and more years of experience.

Freshman college students who aspire to become nurses value the following items more highly than their peers: raising a family, helping others in difficulty, and making a theoretical contribution to science (Meleis & Dagenals, 1981). They value being well off financially, becoming an authority in their field, obtaining recognition from peers, and developing a meaningful philosophy of life less than other occupation peer groups.

Mottaz (1988) compared hospital nurses' nature and source of work satisfaction with other occupational groups.
They reported a moderate and lower level of satisfaction than other groups. The low level of work satisfaction correlates with low levels of task autonomy, nature of supervision, salary and some lack of task involvement.

Nurses as a group have high vocational needs for achievement, security, and social service when compared to 148 other occupations (Rosen, Hendel, & Weiss, 1972). However, clinical nurses like working with people and are not achievement oriented to climb educational or administrative career ladders (Dyer, Monson, & Cope, 1975).

There is a link between clinical nurses practicing primary care nursing and increased job satisfaction and decreased nurse turnover rates (Ferrin, 1981). Studies further support that these nurses have a higher perceived nurse satisfaction level than the team and functional nursing staff (Fairbanks, 1981). Some studies provide evidence contrary to the improved job satisfaction among nurses employed in primary care nursing units. Joiner, Johnson, and Corkrean's (1981) one year study of nurses employed in primary care units found that these nurses had higher absenteeism and turnover rates when compared to other nursing units. They also found that nurses employed on these primary care units have higher motivational potential scores (MPS) than nurses on team and case method nursing units. They concluded the primary care nurses perceive their jobs as more enriched than other unit nurses. Van Servellen (1980), found that satisfaction scores of nurses

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employed in primary care units were similar to team nursing unit nurses. In conclusion, studies examining the impact of primary nursing on nurses job satisfaction are inconclusive. Factors potentially influencing nurses level of satisfaction are nurses individual motivation, perceived recognition and rewards inherent in the enriched job (Joiner & van Servellen, 1984).

Job Enrichment and Job Satisfaction

Through Clinical Ladders

Rationale and Purpose

Creighton (1964) first identified the need for a system of clinical promotion for the nurse providing direct patient care compared to the administrative promotion within nursing service organization. The National Commission for the Study of Nursing and Nursing Education (1970) and the National Commission of Community Health Services (Task Force on Health Manpower, 1967) supported the need.

The 1970's nurse shortage addressed the issue of inadequate clinical career development for the first time. Lysaught (1970) indicated that nurses' dissatisfaction with limited clinical advancement was a significant factor in clinical nurse recruitment and retention. He advocated a nurse career pattern which offered recognition, compensation, and increased responsibility as a means of retaining nurses in clinical practice.

In 1972, Marie Zimmer, Director of Nursing Service at the University of Wisconsin Hospital, presented the first
proposal for a clinical ladder program as a concept for nursing practice. She used constructs from organizational theory of responsibility, mutual attraction, integrative unit based groups, and support of professional growth in providing the rationale for clinical ladders. In an article titled "Rationale for a Ladder for Clinical Advancement in Nursing Practice", she proposed that recognition of staff nurses' performance through a ladder system would result in a higher rate of retention of nurses in patient care settings and result in a higher level of clinical expertise. Nurses would derive satisfaction from responsibility, achievement, professional growth and recognition of practice resulting in hospitals' increased nurse retention rates (Zimmer, 1972).

Clinical nurses are of critical importance in determining the quality of care hospital patients receive. Last year, 20 million Americans spent an average of seven (7.2) days in a hospital and paid $260 billion dollars (America's Best Hospitals, 1990). Therefore, the hospitals' ability to provide optimum patient care outcomes is dependent upon their success in recruiting beginning nurses and maintaining experienced clinical nurses (Aiken, 1981). Joiner & van Servellen (1984) suggest that offering a clinical ladder program, hospitals would meet both nurses' and hospitals' specific needs and result in improved patient care according to outcome predictions offered in the 1970's and 1980's.
Clinical nurse recognition would improve job satisfaction and would result in extended careers in hospital clinical nursing and increased clinical expertise in the delivery of nursing practices. Also, clinical nurses would derive job satisfaction through achievement, recognition, professional growth, and compensations (Joiner & van Servellen, 1984). Ginsberg (1981) also concluded hospital staff nurses' involvement in clinical ladders would improve job satisfaction. By offering clinical ladder programs, nurses are recruited and retained in clinical nursing, resulting in improved patient care outcomes.

Design and Implementation

Colavecchio, Tescher, and Scalzi (1974) reported the first clinical ladder program at the University of California Health Care Facilities. This four level system rewarded clinical nurses for their competence, knowledge, and performance both extrinsically and intrinsically. Other programs designed, developed, and implemented were cited in the literature throughout the 1970's (Bracken & Christman, 1978; Nelson & Arford, 1977; MacKinnon & Eriksen, 1977; Anderson & Denyes, 1975; Miller, 1975).

While clinical ladder programs were being developed, Lysaught (1973) was conducting a longitudinal study documenting nursing progress. He noted the most critical unfinished areas of concern were in the lack of systematic procedures for recognizing and certifying clinical competence (Lysaught, 1973). The report had little impact
since the early 1980's brought a period of downward economic conditions and the first nursing surplus in ten years. However, the nurse surplus was short lived, and by 1988, hospitals were experiencing vacancy rates of 11.3%.


Only one clinical ladder program design was cited in the 1990 nursing literature reviewed. The program is a retention strategy for bedside nurses in a Wyoming hospital. The hospital's annual nurse turnover rate had reached 46%. The turnover rate was much higher than that of nurses in education, management, quality assurance and infection control (Kreman, 1990).

**Outcomes of Clinical Ladder Programs**

In the literature reviewed, there are fewer studies of clinical ladder programs than reports of hospital program designs and implementation strategies. The expectations underlying clinical ladder programs are that the enriched role serves as a motivating factor which rewards nurses for clinical excellence in patient care settings. In addition,
the program is designed to increase nurse satisfaction and promote clinical excellence, which results in quality patient care. In most reported instances, the effects of clinical ladder programs are reduced turnover rates and improved job satisfaction (Joiner & van Servellen, 1984).

The clinical ladder program outcomes impact on nurses' recruitment, retention, and morale (Ulsafer-Van Lanen, 1981). After three years of ladder implementation at Rush-Presbyterian Hospital in Chicago, the turnover in staff nurse positions decreased 14%, and 50% of the nurses returning the questionnaire cited the ladder program as one reason for staying at the hospital. The program has increased job satisfaction, provided an incentive for nurses in direct patient care roles and improved clinical nurses evaluation methods.

Staff nurses at the Department of Clinical Nursing of the Medical University of South Carolina were enthusiastic about their ladder and felt the patients benefitted (Nelson & Arford, 1977). Nurses perceived the clinical ladder at the University of Wisconsin Center for the Health Sciences as providing valuable insight regarding levels of practice and feedback of their worth (Anderson & Denyes, 1975). Barhyte (1987) reported a positive relationship between length of employment and levels of practice program participation among nurses at Chicago's Rush-Presbyterian-St. Luke's Medical Center.
According to the Vice President of Patient Care Services at the Greater Southeast Community Hospital in Washington, D. C., the institution of a clinical ladder resulted in decreased turnover and higher morale on job satisfaction surveys (Gates, 1984).

The clinical ladder program has had a positive effect on nurse turnover at M. D. Anderson Hospital in Houston (Alt, Bates, Gilmore, Houston & Stoner, 1980). The turnover rate is down twenty five percent after one year of program implementation, and education program attendance has increased significantly. The most valued outcome is retention of experienced clinicians in clinical practice positions.

Positive outcomes of these programs are noted; however, two programs cite less than desirable outcomes. Nurses employed in teaching hospitals with a work environment structured by a clinical ladder perceive the program as a detriment to the productivity component of professional achievement. The ladder also offered little support to nurses' increased performance feedback, continuing education involvement, job satisfaction and commitment (Haas, 1986).

A large teaching hospital evaluated its clinical ladder program which was implemented in 1979 using six issue areas (Porter, 1987). Evaluation results indicated that the program increased nurses professionalism, motivation and self evaluation. Conclusions supported the continuation of the clinical ladder program for nurses. However, 13
recommendations were made addressing redesign of the program.

Evaluation of St. Mark's Hospital's clinical ladder program after one year consisted of staff nurse interviews asking nurses how the program was meeting their needs (Hartley & Cunningham, 1988). Nurses who had advanced cited program strengths of recognition, professionalism, satisfaction, loyalty, and challenging. Yet, nurses not participating gave mixed reactions including both positive and negative comments similar to nurses participating in the program.

Recognizing the need for a valid research instrument to measure clinical ladder program outcomes, Strzelecki (1989) developed an instrument to measure nurses' perceived effectiveness of clinical ladder programs. Seventy-six hospitals with a clinical ladder program were identified by The American Nurses Association and from the literature, but only twenty-six of the identified hospitals agreed to participate in the study. The majority of the nurse participants randomly selected in each hospital responded favorably to essential outcomes of clinical ladders. The findings suggest that essential outcomes of clinical ladders can be identified and validated using the researcher designed tool. The five essential outcomes cited by the respondents were as follows:

- Differentiation of levels of nursing clinical competence.
- Reinforcement of responsibility and accountability in nursing practice.
- Assures opportunities for professional growth.
- Provides for increased levels of autonomy and decision making.

**Current Clinical Ladder Program Concerns**

Literature reviewed cites the value of clinical ladder program in meeting specific needs of clinical nurses, hospitals, and health care consumers. The literature reviewed includes many clinical ladder programs which were implemented during the 1970s and 1980s. However, outcome evaluation reports of these programs are limited. The benefits reported include such factors as increased job satisfaction and improved retention rates.

Clinical career advancement opportunities are a professional practice issue in hospitals which concerns nurses because hospitals are the primary work site for more than two-thirds (67.9%) of America's 2 million registered nurses (Aiken, 1990). Yet there exists an average nurse vacancy rate of 12.7% in hospitals (U. S. Department of Health and Human Services, 1990).

In spite of nurses' unmet clinical needs and a lack of clinical advancement opportunities, hospitals continue to employ two thirds of the Nation's practicing nurses (Aiken, 1990; "The Nation's RN Population", 1989). Also when nurses resign their hospital position, they tend to take another
hospital position (Prescott & Bowen, 1987). A recent report
indicates hospital nurse employment has increased by 84%
since 1977. Yet over 80% of the Nation's hospitals do not
have an adequate nursing staff to provide the level of
quality nursing care the agency and consumer desires (Aiken,

Responsible hospital administrators and nurse managers
recognize long term survival requires the hospital remain
competitive (Friss, 1989). The ability to recruit and
retain clinical nurses to provide patient care is a crucial
task. The circumstances which introduced clinical ladders
in the early 1970s and 1980s are resurfacing again as
hospitals again experience rising vacancy rates and a
continuation of the 1986 nursing shortage.

Hospital administrators and nurse managers support the
clinical ladder concept in their efforts to recruit and
retain clinical nurses but limited numbers of hospitals
offer the program. The clinical ladder is reported as an
acceptable method to enrich clinical nurse jobs. Thus
allowing for recognition, rewards and growth in an
environment that supports clinical nursing practice.
Research addressing these clinical ladder programs is
absent. The need for research in this area is reflected in
the literature reviewed.

Clinical ladder program offerings alone will not
improve retention of clinical nurses, but retention is
promoted when nurses are satisfied with clinical practice and the practice environment (Clifford & Horvath, 1990). The outcome of most clinical ladder programs reported in the literature indicated retention of nurses resulted from the implemented program.

In a hospital nursing personnel survey conducted by Hay Consulting Group, only 21% of 857 hospitals offer programs (American Hospital Association, 1989). The typical program is only five years old and has four advancement levels ("Misuse of R.N.'s", 1989, p.1231).

After six years, only one-half of forty identified "magnet hospitals" (model hospitals) in 1983 offer clinical ladders and one-third of those reported that the initial program was unsuccessful (McKibbin, 1990). Some hospitals reported program revisions following earlier administrative and salary structure difficulties.

Nurses support the clinical ladder concept, but with varying degrees of enthusiasm. According to a national nurse survey, ("Misuse of RN's spurs shortage", 1989), there are problems with these programs due to nurses' lack of interest in participation, hospital implementation cost, difficulties in criteria development, and program administration. Jones (1986) reports that after one year of program development in a 146-bed acute care hospital with 300 nurse employees and 66% registered nurses, only eight nurses applied initially and after four years they had eleven advanced program nurses. Another program, which
began in 1984, has only 25% of the eligible clinical perioperative staff nurses at the first and second levels today (Davis, 1989).

After six years of program implementation at Boston's Beth Israel Hospital, one of Harvard Medical School's major teaching facilities, advanced nurses comprise only 27.3% of the total clinical nurse group while 59.4% of the nurses choose not to participate (Clifford & Horvath, 1990). The findings are consistent with the investigation of nurses' advancement interests (MacKay, Storey, MacLean, Misick, Glube, and Pereira, 1987).

Some hospital ladder programs are more successful in their job enrichment designs than others. French (1988) states many of these programs are cumbersome and ineffective in accomplishing the intended purpose of rewarding and recognizing clinical nurses who provide direct patient care. Consequently, some hospitals are considering program elimination while others are updating and revising. He also reports a clinical ladder program is not for every hospital nor for every employed staff nurse. But beneficial opportunities do exist for the hospital offering a program which reflects the needs of the clinical nurse in the 1990's (French, 1988).

French (1988) predicts that hospital's interest in clinical ladder programs will heighten in the 1990's as recruitment and retention efforts continue. He also predicts that many hospitals will initiate program
evaluations during the next 12 to 18 months because:

Theoretically, when the majority of the nursing staff can be recognized for exceptional contributions the satisfaction level is higher and nurses are less inclined to make a career move to another hospital which does not provide a similar recognition program (French, 1988, p. 52).

del Bueno (1982), questioned the psychological effect of a clinical ladder on personnel since the term implies a hierarchy of worth and value. She cites present clinical ladders as "cumbersome super-structure" which are superimposed on existing evaluations systems and the programs outcomes may not be recognized.

The hospital considering offering a clinical ladder must evaluate its commitment prior to implementation of the program (American Nurses' Association Cabinet on Nursing Services, 1984). They cite the problem of defining competency criteria for promotion and funding, managing time, and maintaining the energy required for program implementation.

Summary

A solution to the 1960s nursing shortage advocated by Lysaught (1970) was a clinical career advancement program for nurses providing direct patient care. Cyclic nursing shortages continue today but with even more intensity and duration; along with the continued need to offer clinical career advancement programs as a solution to the nursing
shortage (Hassanein, 1991). Offering nurses opportunities for clinical advancement will not resolve the nursing shortage if these programs are not made available and nurses do not choose to participate. Today, there is limited research reported on the subject of clinical ladders except in describing the program's goals, implementation and expected outcomes of improved retention rates. The expected outcomes of nurses participating in these programs is cited by nurses in job satisfaction or job dissatisfaction studies reported.

Nurses consistently expressed a need for a hospital system which rewards, recognizes, and provides professional growth for clinical nurses providing direct patient care. Literature reviewed indicates that both nurses and hospital administrators endorse the concept of clinical advancement as a method to reward and recognize clinical nurses in an effort to reduce nurse retention rates.

The expectations underlying clinical ladder programs are cited frequently in the literature. The outcomes of clinical ladders are that the enriched role rewards nurses for clinical excellence, increases job satisfaction, and consequently, motivates individual nurses for further clinical excellence. In addition, the program outcome for hospitals is improved quality of patient care and retention of nurses in clinical practice.

However, since the first hospital clinical ladder program reported by Colavecchio, Tescher, and Scalzi (1974),
limited information is available concerning the program's impact on meeting nurses' job enrichment needs and hospitals' recruitment and retention efforts. Although the concept of clinical ladders has been implemented for many years in some hospitals, it is still in the beginning phases of implementation in mostly large medical center hospitals today. In addition, in hospitals offering a clinical advancement program, participation is limited among nurses who are eligible to participate.

Studies examining nurses' perceptions of clinical ladders, individual characteristics, and work-related characteristics of nurses who choose to participate or not participate in available hospital clinical ladder programs are absent.
CHAPTER III
METHODOLOGY

The purpose of this study was twofold: (a) to examine hospital nurses' perceptions of a clinical ladder program as a job enrichment strategy, and (b) to determine the contributions of selected clinical nurses' individual and work-related variables to participation status in available clinical ladder programs. The general procedure used to achieve the purposes of this study was survey research.

The methodology of the study is organized in sections paralleling the study procedure. The sections are (1) research design, (2) population and sample, (3) instrumentation, (4) data collection, and (7) data analysis.

Research Design

This study was pre experimental inasmuch as clinical ladder programs were in place, and nurses were either participating or not participating in the program prior to this study.

Population and Sample

In June, 1990, Nursing Directors in each of the 14 Gulf States Region Voluntary Hospitals of America (VHA) were contacted by telephone to determine if their hospital offered a clinical ladder program. Six hospitals offered a program and each nursing director indicated a desire to participate in the study.

The frame for this study consisted of five regional medical center hospitals in the Gulf States Region of the
Voluntary Hospital of America (VHA) who offered a clinical ladder. The VHA is a national membership cooperative designed to assist hospitals with cost containment practices. Each of the hospitals in the frame is defined by the American Hospital Association (1989) as nonfederal short-term general and other special hospitals whose services and facilities are available to the public. Of the 14 regional hospitals, six offered a clinical ladder program. One hospital declined to participate.

The selected hospitals were located in Louisiana or Mississippi and were similar in location, philosophy, bed capacity, clinical nurse staff numbers, and levels of patient care. The VHA Gulf Region member hospitals offering a clinical ladder program in Mississippi were Forrest General Hospital, Hattiesburg; Memorial Hospital, Gulfport; and North Mississippi Medical Center, Tupelo. VHA member hospitals offering a clinical ladder program in Louisiana were Ochsner Foundation Hospital, New Orleans; and Rapides Regional Medical Center, Alexandria.

The target population for this study was 1,769 clinical staff nurses employed full time at the five frame member hospitals as of January 2, 1991. The population was stratified according to nurses' clinical ladder participation status (participating or not participating in clinical ladder). A random sample of nurses was drawn from each of the two strata. The subjects in each stratum were
random ordered to facilitate sample selection and replacement.

The sample size appropriate for the smaller (ladder participants) of the two strata was determined by using Cochran's sample size formula (Snedecor & Cochran, 1980). The information used in calculating the formula was a five point measured Likert-type scale, an accepted two percent margin of error, a calculated estimate of the population standard deviation and a five percent risk that the actual margin of error exceeded the accepted margin of error.

The calculated sample size for the smaller group strata was 120 clinical ladder program participants. A proportional ratio reflecting the relative size of the two strata was developed. The ratio was applied to the sample size for the smaller stratum to determine the sample for the larger stratum. This yielded a sample of 480 ladder program nonparticipant subjects. The total sample size was 600 nurse subjects. A list of random numbers generated by computer was used to select the subjects at each of the five hospitals. The sample size for each strata by hospitals, number of full-time nurses and nurses' participation status is presented in Table 1.
### Table 1

**Random Sample Selection by Nurse Group Strata**

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Nonparticipant</th>
<th>Participant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>na</td>
<td>nb</td>
<td>na</td>
</tr>
<tr>
<td></td>
<td>n(^a)</td>
<td>n(^b)</td>
<td>n(^a)</td>
</tr>
<tr>
<td>FGMC(^c)</td>
<td>349</td>
<td>136</td>
<td>26</td>
</tr>
<tr>
<td>MH&amp;G(^d)</td>
<td>269</td>
<td>93</td>
<td>26</td>
</tr>
<tr>
<td>RRMC(^e)</td>
<td>122</td>
<td>51</td>
<td>136</td>
</tr>
<tr>
<td>OFH(^f)</td>
<td>200</td>
<td>70</td>
<td>200</td>
</tr>
<tr>
<td>NMMC(^g)</td>
<td>431</td>
<td>130</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>1371</td>
<td>480</td>
<td>398</td>
</tr>
</tbody>
</table>

\(^a\)Number of nurses in each hospital. \(^b\)Number of nurses selected in sample in each hospital. \(^c\)Forrest General Medical Center, Hattiesburg, MS. \(^d\)Memorial Hospital at Gulfport, Gulfport, MS. \(^e\)Rapides Regional Medical Center, Alexandria, LA. \(^f\)Ochsner Foundation Hospital, New Orleans, LA. \(^g\)North Mississippi Medical Center, Tupelo, MS.

### Instrumentation

This section addresses instrument selection, instrument development, validity and reliability. The review of literature revealed no single instrument available that accomplished the objectives of the study. A three part...
instrument was utilized for data collection (see Appendix B). Two parts were researcher developed while the third part was a standardized instrument. Part I of the instrument was developed by the researcher to measure nurses' perceptions of clinical ladders as a job enrichment method. Part II of the instrument section consisted of the Job Diagnostic Survey (JDS) long form developed by Hackman and Oldham (1975, 1974). Part III of the instrument collected selected demographic information about hospital nurses.

**Instrument: Part I**

Part I of the instrument measured nurses' perceptions of clinical ladders. This instrument was researcher developed since no instrument was available in the literature which measured nurses' perceptions of clinical ladder programs as a job enrichment strategy.

The researcher reviewed literature that was printed from 1967 through 1990. Statements addressing clinical ladders in general were compiled for the instrument from the clinical ladder literature, and included the program's value to nurses and hospitals, proposed outcomes, and advancement criteria currently used for ladder promotion.

The initial 38 item instrument was constructed for the purpose of measuring 311 hospital nurses' perceptions of clinical ladders prior to the regional medical center hospital developing a ladder program. Nurses participating in the study were employed in a VHA member hospital similar...
to the frame hospitals in philosophy, location, clinical staff numbers, and levels of patient care, but the hospital differed by not offering a clinical ladder program. The perception scale employed a 5-point Likert-type scale (1 = strongly disagree and 5 = strongly agree).

The 38 statements were content validated by employed clinical nurses, graduate nursing students, and nurse educators in associate degree and baccalaureate nursing programs in Baton Rouge, Louisiana. Statement revisions were made which reflected the comments and suggestions of each validation group.

Factor analysis was used to identify factors which represented relationships among sets of many interrelated clinical ladder statements. The 38 items measuring nurse perceptions were submitted to factor analysis and reduced to 20 items as a result. The four identified categories were nurses' need for the clinical ladder, clinical ladders' purpose, ladder advancement criteria and ladder outcomes.

The Cronbach's alpha procedure was used as an estimate of the instrument reliability. An overall reliability of .87 was established.

After field test, instrument Part I was again submitted to factor analysis and the 20 perception items were increased to 22 items by restating two items for clarity. The three factor areas identified were intrinsic and extrinsic outcome factors, advancement criteria, and the need for a hospital to implement a clinical ladder. The
overall Cronbach's alpha procedure assessed the instrument's reliability at .73.

**Instrument: Part II**

The *Job Diagnostic Survey* (JDS) is a long form standardized instrument developed by Hackman and Oldham (1975; 1974). The major intended uses of the JDS are to diagnose existing jobs prior to changes. The JDS can also be used to evaluate the effects of job changes. The JDS was appropriate since the instrument measured clinical nurses' perceptions of selected job related variables that are the proposed outcomes of a clinical ladder program as noted in literature.

The JDS measured job characteristics, critical psychological states, affective outcomes, and work context variables on a 7-point scale. The variable growth need strength is measured on a 5-point scale. A description of each JDS concept and subconcepts is defined in the definition of terms (see Appendix A).

A Motivating Potential Score was formed for each nurse by combining measures of the five job characteristics according to a formula provided (Hackman & Oldham, 1980).

A growth need strength index was obtained by averaging the items job choice and would like scores. The items were paired by a job with characteristics relevant to growth need satisfaction and a job having the potential for satisfying one of a variety of other needs.
The work index summary scores were obtained by averaging the items measuring the variables: pay, security, supervisory, and social. An index was formed to measure overall satisfaction with the context factors by summing the scores obtained from the four scales measuring specific aspects of the work context.

The Job Diagnostic Survey instrument by Hackman and Oldham (1974) has established internal consistency reliability for each of the scales measured. The reliability scores and the median correlations between the items composing a given scale and all other items which are scored on different scales of the general type is provided (Hackman & Oldham, 1980). According to Hackman and Oldham, the internal consistency reliability ranges from a high of .88 to a low of .56, and the median off-diagonal correlations range from a .12 to a .28.

The JDS instrument validity is substantial (Hackman & Oldham, 1975). The variables measured by JDS relate to one another, and the job dimensions and motivating potential score relate positively and often substantially to the other variables measured.

Hackman and Oldham (1980) reported the JDS normative data for nine job occupations. These data were obtained from 6,930 employees who worked on a variety of jobs, including nursing, in 56 organizations throughout the United States. The JDS' means and standard deviations for nine job occupations score are reported in Hackman and Oldham (1980).
Nurse Manager Job Rating Form (JRF) Measurement

Nurse managers of the clinical nurse subjects completed the Job Rating Form (Hackman & Oldham, 1974) which measures the characteristics of the clinical nurses' job as viewed by nurse managers who do not work as clinical nurses. This provides an indirect test of the objectivity of clinical nurses' descriptions of the characteristics of their job. The Job Rating Form consists of job descriptive items somewhat identical in form and content to those in the JDS. The objectivity of the job dimensions was done to provide an indirect test of the objectivity of employee ratings of the characteristics of their own jobs (Hackman & Oldham, 1980).

Instrument: Part III

Part III included items related to demographic characteristics of employed hospital nurses. The individual and work-related characteristics included in this study were those variables cited in national nurse survey data reported by the U. S. Department of Health and Human Services (1990). Also, those demographic factors reported in the literature as related to job enrichment and job satisfaction among hospital nurses were included. The variables work schedule and length of hours worked each shift were included to provide a more comprehensive explanation of hospital nurses' work-related characteristics. The individual and hospital work-related demographic items included: clinical practice area, nurse education level, years in clinical nursing, years in present nursing position, work schedule, hours work
per shift, method of patient care assignment, age, gender, ethnic group.

Content and construct validity were established for instrument Part III using 311 clinical nurses employed in a regional medical center VHA hospital without a clinical ladder. Revisions were made based on the clinical nurses' comments and suggestions.

The three part instrument was organized in a booklet form and reviewed by each of the researcher's doctoral committee members. Revisions were made prior to the final draft and printing.

Instrument Field Test

The three part instrument was field tested in November, 1990. The total number of clinical nurses employed in the field test setting was 296; 268 were not participants in clinical ladders while 28 were enrolled in the ladder program. The hospital selected was similar to the study hospitals in size, location, philosophy, and levels of patient care. Nurses were randomly selected for the two nurse groups using a list of full time nurses provided by the nursing service administrative staff. Eighty-eight participant nurses were not in the clinical ladder, and 28 ladder participant nurses were selected for the study. All ladder participants were surveyed at the request of the nursing administration staff. Packets were distributed to nurses on each unit or left in each nurses' communication box. Nonrespondents received a follow-up letter two weeks
later. Sixty-nine (78.4%) participants who were not in the ladder program and 27 (96.4%) participants who were in the ladder program responded to the research instrument. The subjects' seven nurse managers completed the Job Rating Form (JRF).

After field test revisions, the completed instrument booklet was again presented to each committee member. After committee review data collection steps began.

Data Collection Procedures

A three part instrument was used for data collection between January and April, 1991 (see Appendix B). The following procedure was followed by the researcher in collecting the data:

On December 27, 1990, a letter, research proposal materials and an information request sheet were mailed to the six identified hospitals. The information was reviewed by committee and administrative staff prior to participation in the study approval (see Appendix D). The letter requested information from the Director of nursing at each of the five hospitals' Director of Nursing Service. The information requested included the: a) the number of full time clinical nurses employed; b) number of ladder participants and nonparticipants; c) research committee or administrative staff's approval to conduct research in the facility; d) confirmation date to visit the hospital and select a random sample of clinical nurses from the two
groups and to distribute instrument packets; and, e) the name and address of a contact person prior to the visit.

While all hospitals required a proposal review prior to research data collection, one hospital requested that the researcher attend the hospital's research committee meeting prior to granting permission. Five of the six hospitals granting initial permission agreed to participate in this study.

In January, 1991, the number of full time nurses by participation status was received from each hospital. A sample size was calculated using the total nurse population employed in the five hospitals and the total number of nurses in each group strata. Based on the calculated sample size, a computer list of random numbers was generated and used to select the participants in this study.

During January and February, 1991, each hospital received a letter outlining the visit date and data collection steps (see Appendix E). Later, each hospital was visited and a random sample selection of nurses from the two groups using the hospitals' current list of employed full time clinical nurses was drawn. Selected subjects were assigned a code number to appear on the subjects' instrument packet for follow up purposes. Subjects' names and nursing unit were placed on the outside of each packet. The prepared instrument packets were presented to the head nurse in each selected nursing unit. The instrument packets were distributed by the head nurse to the selected clinical
nurses on duty or placed in the nurses' communication box. The distributed packet consisted of (a) a three part instrument with front page instructions (see Appendix B), (b) a letter requesting the nurse's participation (see Appendix F ), (c) a self addressed post card for a copy of the study results. Respondents were instructed to return the completed form to the nursing service department, and there they would receive a 1964 nursing stamp for participating in the study.

The Job Rating Form instrument packet, with written instructions for completion, was distributed to Unit Head Nurses. These were the nurse managers of the randomly selected nurses during the hospital visit (see Appendix C).

During February, 1991, the designated contact nurse at each hospital mailed the returned forms which had been received in the nursing service department to the researcher. In March 1991, another copy of the instrument, with specific instructions addressed to each nonrespondent, was mailed to the contact person for distribution by each nonrespondents' Head Nurse. Each hospital contact nurse received a letter with specific instructions for instrument distribution (see Appendix G). The nurse managers letter contained distribution instructions (see Appendix H). A letter was included in each nonrespondent's instrument packet along with a self-addressed stamped envelope for direct return to the researcher (see Appendix I).
On March 26, 1991, the address of each nonrespondent was obtained from the current list of licensed nurses from the Louisiana and Mississippi State Boards of Nursing. Another instrument packet was mailed to each nonrespondent which also included a stamped self-addressed envelope and a 1964 nursing stamp. In early April, 1991, a follow-up postcard was mailed to each nonrespondent (see Appendix J).

In May, 1991, a short form of the study's Part I and Part III instrument was mailed to each nonrespondent (n=105) along with a stamped, self-addressed envelope (see Appendix K). The short form instrument contained perceptions items and individual and work related information.

Twenty-six subjects (24.8%) not responding to the initial inquiry responded to the follow up and returned the completed short form instrument. One response was not included in the data analysis since the response arrived after the June 1, 1991, deadline. The number of responses entered for data analysis was 25 (23.8%). The number of nonrespondents (105 or 17.5%) completing the short form instrument was 25 (23.8%). The nonrespondents' and respondents' data were compared using Chi Square and t-test procedures. The nonrespondent and respondent responses were not significantly different except in on the variable ethnic group.

Summary of Actual Responses

In summary, instrument packets were distributed to a random sample of 600 clinical nurses. The sample size was a
group strata of 480 nurses not participating in clinical ladder programs and 120 nurses which were participating in available clinical ladder programs. The response from the first instrument distribution was 246 (51.2%) for the nonparticipant and 59 (49.1%) for the participants for a total response of 305 (50.8%). The second instrument packet mailing to each hospital resulted in an additional 113 (23.5%) responses from the nonparticipant and 42 (35%) more for the participants for a total gain of 155 (25.8%) responses. The response to the second follow up was an additional 26 (5.4%) from the nonparticipant and five (4.2%) more from the participants for a gained response of 31 (5.2%). The final nonparticipant response was 385 (80.2%), and the total participant response was 106 (88.3%). The grand total number of respondents was 491 (81.8%). The total number of nurse managers completing the JRF instrument was 55.

Table 2 shows the number of instruments distributed and returned. Of the 600 instruments distributed, 495 were completed for a total return rate of 82.5%. Four responses were not used because they were received after the final deadline date of May 20, 1991.
Table 2

Subjects' Response Rate by Hospital and Participation Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Hospital</th>
<th>Nonparticipant</th>
<th>Participant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n^a</td>
<td>n^b</td>
<td>n^a</td>
<td>n^b</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>FGMC^c</td>
<td>136</td>
<td>105</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>28.1</td>
<td>27.3</td>
<td>9.2</td>
<td>9.4</td>
</tr>
<tr>
<td>MH@G^d</td>
<td>93</td>
<td>75</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>19.4</td>
<td>19.5</td>
<td>6.7</td>
<td>7.5</td>
</tr>
<tr>
<td>RRMC^e</td>
<td>51</td>
<td>39</td>
<td>33</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>10.6</td>
<td>10.1</td>
<td>27.5</td>
<td>28.3</td>
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<tr>
<td>OFH^f</td>
<td>70</td>
<td>50</td>
<td>66</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>14.6</td>
<td>13.0</td>
<td>55.0</td>
<td>52.8</td>
</tr>
<tr>
<td>NMMC^g</td>
<td>130</td>
<td>116</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>27.1</td>
<td>30.1</td>
<td>1.7</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>480</td>
<td>385</td>
<td>120</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

^aNumber selected in each hospital and the percentage of the total sample. ^bNumber returning instrument and the percentage of total returned instruments. ^cForrest General Medical Center, Hattiesburg, MS. ^dMemorial Hospital at

(table continues)
Gulfport, Gulfport, MS. Rapides Regional Medical Center, Alexandria, LA. Ochsner Foundation Hospital, New Orleans, LA. North Mississippi Medical Center, Tupelo, MS

Data Analysis

Data analysis procedures are described for each research question. The alpha level was set at .05 a priori. Statistical analysis procedures were calculated using the SPSS-X Data Analysis System (1988).

Question 1. The nurse subjects were described on the individual and work-related characteristics of clinical practice area, educational level, years in clinical nursing experience, years in present clinical nurse position, clinical shift, hours per shift, unit patient care assignment method, age, gender, and ethnic group.

Characteristics which were measured on a nominal scale (educational level, clinical practice area, age, gender, ethnic group, unit patient care assignment method) were summarized using frequencies and percentages. In addition, the clinical practice areas were grouped into three groups of related hospital clinical areas. These subgroupings were based on common areas for organization of nursing units in hospitals and nurses' knowledge and skill levels. These groupings were summarized using frequencies and percentages.

Characteristics which were measured on an interval scale (years of clinical nursing experience, years present
clinical nurse position) were summarized using means and standard deviations.

Question 2. Clinical ladder program participants' and nonparticipant' individual and work-related characteristics measured on a nominal scale were compared between the two nurse groups using the Chi Square procedure. The three grouped clinical practice areas were also compared using the Chi Square procedure. The characteristics measured on an interval scale were compared using the t-test procedure.

Question 3. The two nurse groups' perceptions of the JDS variables measured on an interval scale were summarized using means and standard deviations.

Question 4. The two nurse groups were compared on selected job-related characteristics, critical psychological states, affective outcomes, context satisfaction and growth need strength using the JDS instrument. The overall means for each variable were compared using the t-test procedure for comparisons between nurse participants and nonparticipant.

Question 5. Nurses' perception of clinical ladders whether participating or nonparticipating in the program was measured on an interval scale and summarized using means and standard deviations for each item.

Question 6. Clinical ladder program participants' and nonparticipant' perceptions of clinical ladders means were grouped into the three factor areas derived from the factor analysis procedure. The three means from each factor area
were compared using the t-test procedure for comparisons between the two nurse groups.

Question 7. Nurse managers' means on the JRF variables were compared with the nurse participants' and nonparticipant' means using the t-test procedure.

Question 8. The differences between the nurses participating and nonparticipating in a clinical ladder program on the basis of discrimination of individual and work-related variables were calculated using discriminant analysis procedures.
CHAPTER IV
FINDINGS

The purpose of this chapter is to present the data and explain the results which are presented according to the research questions. The chapter is organized into the following sections: (a) respondents individual and work-related characteristics, (b) respondents perceptions of the clinical nurse job by Job Diagnostic Survey (JDS) instrument, (c) respondents perceptions of clinical ladders as a desired job enrichment method, (d) respondents and nurse managers perceptions of the clinical nurse job, and (e) variables which discriminate between nurses' participation status in clinical ladders.

Respondents Individual and Work-Related Characteristics

Question One

The first question asked, "What were the individual and work-related demographic characteristics of clinical nurses' employed in hospitals with clinical ladder programs?"

The individual characteristics for description included in this study were age, gender and ethnic group. Respondents work-related characteristics were educational level, years of clinical nursing experience, years in present position, clinical practice area, unit patient care delivery method, clinical work shift, and hours worked per shift.
Age Group by Participation Status

Over three-fourth (378 or 77.1%) of the respondents were between 20-40 years of age. The numbers of nonparticipants age 40 or less were 293 (76.3%) while 85 participants were less than 40 (80.2%) (see Table 3).

Table 3

Age Group by Participation Status

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Nonparticipant</th>
<th>Participant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 385)</td>
<td>(n = 106)</td>
<td></td>
</tr>
<tr>
<td>20-25</td>
<td>71</td>
<td>5</td>
<td>76</td>
</tr>
<tr>
<td>26-30</td>
<td>77</td>
<td>28</td>
<td>105</td>
</tr>
<tr>
<td>31-35</td>
<td>80</td>
<td>29</td>
<td>109</td>
</tr>
<tr>
<td>36-40</td>
<td>65</td>
<td>23</td>
<td>88</td>
</tr>
<tr>
<td>41-45</td>
<td>40</td>
<td>12</td>
<td>52</td>
</tr>
<tr>
<td>46-50</td>
<td>16</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>51-55</td>
<td>14</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>56-60</td>
<td>11</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>61 &amp; &gt;</td>
<td>10</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>384</td>
<td>106</td>
<td>490</td>
</tr>
</tbody>
</table>

*Missing case was 1.


**Gender by Participation Status**

Among participating nurses, 95.3% (n = 101) were female and 4.7% (n = 5) were male, while the nonparticipating group was also composed of 95.3% (n = 366) female and 4.7% (n = 18) male (see Table 4).

Table 4

**Gender by Participation Status**

<table>
<thead>
<tr>
<th>Group</th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
<th>Total (n = 490)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Females</td>
<td>366</td>
<td>95.3</td>
<td>101</td>
</tr>
<tr>
<td>Males</td>
<td>18</td>
<td>4.7</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>384</td>
<td>100.0</td>
<td>106</td>
</tr>
</tbody>
</table>

*Missing case was 1.

**Ethnic Group by Participation Status**

Table 5 reveals that the majority of respondents were Caucasian (n = 447 or 92%), and the percentage was almost equally distributed between nonparticipants (n = 353 or 92.2%) and participants (n = 94 or 91.2%).
Table 5

Ethnic Group by Participation Status

<table>
<thead>
<tr>
<th>Ethnic Groups</th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Black</td>
<td>22</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>Caucasian</td>
<td>353</td>
<td>94</td>
<td>447</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>383</td>
<td>103</td>
<td>486</td>
</tr>
</tbody>
</table>

*Missing cases were 2. **Missing cases were 3.

Educational Level by Participation Status

Table 6 shows the majority of the 490 respondents (n = 206 or 51%) were associate degree graduates while the baccalaureate and diploma graduates totaled 230 (47%). This was also the case by participation areas; nonparticipants (n = 206, 53.6%), participants (n = 44, 41.5%).
Table 6

Educational Level by Participation Status

<table>
<thead>
<tr>
<th>Education</th>
<th>Nonparticipant</th>
<th>Participant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 385)</td>
<td>(n = 106)</td>
<td></td>
</tr>
<tr>
<td>Associate</td>
<td>206 53.6</td>
<td>44 41.5</td>
<td>250</td>
</tr>
<tr>
<td>Diploma</td>
<td>48 12.5</td>
<td>17 16.0</td>
<td>65</td>
</tr>
<tr>
<td>Masters</td>
<td>5 1.3</td>
<td>1 1.0</td>
<td>6</td>
</tr>
<tr>
<td>Other degree</td>
<td>3 .8</td>
<td>1 1.0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>384 100.0</td>
<td>106 100.0</td>
<td>490</td>
</tr>
</tbody>
</table>

*Missing case was 1.

Clinical Nursing Practice Area Participation Status

Respondents cited 37 clinical practice area units (see Table L-1). In Table 7 these practice areas were organized into three general nursing unit categories titled critical care, specialty, and general nursing units. Most respondents (n = 211 or 43.1%) were practicing in a general nursing unit. The distribution of respondent groups over the three practice areas were very similar for both groups.
Table 7

Clinical Nursing Practice Area and Participation Status

<table>
<thead>
<tr>
<th>Practice Area</th>
<th>Nonparticipant(^a) (n = 385)</th>
<th>Participant (n = 106)</th>
<th>Total (n = 490)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical care</td>
<td>88 22.9</td>
<td>23 21.7</td>
<td>111 22.6</td>
</tr>
<tr>
<td>Specialty</td>
<td>130 33.9</td>
<td>38 35.8</td>
<td>168 34.3</td>
</tr>
<tr>
<td>General nsg</td>
<td>166 43.2</td>
<td>45 42.5</td>
<td>211 43.1</td>
</tr>
<tr>
<td>Total</td>
<td>384 100.0</td>
<td>106 100.0</td>
<td>490 100.0</td>
</tr>
</tbody>
</table>

\(^a\) Missing case was 1.

Clinical Shift Schedule by Participation Status

Table 8 shows the clinical shift schedule by participation status. The highest percentage (39.3%) of the 491 respondents work days. More nonparticipants (n = 91 or 23.6%) than participants (n = 14 or 13.2%) work nights. While more participants (n = 29 or 27.4%) than nonparticipants (n = 51 or 13.3%) rotate two shifts.
Table 8

Clinical Shift Schedule by Participation Status

<table>
<thead>
<tr>
<th>Shift</th>
<th>Group</th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
<th>Total (n = 491)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Days only</td>
<td></td>
<td>151</td>
<td>39.2</td>
<td>42</td>
</tr>
<tr>
<td>Evenings only</td>
<td></td>
<td>26</td>
<td>6.8</td>
<td>3</td>
</tr>
<tr>
<td>Nights only</td>
<td></td>
<td>91</td>
<td>23.6</td>
<td>14</td>
</tr>
<tr>
<td>Week-ends only</td>
<td></td>
<td>17</td>
<td>4.4</td>
<td>3</td>
</tr>
<tr>
<td>Rotate all</td>
<td></td>
<td>15</td>
<td>3.9</td>
<td>4</td>
</tr>
<tr>
<td>Shifts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotate two</td>
<td></td>
<td>51</td>
<td>13.3</td>
<td>29</td>
</tr>
<tr>
<td>Shifts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>34</td>
<td>8.8</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>385</td>
<td>100.0</td>
<td>106</td>
</tr>
</tbody>
</table>

Clinical Hours Per Shift by Participation Status

Table 9 presents the clinical hours per shift by participation status. The majority of respondents (n = 292 or 59.6%) work twelve hour shifts. The majority of nonparticipants (n = 246 or 64.1%) work twelve hour shifts.
while the largest number of the participants (n = 49 or 46.2%) work the eight hour shift.

Table 9
Clinical Hours Per Shift by Participation Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours per Shift</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Eight hours</td>
<td>100</td>
<td>26.0</td>
<td>49</td>
</tr>
<tr>
<td>Ten hours</td>
<td>4</td>
<td>1.0</td>
<td>3</td>
</tr>
<tr>
<td>Twelve hours</td>
<td>246</td>
<td>64.1</td>
<td>46</td>
</tr>
<tr>
<td>Other</td>
<td>34</td>
<td>8.9</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>384</td>
<td>100.0</td>
<td>106</td>
</tr>
</tbody>
</table>

*aMissing case was 1.

Patient Care Delivery Method by Participation Status

In Table 10 the patient care delivery method by participation status is displayed. The majority of the respondents (n = 246 or 51.9%) were practicing primary care nursing. The most frequent method of patient care delivery was primary care by both nonparticipants (n = 199 or 53.4%)
and participants (n = 47 or 46.5%). Team nursing was the next most frequent method of patient care delivery cited by over one-fourth of both groups of the nonparticipants (n = 117 or 31.4%) and participants (n = 26 or 25.8%).

Table 10
Patient Care Delivery Method by Participation Status

<table>
<thead>
<tr>
<th></th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Case</td>
<td>27</td>
<td>7.2</td>
<td>14</td>
</tr>
<tr>
<td>Primary</td>
<td>199</td>
<td>53.4</td>
<td>47</td>
</tr>
<tr>
<td>Functional</td>
<td>15</td>
<td>4.0</td>
<td>7</td>
</tr>
<tr>
<td>Team</td>
<td>117</td>
<td>31.4</td>
<td>26</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>4.0</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>373</td>
<td>100.0</td>
<td>101</td>
</tr>
</tbody>
</table>

a Missing cases were 12. b Missing cases were 5.

Years Clinical Nursing Experience by Participation Status

The respondents ages were organized into age groups for reporting years of clinical nursing experience (see Table
11). Over one-half (n = 248 or 50.5%) of the 491 respondents had less than five years of clinical experience. The majority of both nonparticipants (n = 277 or 71.9%) and participants (n = 71 or 67%) had less than 10 years of nursing experience. See Table L-2 for a listing of the frequencies of years experience by participation status.

Table 11

Years Clinical Nursing Experience by Participation Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Nonparticipant</th>
<th>Participant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>0-5</td>
<td>209</td>
<td>54.3</td>
<td>39</td>
</tr>
<tr>
<td>6-10</td>
<td>68</td>
<td>17.6</td>
<td>32</td>
</tr>
<tr>
<td>11-15</td>
<td>45</td>
<td>11.7</td>
<td>16</td>
</tr>
<tr>
<td>16-20</td>
<td>37</td>
<td>9.6</td>
<td>10</td>
</tr>
<tr>
<td>21-25</td>
<td>12</td>
<td>3.1</td>
<td>6</td>
</tr>
<tr>
<td>26-30</td>
<td>8</td>
<td>2.1</td>
<td>2</td>
</tr>
<tr>
<td>31-35</td>
<td>3</td>
<td>.8</td>
<td>1</td>
</tr>
<tr>
<td>36-40</td>
<td>3</td>
<td>.8</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>385</td>
<td>100.0</td>
<td>106</td>
</tr>
</tbody>
</table>
Years of Clinical Experience Present Position by Participation Status

Over three-fourths (n = 395 or 80.5%) of the respondents had been in their present position less than five years (see Table 12). Over one-fourth of the total respondents (28%) were in their present position one year or less. The number of years in their present position ranged from less than one year to 24 years. Nonparticipants average number of years (M = 4.99) in the present position was more than program participants (M = 3.34).

The respondents years of clinical experience were grouped into five-year groups for reporting the data. A frequency listing of years clinical experience by participation status is reported in Table L-3. More participants than nonparticipants had been in their job for six or more years.
Table 12
Years of Clinical Experience Present Position by
Participation Status

<table>
<thead>
<tr>
<th>Years</th>
<th>Nonparticipant</th>
<th>Participant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>0-5</td>
<td>325 84.4</td>
<td>70 66.0</td>
<td>395 80.5</td>
</tr>
<tr>
<td>6-10</td>
<td>38 9.9</td>
<td>27 25.5</td>
<td>65 13.2</td>
</tr>
<tr>
<td>11-15</td>
<td>19 4.9</td>
<td>6 5.7</td>
<td>25 5.1</td>
</tr>
<tr>
<td>16-20</td>
<td>3 0.8</td>
<td>2 1.9</td>
<td>5 1.0</td>
</tr>
<tr>
<td>21-25</td>
<td>0 .0</td>
<td>1 .9</td>
<td>1 .2</td>
</tr>
<tr>
<td>Total</td>
<td>385 100.0</td>
<td>106 100.0</td>
<td>491 100.0</td>
</tr>
</tbody>
</table>

Question Two

The second question asked, "Were there differences in hospital clinical nurses' individual and work-related characteristics by clinical ladder program participation status?"

The individual and work-related demographic variables, measured on a categorical scale, were compared by group participation status using the Chi-square procedure. The variables were: age, gender, ethnic group, educational level, clinical practice area, unit patient care delivery method, clinical work shift and hours worked per shift.
Variables measured on the interval scale, years of clinical experience and years in present nurse position were compared using the t-test statistical procedure.

Age Group by Participation Status

Results of the Chi-square test revealed that the variables age group and participation status were not independent, $X^2(8, N = 491) = 16.57$, $p = .03$. A lower proportion of those in young age group were ladder program participants than expected.

Gender by Participation Status

Chi-square test procedure determined the variables gender and participation status were independent, $X^2(1, N = 491) = .000$, $p = .99$.

Ethnic Group by Participation Status

The Chi-square was used to determine the variables ethnic group and participation status to be independent. The results revealed that the variables were independent, $X^2(4, N = 491) = 2.42$, $p = .65$.

Educational Level by Participation Status

The Chi-square test was used to determine if the variables, educational level and participation status, were independent. The results indicated that the two variables were independent, $X^2(4, N = 491) = 5.20$, $p = .267$.

Clinical Nursing Practice Area by Participation Status

Result of the Chi-square test revealed that the practice area category and participation status variables were independent, $X^2(2, N = 491) = 162$, $p = .921$. 

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Clinical Shift Schedule by Participation Status

The Chi-square test was used to determine whether the variable group participation status and clinical shift were independent. Results revealed that the variables were not independent, $X^2(6, N = 491) = 17.29$, $p = .008$. A higher proportion of nonparticipant program nurses work night than was expected.

Clinical Hours Per Shift by Participation Status

The Chi-square test was used to determine if the variables clinical hours per shift and participant status were independent. Results revealed that the variables were not independent, $X^2(3, N = 491) = 19.11$, $p < .001$. A higher proportion of nonparticipants ladder program nurses worked the 12 hour shift.

Patient Care Delivery Method by Participation Status

The Chi-square test was used to determine if the variables patient care delivery method and participation status were independent. Results showed that the variables were independent, $X^2(4, N = 491) = 8.49$, $p = .076$.

Mean Years of Clinical Nursing Experience by Participation Status

Group mean scores were compared on the variable years of clinical nursing experience using the $t$-test statistical procedure. The nonparticipants group mean (8.03) was not significantly different from the participants group mean (9.48) on the variable years clinical nursing experience, $t_{188.19} = 1.90$, $p = .06$ (see Table 13).
Table 13

Mean Years of Clinical Nursing Experience by Participation Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Years Exp.</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Between groups</td>
<td>8.03</td>
<td>9.48</td>
</tr>
<tr>
<td>t-value</td>
<td>1.90</td>
<td>.059</td>
</tr>
</tbody>
</table>

Mean of Years Present Clinical Nurse Position

The t-test procedure was used to compare the groups mean scores on the variable years in present clinical nurse position. The mean score for the participant group (9.48) was significantly higher than the mean for the nonparticipant (8.03) group. t-test revealed a significant difference between the two groups mean years in present clinical practice position, $t_{139.48} = 3.57, \ p = <.001$ (see Table 14).
Table 14
Mean of Years Present Clinical Nurse Position by Participation Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years clinical M</td>
<td>3.34</td>
<td>4.99</td>
</tr>
<tr>
<td>t-value</td>
<td>3.57</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Respondents Perceptions of Nurse Job by (JDS) Scores

Question Three

The third study question asked, "What were hospital nurses' perceptions of the clinical nurses' job as measured by the Job Diagnostic Survey (JDS) (Hackman and Oldham, 1975)?"

Specific JDS concepts and subconcepts measured were:

a. Job Characteristics: skill variety, task identity, task significance, autonomy, feedback from job, feedback from agents, dealing with others.

b. Critical Psychological States: experienced meaningfulness of the work, experienced
responsibility for work outcomes, knowledge of results.

c. Affective Outcomes: general satisfaction, growth satisfaction, internal work motivation.
e. Individual Growth Need Strength: (Job Choice, Would like)

The mean scores and standard deviations for specific measures obtained from the JDS instrument are cited in Table 15. Each category of variable is measured in two different sections of the JDS instrument and by items written in two different formats. After scoring, all JDS concepts are expressed on a 7-point scale, where 1=low and 7=high.

Mean on JDS Subconcepts by Participation Status

JDS Job Characteristics Mean Scores

Seven subconcepts measured job characteristics of the nurse groups (see table 15). The highest mean for the nonparticipants (M = 6.44, SD = .63) and participants (M = 6.41, SD = .65) was dealing with others. Feedback from agents had the lowest mean for both nonparticipants (M = 4.31, SD = 1.40) and participants (M = 4.75, SD = .28). Nonparticipants job characteristic subconcept means ranged from 4.31 (SD = .63) to 6.44 (SD = 1.18) while participants range of means were 4.75 (SD = .28) to 6.41 (SD = .65).
**JDS Critical Psychological States Means**

Three subconcepts measured critical psychological states (see Table 15). The highest means for both groups was experienced meaningfulness of work, nonparticipants ($M = 5.93$, $SD = .78$) and participants ($M = 5.95$, $SD = .75$). The lowest subconcept mean for each group was knowledge of results with a nonparticipants mean of 5.17 ($SD = 1.01$) and participants mean was 5.23 ($SD = .95$).

**JDS Affective Outcomes Means**

The JDS affective outcomes were measured by three subconcepts or reactions obtained from performing the job. Nonparticipants and participants means were the highest and lowest for the same subconcepts (see Table 15). The highest mean among nonparticipants ($M = 5.62$, $SD = .84$) and participants ($M = 5.80$, $SD = .68$) was related to the subconcept of growth satisfaction. Nonparticipants mean was higher on general job satisfaction ($M = 5.05$, $SD = 1.08$) than the participants mean ($M = 4.96$, $SD = .99$).

**JDS Context Satisfaction Means**

Both nonparticipants and participants highest and lowest means scores were on subconcept satisfaction with co-worker relationships and satisfaction with pay (see Table 15). By group, the co-worker "social satisfaction" relationships mean was highest for both nonparticipants ($M = 5.91$, $SD = .76$) and participants ($M = 5.99$, $SD = .67$). The lowest mean on satisfaction with pay for nonparticipants was
lower ($M = 4.60$, $SD = 1.49$) than participants mean ($M = 4.81$, $SD = 1.42$).

**JDS Growth Need Strength Mean**

The growth need strength concept measured subjects' desire to obtain growth satisfaction from work. By group, the mean scores were almost the same as the mean scores for both groups (see Table 15). The nonparticipants mean score value was 4.97 ($SD = .73$) while participants mean score was 4.99 ($SD = .63$)

**JDS Motivation Potential Mean Score**

The MPS score was derived from the respondents scores on the five Job Characteristics subconcepts. The nonparticipants motivating potential mean score (MPS) was 153.32 ($SD = 57.99$) while the participants mean score (MPS) ($M = 161.21$, $SD = 60.71$) was higher (see Table 15).
Table 15

Job Diagnostic Survey (JDS) Subconcepts Means by Participation Status

<table>
<thead>
<tr>
<th>JDS Concept</th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill variety</td>
<td>5.80 (SD = .96)</td>
<td>5.86 (SD = .93)</td>
<td>5.81 (SD = .95)</td>
</tr>
<tr>
<td>Task identity</td>
<td>4.53 (SD = 1.18)</td>
<td>4.89 (SD = 1.11)</td>
<td>4.61 (SD = 1.18)</td>
</tr>
<tr>
<td>Task significance</td>
<td>6.36 (SD = .73)</td>
<td>6.28 (SD = .72)</td>
<td>6.34 (SD = .73)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>5.33 (SD = 1.04)</td>
<td>5.44 (SD = .98)</td>
<td>5.35 (SD = 1.02)</td>
</tr>
<tr>
<td>Feedback from job</td>
<td>5.03 (SD = .99)</td>
<td>5.08 (SD = .97)</td>
<td>5.04 (SD = .99)</td>
</tr>
<tr>
<td>Feedback agents</td>
<td>4.31 (SD = 1.40)</td>
<td>4.75 (SD = .28)</td>
<td>4.41 (SD = 1.38)</td>
</tr>
<tr>
<td>Dealing others</td>
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**Note.** Scale values include: 7 = High, 1 = Low.

**Question Four**

The fourth question asked, "Were there differences in clinical nurses' perceptions of the clinical nurses' job as
measured by JDS scores and nurses' clinical ladder program participation status?"

**Comparison of Respondents' JDS Subconcept Means by Participation Status**

The t-test statistical procedure was used to measure the JDS subconcepts means of nonparticipants and participants (see Table 16). The results are reported and organized by JDS subconcepts means for each concept.

**JDS Job Characteristics**

The mean scores for the nonparticipants were significantly higher than the participants on two of the seven subconcept categories, task identity and feedback from agents. Task identity, or doing a job from beginning to end with a visible outcome nonparticipants mean was 4.53 (SD = 1.18) and participants was 4.89 (SD = 1.11). The t-test procedure revealed the mean score was significantly different between the two groups, $T_{175.78} = 2.96, p = .003$.

On subconcept feedback from agents, nonparticipants mean was 4.31 (SD = 1.40) and participants mean was 4.75 (SD = 1.28). The t-test statistical procedure revealed the mean scores were significantly different $t_{180.15} = 3.04, p = .003$ (see Table 16).

**JDS Critical Psychological States**

Subconcepts mediating between job characteristics and work outcomes are termed critical psychological states. The mean scores for nonparticipants on the three subconcepts
were not significantly different from the three means for the participant group (see Table 16).

**JDS Affective Outcomes**

In the affective outcomes section, nonparticipants mean ($M = 5.62, SD = .84$) for the JDS variable growth satisfaction was significantly lower than the participants mean ($M = 5.79, SD = .68$), $t_{202.45} = 2.27, p = .024$ (see Table 16).

**JDS Context Satisfaction**

This concept measured security, pay, co-workers and supervision. For subconcept security the nonparticipants and participants means were 5.55 ($SD = 1.00$) and 5.81 ($SD = 1.00$) respectively. These means were significantly different based on the t-test statistical analysis, $t_{175.96} = 2.29, p = .023$ (see Table 16). The group means were not significantly different on the other JDS subconcepts measured (see Table 16).

**JDS Individual Growth Need Strength**

Both nonparticipants and participants means ($M = 4.97, SD = .73; M = 4.99, SD = .63$, respectively) for the degree to which they desired job opportunities to meet the psychological needs of learning, self direction and personal accomplishment were not significantly different using the t-test procedure, $t_{190.17} = .20, p = .841$ (see Table 16).

**JDS Motivation Potential Score (MPS)**

The MPS mean derived from the sum of job characteristics multiplied by autonomy and job feedback. The
nonparticipants ($M = 153.32, SD = 57.96$) were not significantly different from the participants mean score ($M = 171.21, SD = 60.71$), $t_{161.57} = 1.20, p = .233$.

Table 16

Comparison of JDS Subconcept Mean by Participation Status

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</tr>
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<tbody>
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**Note.** Scale values include: 7 = High, 1 = Low.
Respondents Perceptions of Clinical Ladder Programs

Question Five

Question five of the study asked, "What were hospital clinical nurses' perceptions of clinical ladders as a method to enrich the clinical nurses' job?"

Perceptions of Clinical Ladder Programs by Factor Areas and Participation Status

The 22 items measuring nurses' perceptions of clinical ladders were organized by three factor areas. These areas were derived from the factor analysis procedure after the field test (see Table 17). A confirmatory factor analysis was done and the items were compounded into three factor areas previously defined.

Intrinsic/Extrinsic Outcomes for Nurses and Hospital

In the factor area which measured intrinsic and extrinsic outcomes derived from clinical ladder program participation, the nonparticipant means were consistently lower for all 13 items. The range was from 3.00 to 3.96 while participants means ranged from 3.08 to 4.25 using a scale value of 5 to 1 (strongly agree to strongly disagree). The highest mean for both nonparticipants ($M = 3.68, SD = .89$) and participants ($M = 4.11, SD = .77$) was item number 13, indicating a ladder increases professional growth. The next highest mean for both groups was item number 7 which indicated a ladder would attract clinical nurses.
Clinical Nurses Need for Clinical Ladder

The ladder participants had a higher mean than the nonparticipants for all five items in the category of needs for a clinical ladder (see Table 17). The nonparticipants' means ranged from 3.96 to 3.54 (SD = 1.02 to .83) whereas the participants' means ranged from 4.24 to 4.07 (SD = .90 to .74). Participants' highest mean in the advancement category for all items was 4.24 (SD = .86). This category indicated a need for the program because nurses are not rewarded for a clinical experience (see Table 17).

Criteria Preferred for Ladder Program Advancement

The third category included four advancement criteria items. Nonparticipants' means were lower on each item than the participants' means. The highest mean for the nonparticipant group was 3.67 (SD = .88) for certification criteria. The participants' highest mean was 4.10 (SD = .75) for the item dealing with intended promotion criteria.

Clinical Ladder Perceptions Summary

For all 22 items the nonparticipants' highest mean was 3.96 (SD = .86). This item indicated a need for the program since promotion to an administrative position does not provide adequate rewards and recognition. Both groups' means, nonparticipants (M = 3.00, SD = 1.00) and participants (M = 3.08, SD = .90) were lowest on the measure of nurses' perception that a clinical ladder program decreases clinical nurse turnover rates.
Table 17

Respondents' Perceptions of Clinical Ladder Programs by Factor Areas and Participation Status

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Intrinsic/extrinsic outcomes for nurses and hospital

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<td>n  M</td>
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<td>1.00</td>
<td>.90</td>
<td>.97</td>
</tr>
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</table>

**Clinical nurses need for clinical ladder**

| Item 9  | 383  3.82     | 105  4.22   | 488  3.91 |
|         | .93           | .75         | .91    |
| Item 11 | 384  3.96     | 106  4.21   | 490  4.01 |
|         | .86           | .74         | .84    |

*(table continues)*
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<tr>
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<th>Total</th>
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<td>n M</td>
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<td>489 4.00 .85</td>
</tr>
</tbody>
</table>

Criteria preferred for clinical ladder program advancement

| Item 8s               | 382 3.55 .98             | 105 3.78 .95          | 487 3.60 .97 |
| Item 10t              | 384 3.55 .90             | 106 3.87 .74          | 490 3.62 .88 |
| Item 14u              | 384 3.67 .88             | 106 3.96 .87          | 490 3.74 .89 |
| Item 17v              | 383 3.65 .88             | 105 4.10 .75          | 488 3.75 .87 |

**Note.** Scale values include: 5=strongly agree, 4=agree, 3=undecided, 2=disagree, 1=strongly disagree.

*a* Increases retention clinical nurse.  
*b* Considers practice
needs. *Considers years experience. dPromotes nurse in clinical practice. Motivates nurses by increasing knowledge and skill. fRewards nurses for direct patient care. bAttracts nurses from other hospitals. hIncreases professional growth. iRecognizes nurses abilities, responsibilities, accountabilities. jIncreases job satisfaction. kConsiders expertise each promotion level. lProvides job enrichment. "Decreases nurse turnover rate. mNurses are satisfied with present job. nClinical nurses satisfied with promotion to administrative positions. oJob descriptions are same for all clinical nurses. qCurrent clinical practice provides sufficient rewards. rCurrent clinical practice rewards experience. Educational status. tPromotional validation responsibility clinical nurse. "Certification. "Activities in addition to job description.

Question Six

This study question asked, "Were there differences in hospital clinical nurses' perceptions of clinical ladders as a method to enrich the clinical nurses' job by clinical ladder participation status?"

Comparison Mean Score Perceptions of Clinical Ladder Programs by Factor Areas and Participation Status

Intrinsic/Extrinsic Outcomes for Nurses and Hospital

The mean for the nonparticipants (M = 3.49, SD = .73) and participants (M = 3.78, SD = .59) on the factor area of intrinsic and extrinsic outcomes. The means were
significantly different based on the \( t \)-test statistical analysis, \( t_{204.33} = 4.27, p < .001 \) (see Table 18).

**Clinical Nurses Need for Clinical Ladder**

In this factor, the mean for nonparticipants (\( M = 3.80, \ SD = .73 \)) and participants (\( M = 4.18, \ SD = .67 \)) were also significantly different based on \( t \)-test analysis, \( t_{180.63} = 5.02, p < .001 \) (see Table 18).

**Criteria Preferred for Ladder Program Advancement**

The \( t \)-test analysis also showed a significant difference between the nonparticipants mean (\( M = 3.60, \ SD = .60 \)) and participants mean (\( M = 3.92, \ SD = .58 \)) for the desired advancement criteria factor, \( t_{172.00} = 4.98, p < .001 \) (see Table 18).

**Summary Perceptions Clinical Ladder**

The overall mean between nonparticipants (\( M = 3.58, \ SD = .60 \)) and participants (\( M = 3.90, \ SD = .50 \)) to the 22 items which measured perceptions of clinical ladders were significantly different based on \( t \)-test analysis, \( t_{198.89} = 5.56, p < .001 \) (see Table 18).
### Table 18

**Comparison Mean Score Perceptions of Clinical Ladder Programs by Factor Areas and Participation Status**

<table>
<thead>
<tr>
<th>Factor Area</th>
<th>Nonparticipant (n = 385)</th>
<th>Participant (n = 106)</th>
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<td>Need for clinical ladder</td>
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<td>&lt;.001</td>
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**Note.** Scale values include: 5=strongly agree, 4=agree, 3=undecided, 2=disagree, 1=strongly disagree.

Respondents and Nurse Managers Perceptions of Job

**Question Seven**

Question seven asked, "Were there differences in clinical nurses' perceptions of their job as measured by the Job Diagnostic Survey (JDS) and their nurse managers'
perceptions of the clinical nurses' job as measured by the Job Rating Form (JRF) by Hackman and Oldham (1975)?"

The $t$-test procedure was used to compare clinical nurses and nurse managers responses to the job characteristics subconcepts of skill variety, task identity, task significance, autonomy, feedback of job, feedback of agents and dealing with others using the JDS and JRF.

Comparison of Overall Means of Clinical Nurses' JDS Job Characteristics and Nurses' Manager JRF

The clinical nurses Job Characteristics mean for the subconcept of skill variety ($M = 5.81$, $SD = .95$) was significantly different from the nurses' managers score ($M = 6.12$, $SD = .90$), $t_{68.22} = 2.39$, $p = .020$ (see Table 19). The clinical nurses mean ($M = 4.40$, $SD = 1.38$) for the subconcept, feedback from agents was also lower than their managers' mean ($M = 4.86$, $SD = 1.07$). The $t$-test statistical procedure revealed the means of these two groups were significantly different, $t_{75.82} = 2.92$, $p = .005$ (see Table 19).
Table 19

Comparison of Overall Means of Clinical Nurses' JDS Job Characteristics and Nurses' Manager JRF

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<th>Nurses Manager</th>
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<table>
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Note. Scale values include: 7 = high, 1 = low.

Discriminating Variables by Participation Status

Question Eight

The last inquiry raised was, "Were there variables which discriminate between nurses' who participate or decline to participate in clinical ladder programs?"
Variables examined for possible discrimination were:

a. nurses' individual and work-related professional characteristics,

b. nurses' perceptions of the clinical nurse job as measured by the JDS instrument,

c. nurses' perceptions of clinical ladders as measured by the researcher designed instrument.

Means, Standard Deviations, and F-ratios Between Groups for Discriminating Variables

Discriminant analysis was used to determine if differences existed between the clinical nurses nonparticipants and participants of clinical ladder programs. To meet the requirements for discriminant analysis, all discriminating variables which were not measured on an interval scale were dummy coded before analysis procedures were initiated.

Stepwise discriminant analysis was used to determine which of the 491 unweighted cases best distinguished clinical ladder program participants from the nonparticipants. The number of cases selected for inclusion in the discriminant analysis computation totaled 466 cases. These cases had no missing data on any of the variables. The number of clinical ladder nonparticipant cases selected were 367 and participant cases were 99.

Table 20 shows the means and standard deviations calculated when all 466 cases were combined into a single sample for each group. If the F ratio value is less than
the .05 level of significance, the group means were significantly different on the predictor variable. There was a significant difference between the group means on thirteen variables.

Table 20
Means, Standard Deviations, and F-ratios Between Groups for Discriminating Variables

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Satisfaction with supervision.  

Critical care units.  

Speciality care units.  

General care units.  

Educational level.  

Work days only.  

Work evenings only.  

Work nights only.  

Work weekends only.  

Rotate all shifts.  

Rotate two shifts.  

Work 8 hour shift.  

Work 10 hour shift.  

Work 12 hour shift.  

Case method nursing.  

Primary nursing.  

Functional nursing.  

Age.  

Black.  

White.  

Team nursing.  

Need for a clinical ladder.  

Criteria for advancement clinical ladder.  

Years nursing experience.  

Years present nursing position.  

Gender.  

**Pooled Within-Groups Correlation Matrix: Discriminating Variables**

Since interdependencies among the variables affect the discriminate analysis, Table M-1 shows the pooled within-group correlation matrix of the 44 discriminating variables. An interrupted of Table M-1 is the variables growth need strength and perceptions of clinical ladders intrinsic and extrinsic factor value is .13. This is a correlation between the two variables when all cases are from a single sample.

The total number of variables used to calculate the within group correlation matrix was 44. Ten pairs of variables have a correlation matrix value greater than .50. Variables with a within group correlation matrix value greater than .50 were: perception of intrinsic and extrinsic outcomes of clinical ladders and perception of
advancement criteria for a ladder program (.51); feedback from agents measured by JDS and supervision measured by JDS (.60); experienced meaningfulness of the work measured by JDS and experienced responsibility for the work measured by JDS (.51); general satisfaction and growth satisfaction measured by JDS (.54) general satisfaction and supervision measured by JDS (.52); growth satisfaction and co-worker satisfaction measured by JDS (.64); specialty nursing unit and general nursing unit (-.62); eight hour shift and 12 hour shift (-.80); primary nursing and team nursing (-.69); Black and White ethnic group (-.87); age and years of nursing experience (.67).

Summary Data for Stepwise Discriminant Analysis

Next in discriminant analysis, a linear combination of the predictor variables was formed to serve as a basis for assigning cases to groups. The coefficient values (b) for the 15 predictive variables are listed in Table 21.

The centroid values for the nonparticipant group was - .257728 and the participant value was .95374. This value was derived by applying the discriminant function score to the input data for each subject and obtaining a group average (see Table 21).

The magnitude of the difference between the nonparticipants and participants is expressed in the eigenvalue (.24643). This indicates the majority of the differences were within the groups (see Table 21).
The $R_c$ of .4446 is a correlation between groups sum of squares divided by total group sum of squares. The larger the value, the better the researcher can predict group status. A Wilks' Lambda value of .8023 indicated there was little variability between the nonparticipants and participant groups means. The larger the value of Wilks' Lambda, the less difference between the group means. A probability value of < .001 indicated a significant difference between the nonparticipants and participants mean scores on the discriminant functions (see Table 21).

Table 21

Summary Data for Stepwise Discriminant Analysis (n=466)

<table>
<thead>
<tr>
<th>Variables</th>
<th>$b^1$</th>
<th>$s^2$</th>
<th>Group</th>
<th>Centroids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity  $^a$</td>
<td>.31076</td>
<td>.26941</td>
<td>Nonparticipant</td>
<td>-.25728</td>
</tr>
<tr>
<td>Signif $^b$</td>
<td>-.18508</td>
<td>-.07318</td>
<td>Participant</td>
<td>.95374</td>
</tr>
<tr>
<td>Fdbkjob $^c$</td>
<td>-.19442</td>
<td>.03318</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fdbkagen $^d$</td>
<td>.29029</td>
<td>.28939</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gensat $^e$</td>
<td>-.33707</td>
<td>-.05893</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growsat $^f$</td>
<td>.19687</td>
<td>.18428</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security $^g$</td>
<td>.21439</td>
<td>.21259</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sch2 $^h$</td>
<td>-.13758</td>
<td>-.13140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sch6 $^i$</td>
<td>.28875</td>
<td>.33584</td>
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</tr>
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</table>

(table continues)
### Discriminant Function 1

<table>
<thead>
<tr>
<th>Variables</th>
<th>$b^1$</th>
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<th>Group Centroids</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.37021</td>
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</tr>
<tr>
<td>Hrs2$^k$</td>
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<tr>
<td>Assigl$^l$</td>
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<td>.19830</td>
<td></td>
</tr>
<tr>
<td>Percpt2$^m$</td>
<td>.36790</td>
<td>.42030</td>
<td></td>
</tr>
<tr>
<td>Percpt3$^n$</td>
<td>.28813</td>
<td>.43214</td>
<td></td>
</tr>
<tr>
<td>Nsgpos$^o$</td>
<td>.43572</td>
<td>.33760</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>$R_c$</th>
<th>Wilks' Lambda</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.24643</td>
<td>.8022905</td>
<td>.0000</td>
</tr>
</tbody>
</table>

$^1$standardized discriminant function coefficient. $^2$within-groups structure coefficient. $R_c$: canonical correlation coefficient (Pearson's correlation coefficient between discriminant score the group variable). $^a$JDS: Task identity. $^b$JDS: Task significance. $^c$JDS: Feedback from job itself. $^d$JDS: Feedback from agents. $^e$JDS: General satisfaction. $^f$JDS: Growth need satisfaction. $^g$JDS: Satisfaction with job security. $^h$Work evenings only. $^i$Rotate two shifts. $^j$Work 8 hour shift. $^k$Work 10 hour shift. $^l$Case method nursing. $^m$Need for a clinical ladder. $^n$Criteria for advancement clinical ladder. $^o$Years nursing experience.
Classification of Cases

Table 22 depicts the classification of 473 cases by the predicted group. On the 372 nonparticipant cases, it was predicted that 290 (78.0%) would not be participate and 82 (22.0%) would participate in a ladder program. Of the 101 participant cases, it was predicted that 68 (67.3%) would participate and 33 (32.7%) would not participate. There were 358 (75.69%) of the 473 cases correctly classified.

Table 22
Classification of Cases

<table>
<thead>
<tr>
<th>Actual Group</th>
<th>No. of Cases</th>
<th>Predicted Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonparticipant</td>
<td>372</td>
<td>290</td>
</tr>
<tr>
<td>Participant</td>
<td>101</td>
<td>33</td>
</tr>
</tbody>
</table>

Percent of cases correctly classified: 75.69%

A Tau statistic was used to assess the substantive significance of percentage of cases correctly classified. This procedure was used to determine the proportion of cases correctly classified more than would have been expected by
chance was 51.1%. The computation for Tau is presented below:

Equation 1:

\[ \tau = \frac{n_c - E \ p_i n_i}{N - E \ p_i n_i} \]

\( n_c \) = number correctly classified

\( E \) = summation

\( p_i \) = probability of being classified into a group by chance

\( n_i \) = number in a group

\( N \) = total number of cases (Barrick and Warmbrod, 1988)

\[
\frac{358 - (.5)(372) - (.5)(101)}{473 - (.5)(372) - (.5)(101)} = 51.1\% 
\]

The Box's M statistical procedure was conducted to determine violation of assumptions underlying discriminant analysis. The Box's M test for equality of group covariance matrices was significant, Box's M (120, 104784.9), \( (F = 2.09) = 265.36, \ p < .001 \). This indicates the covariance matrices were independent.

Several explanations for the Box's M significance were derived from the literature. One noted author addressing discriminant analysis assumptions violations is Kennedy (1977). He stated that, "it is reasonable to conclude that departures from population normality have little effect, in
practice, relative to spuriously altering the probability of committing Type I errors" (Kennedy, 1977, p. 147). He concluded that violations of the assumptions of underlying discriminant analysis can exist and not distort analysis of the data in most instances.

Another source (SPSS, 1988) reported that, "when sample sizes in the group are large, the significance probability may be small even if the group covariance matrices are not too dissimilar" (pp. 108-109).
CHAPTER V
SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Purpose and Study Questions

The purpose of this study was to examine hospital nurses' perceptions of clinical ladder programs while employed in Gulf States Region Hospitals of VHA which offer a program. Another study purpose was to determine the contributions of selected demographic and work-related variables to hospital nurses' clinical ladder program participation status.

The specific research questions were:

1. What were the individual and work related demographic characteristics of clinical nurses' in hospitals with clinical ladder programs?

2. Were there differences in hospital clinical nurses' individual and work related demographic characteristics between nurses who participated or declined to participate in available clinical ladder programs?

3. What were hospital nurses' perceptions of the clinical nurses' job as measured by the Job Diagnostic Survey (JDS) (Hackman & Oldham, 1975)?

4. Were there differences in clinical nurses' perceptions of their job as measured by JDS between nurses who participated or declined to participate in the hospitals' available clinical ladder program?
5. What were hospital clinical nurses' perceptions of clinical ladders as a method to enrich their job?

6. Were there differences in hospital clinical nurses' perceptions of clinical ladders as a method to enrich the clinical nurses' job by whether they were participating in a clinical ladder program?

7. Were there differences between clinical nurses' perceptions of their job as measured by the Job Diagnostic Survey (JDS) and their nurse managers' perceptions of the clinical nurses' job as measured by the Job Rating Form (JRF) (Hackman & Oldham, 1975)?

8. Were there variables which discriminated between nurses' who participated or declined to participate in clinical ladder programs?

**Procedures**

The target population was Registered Nurses employed in five Gulf States Region member hospitals of VHA and offering a clinical ladder program. The research setting was five regional medical center hospitals located in Louisiana or Mississippi.

A three part instrument was used for data collection. Part I of the instrument measured nurses' perceptions of clinical ladders, Part II of the instrument was the Job Diagnostic Survey (JDS) long form instrument by Hackman and Oldham, (1975, 1974) and Part III contained demographic questions. Content validity of Part I and III was evaluated by clinical nurse educators and practicing nurses. The
three section instrument was field tested by clinical nurses, randomly selected, from staff nurses employed in a Baton Rouge hospital with a clinical ladder program.

The completed instrument was administered to a random sample of 600 clinical nurses. The study sample consisted of 480 nonparticipants and 120 participants. Nonrespondents to the initial instrument received two follow up instrument packets and a post card. The total number of clinical nurses responding to the study totaled 495 (82.5%). Four were unusable resulting in an total overall response of 491 (81.8%). This was 385 (80.2%) of the sampled nonparticipants and 106 (88.3%) of the ladder participants.

Data analysis was organized and reported by study questions. Descriptive statistics were calculated for data related to questions 1, 3 and 5. The nominal, ordinal and interval data were reported using frequencies, percentages, means and standard deviations. Chi-square and t-test statistical tests were used in questions 2, 4, 6 for comparison when appropriate. Discriminant analysis was used to calculate data noted in question 8. The alpha level of statistical significance was set at .05 a'priori.

Findings

Respondents Individual and Work-Related Characteristics

Question One

Individual Characteristics Findings

The selected individual characteristics findings included in this study were age, gender and Ethnic group.
1. Over three-fourths (378 or 77.1\%) of the hospital clinical nurses were less than 40 years of age regardless of ladder program participation status. The most represented age group by all respondents was the 31-35 age group (119 or 22.2\%).

2 and 3. The majority of hospital clinical nurses were female (467 or 95.3\%) Caucasians (447 or 92.0\%).

**Work-Related Characteristics Findings**

The work-related characteristics findings reported in this study were educational level, years of clinical nursing experience, years in present position, clinical practice area, unit patient care delivery method, and clinical work shift and hours worked per shift.

4. The majority of clinical nurses were associate degree graduates (250 or 51\%). By educational level, there were more AD nurse program participants (44 or 41.5\%) than baccalaureate nurses (43 or 40.6\%) or diploma nurses (17 or 16.0\%).

5. By clinical nursing practice area categories, nurses' program participation status was not equal in critical care (111 or 22.6\%), specialty care (168 or 34.3\%) and general care (211 or 43.1\%) categories. Over one-fourth of the hospital clinical nurses were working in a medical surgical general nursing unit caring for the adult medical surgical patient (125 or 25.5\%).
6. Over one-third of the hospital clinical nurse nonparticipants (39.2%) and participants (39.6%) work the day shift.

7. More nurse participants (46.2%) than nonparticipants (26.0%) work eight hour shifts while more nonparticipants (64.1%) work 12 hour shifts than participants (43.4%).

8. The majority of clinical nurse nonparticipants (53.4%) and participants (46.5%) were practicing primary care nursing as the patient care delivery method.

9. The mean years of clinical experience for program participants (M = 9.48) were more than the nonparticipants (M=8.03).

10. The mean years in the present clinical nurse position for participants (4.99) were greater than nonparticipants (3.34).

Respondents Individual and Work-Related Characteristics

Question Two

Individual Characteristics Findings

1. The Chi Square test revealed that the variable age group and participation status were not independent, $X^2(8, N = 490) = 16.57, p = .03$.

2. Gender and participation status were determined to be independent of one another using the Chi-square test, $X^2(4, N = 490) = .000, p = .990$. 

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3. The Chi-square test revealed that the variable ethnic group and participation status were independent, $X^2(4, N = 486) = 2.42$, $p = .658$.

**Work-Related Characteristics Findings**

4. Educational level and participation status were independent using the Chi Square test, $X^2(4, N = 490) = 5.20$, $p = .267$.

5. The Chi-square test revealed that the clinical practice areas of critical care, specialty, and general care units were independent of clinical nurses' participation status, $X^2(2, N = 490) = .162$, $p = .922$.

6. Clinical shift worked and program participation status were not independent using the Chi Square test, $X^2(6, N = 491) = 17.29$, $p = .008$.

7. The variables hours worked per shift and nurses' participation status were not independent using the Chi Square test, $X^2(3, N = 490) = 19.109$, $p = .001$.

8. The variables patient care delivery method and participation status were independent using the Chi Square test, $X^2(4, N = 474) = 8.474$, $p = .076$.

9. The mean scores for years of experience in clinical nursing were not significantly different between the nonparticipant ($M = 8.03$) and the participant ($M = 9.48$) groups using the $t$-test, $t_{188.19} = 1.90$, $p = .06$.

10. The $t$-test revealed the nurse program participants mean years (4.99) in the present clinical nursing position

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were significantly higher than nonparticipants mean years
(3.34), \( t_{139.48} = 3.57, p < .001. \)

Respondents Perceptions of Nurse Job by JDS Concepts

Question Three

JDS Job Characteristics Findings

1. The highest mean score for nonparticipants (\( M = 6.44 \)) and participants (\( M = 6.41 \)) was the job
characteristic, dealing with others. This is the degree to
which clinical nurses are required to work closely with
others in carrying out work activities (Hackman and Oldham,
1975, 1974).

JDS Affective Outcome Findings

2. The internal work motivation mean scores were
almost the same for nurses regardless of participation
status. The nonparticipants mean score was 5.33 and
participants score was 5.32. Hackman and Oldham (1975)
defined the term as the degree to which nurses are self-
motivated to perform effectively on the job.

JDS Context Satisfaction Findings

3. Nonparticipants' perception of general job
satisfaction mean score of 5.05 was larger than participants
mean score of 4.96. General job satisfaction is an overall
measure of the degree to which clinical nurses were
satisfied and happy with their job (Hackman & Oldham, 1975,
1974).

JDS Individual Growth Need Strength Findings

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4. Clinical nurses' mean scores for JDS individual growth need strength (the degree to which nurses desire job opportunities for meeting their psychological needs of learning, personal accomplishment, and self direction) were almost the same for both groups, nonparticipants (M = 4.97) and participants (M = 4.99). This mediating variable according to Hackman and Oldham (1980) can be described as the degree to which nurses wish for job opportunities to meet the psychological needs of self-direction, learning and personal accomplishment.

**JDS Motivating Potential Score (MPS) Findings**

5. The MPS mean for nonparticipants was 153.32. The MPS mean for participants was 161.21.

**JDS Summary Findings**

6. Clinical nurses' whether ladder participants or nonparticipants, mean scores ranking from highest to lowest were almost the same for each subconcept measuring the JDS concepts of job characteristics, critical psychological states, affective outcomes, context satisfaction and growth need strength. The JDS mean score ranges on a seven point scale (high=7 and low=1) for both groups were between 4.31 and 6.44.
Respondents Perceptions of Nurse Job by JDS Concepts

Question Four

JDS Job Characteristics Findings

1. The $t$-test statistical analysis revealed significant differences between the mean scores of nonparticipants and participants on two of the seven subconcepts measuring job characteristics. Nonparticipants score ($M = 4.53$) was significantly lower than participants score of ($M = 4.89$) for the scales measuring the subconcept task identity, $t_{175.78} = 2.96$, $p = .003$. Task identity is defined by Hackman and Oldham (1980) as doing a job from beginning to end with a visible outcome.

Nonparticipants' score ($M = 4.31$) was also significantly lower than participants score ($M = 4.75$) on feedback from agents, $t_{180.15} = 3.04$, $p = .003$.

Feedback from agents is the degree to which clinical nurses receive clear information about job performance from managers and co-workers (Hackman & Oldham, 1980). For both groups, this was the lowest JDS means score reported.

JDS Affective Outcomes Findings

2. A significant difference was found using $t$-test analysis between the scores of nonparticipants ($M = 5.62$) and participants ($M = 5.80$) on subconcept individual growth need satisfaction, $t_{202.42} = 2.27$, $p = .024$. Individual growth need satisfaction is the degree to which the clinical nurses job meets the nurses psychological needs of learning,
personal accomplishment and self-direction (Hackman & Oldham, 1975, 1974).

JDS Context Satisfaction Findings

3. The t-test comparison of the group scores between nonparticipants (M = 5.55) and participants (M = 5.81) noted a significant difference on the JDS context satisfaction subconcept security, or contentment with stability of the present clinical nurse position, t₁₇₅,₉₆ = 2.29, p = .023.

JDS Individual Growth Need Strength Findings

4. The t-test revealed no significant differences between the mean scores of nonparticipants (4.97) and participants (4.99) on JDS Growth Need Strength, t₁₉₀,₁₇ = .20, p = .841.

JDS Motivation Potential Score (MPS) Findings

5. The t-test also indicated no significant differences between the mean scores of nonparticipants (153.32) and participants (161.21) on the MPS score of JDS, t₁₆₁,₅₇ = 1.20, p = .233.

Respondents Perceptions of Clinical Ladders as Job Enriched Question Five

Intrinsic and Extrinsic Factor Area Findings

1. In the perceptions of clinical ladders, intrinsic and extrinsic outcome factor area and group participation status, the mean score rankings were similar on 12 of the 13 items between the groups except the groups differed on the items ranked first. The highest score for the program participant group was for the item which stated the program
increases nurses' participation in professional development (M = 4.11). The nonparticipants' highest score (M = 3.74) was for the item stating the program promotes nurses in clinical practice.

2. The lowest scores among all 22 items measuring perceptions of clinical ladder programs by the nonparticipants (M = 3.00) and participants (M = 3.08) were for item 21 which stated the program decreases the turnover rate among clinical nurses.

Need for Clinical Ladders Factor Area Findings

3. By group, respondents differed on highest mean scores on items cited in the factor area of need for clinical ladder programs. The nonparticipants highest score (M = 3.96) was item number 11 which stated nurses are dissatisfied with promotion to administrative positions. The participant group highest score (M = 4.24) was item number 19 which stated clinical nurses were not adequately rewarded for clinical practice.

Criteria for Advancement Factor Area Findings

4. In the factor area, preferred ladder advancement criteria, nonparticipants highest score (M = 3.67) indicated a preference for certification criteria for advancement over participants (M = 4.10) who most prefer activities in addition to the job description.
Respondents' Perceptions of Clinical Ladders as Job Enriched

Question Six

Intrinsic and Extrinsic Factor Area Findings

1. The $t$-test revealed that the mean scores of ladder program participants (3.79) nurses were significantly higher than those of nonparticipants (3.49) on the items measuring intrinsic and extrinsic factors of a clinical ladder program, $t_{204.33} = 4.27$, $p < .001$.

Need for Clinical Ladders Factor Area Findings

2. Nonparticipants' mean scores (3.81) were significantly lower than participants mean scores (4.18) in measuring nurses' perceptions of a need for ladder programs, $t_{180.63} = 5.02$, $p < .001$.

Criteria for Advancement Factor Area Findings

3. The $t$-test statistical procedure indicated the nonparticipants' mean scores (3.60) were significantly lower than the participants mean scores (3.92) when measuring nurses' perceptions of the criteria for program advancement, $t_{172} = 4.98$, $p < .001$.

Respondents and Nurse Managers' Perceptions of the Clinical Nurse Job

Question Seven

Findings

1. The $t$-test indicated that the clinical nurses' mean score of 5.81 on the JDS, job characteristics of skill variety was significantly lower than nurses' managers' mean scores of 6.12 on the JRF companion instrument, $t_{68.22} =$
-2.39, \( p = .020 \). Skill variety is the use of a variety of skills and talents.

2. The \( t \)-test also revealed the clinical nurses mean score (4.41) was significantly lower than the nurses' managers mean score (4.87) on the subconcept feedback from agents, \( t_{75.82} = -2.92, \ p = .005 \). Feedback from agents is when nurses receive clear information about their job performance from the supervisor or co-worker) (Hackman & Oldham, 1980).

**Variables Which Discriminate Between Nurses' Participation Status In Clinical Ladders**

**Question Eight**

**Findings**

1. Fifteen of the 44 predictor variables were used in predicting the participation status of nurses in clinical ladder programs.

2. A 51.1\% improvement over chance that was obtained on the 473 cases using the tau statistic predictive formula.

3. Over 75 percent (75.69\%) or 358 of the 473 total cases were correctly classified by participation status.

4. The 15 predictor variables represented the three sections of the data collection instrument: a) JDS subconcepts measuring job characteristics, affective outcomes, context satisfaction and a component of individual growth need strength; b) work-related characteristics; and, c) perceptions of clinical ladders factors need for clinical ladder and criteria for advancement.
Predictor variables were the JDS subconcepts of task identity, task significance, feedback from the job, general satisfaction, growth satisfaction, and security. The perception predictor areas represented were the need for a ladder program and the criteria for advancement. The individual and work-related characteristics identified as predictors were: work schedule of evenings only and rotate 2 shifts, hours worked per shift of 8 and 10, case assignment method and years in present nurse position.

Conclusions and Recommendations

The conclusions and recommendations of this study are organized by sections and questions related to each section.

Respondents Individual and Work-Related Characteristics

Questions One and Two

Individual Characteristics Conclusions

1. Hospital nurses' age in this study parallel that of clinical nurses nationally. Participants were older than nonparticipants. However, the degree of association was low and no practical implications were concluded.

2 and 3. The vast majority of both nonparticipants and participants were female Caucasians. Clinical hospital nurses' gender and Ethnic origin were not significant factors in their decision to participate in a clinical ladder program.

These findings reflect a slightly lower percentage of females and a higher percentage of males than national survey findings (U.S. Department of Health and Human
Nationally, only 3.3% of nurses were males whereas the findings of this study were 4.7% males.

**Work-Related Characteristics Conclusions**

4. The educational level of clinical nurses was not a significant factor in their program participation status.

5. Clinical nurses' decisions regarding clinical ladder program participation were not influenced by the nursing unit in which they practiced.

These findings and conclusions were similar to other nurse studies (U. S. Department of Health and Human Services, 1990; Strzelecki, 1989).

6. While the shift clinical nurses worked was a factor in program participation status, the association was low and no practical value was noted.

7. The number of hours nurses worked per shift was also a factor in nurses' participation status. However, the low strength of association was such that no practical value was concluded.

8. Patient care delivery method was not a factor in whether nurses participated in a clinical ladder program.

9. The number of years of clinical nursing experience was not a factor in whether the nurses participated in the clinical ladder.

One cited explanation reported was a lack of recognition for clinical experience tends to foster turnover among clinical nurses (Wilensly, 1988; Patterson & Goad, 1987; Aiken, 1987; Link, 1987; Smith, 1983).
10. Hospital nurse clinical ladder program participants have been employed in their position longer than nonparticipants.

These findings were similar to Strzelecki's (1989) findings that clinical nurses' employment in settings with a clinical ladder mean years were 9.8 while most nurses were in their present position only one year. Barhyte (1987) reported a positive relationship between length of employment and levels of clinical practice program participation.

Recommendation

1. Based on these findings and conclusions, with reference to hospital clinical nurses' individual and work-related characteristics by clinical ladder program participation status, the researcher recommends: Hospitals should maintain an appropriate data base for establishing an ongoing profile of its clinical nursing resources, determining the hospitals requirements for these resources and projecting the individual and work-related needs for job enrichment of nurses into the 1990s and beyond.

Respondents Perceptions of Nurse Job by JDS Scores

Questions Three and Four

JDS Job Characteristics Conclusions

1. Clinical ladder program participants perceptions of the job characteristics, task identity and the degree of job feedback from their managers, were more positive than the nonparticipants. Keller and Holland, (1981) reported that
when there are positive changes in job characteristics of skill variety, autonomy and feedback there is increased job satisfaction.

**JDS Affective Outcomes Conclusions**

2. Clinical ladder program participants' satisfaction with the job meeting their growth needs were significantly greater than nonparticipant nurses.

Growth need satisfaction was a stated goal of most clinical ladder program offerings. Gates,(1984) and Strzelecki (1989) reported clinical ladder participants perceive these programs as an opportunity for growth and advancement. Stewart-Dedmon's (1988) found that the baccalaureate graduates were less satisfied with their job in the area of self-growth than associate degree and diploma graduates.

**JDS Context Satisfaction Conclusions**

3. Clinical ladder program participant nurses were more satisfied with job security than nonparticipants.

The conclusion about program participants perceptions of being more content with their job security than nonparticipants is supported by Orpen (1979). Orpen reported that when employees jobs were enriched, there was a significant increase in job satisfaction.

**JDS Individual Growth Need Strength Conclusions**

4. All hospital clinical nurses have a need for job opportunities which would meet their psychological needs of learning, personal accomplishment and self direction.
This conclusion is based on the findings of an almost identical mean score on the JDS Growth Need Strength concept.

This conclusion was supported in reported studies by McClure, Poulin, Sovie and Wandlet (1983) and Prestholdt, Lane and Matthews (1988). Clinical nurses have a perceived need for individual and work related development and when these needs are met, nurses tend to remain in clinical practice ("Misuse of RNs", 1989).

**JDS Motivation Potential Score MPS**

5. Participants' Motivation Potential Score is not higher than that of the nonparticipant nurses.

**JDS Summary Conclusions**

6. Clinical ladder program participants and nonparticipants have similar overall perceptions of the clinical nurses' job.

**Recommendation**

1. The researcher recommends that hospitals support clinical nurses needs for individual and work related growth by offering ongoing continuing education programs recognizing nurses' adult learning needs.

2. The researcher further recommends the continued use of the Job Diagnostic Survey instrument as a tool in planning and evaluating job enrichment changes such as a clinical ladder program.
Respondents Perceptions of Clinical Ladder Programs

Questions Five and Six

Intrinsic and Extrinsic Factors Conclusion

1. Clinical nurse ladder participants perceive the intrinsic and extrinsic factors of a program more positively than do nonparticipants.

The conclusion that clinical nurses' perceptions of clinical ladders were mostly neutral differed from several reported studies. Nurses desire job enrichment such as a clinical ladder program which meets the nurses' need for advancement, recognition, promotion, and achievement, resulting in increased job satisfaction and continued clinical practice (Hassanein, 1991; Pooyan, Eberhardt, Szigeti, 1990; Porter, 1987; Joiner & van Servellen, 1984; Godfrey, 1978; Cronin-Stubbs, 1977; Zimmer, 1972; Lysaught, 1970).

On the contrary, clinical ladders provided little support to nurses' job satisfaction, continuing education, and performance feedback but they contributed to professional achievement (Haas, 1986). Clinical nurses were not achievement orientated to climb ladders; they like working with people (Dyer, Monson, & Cope, 1975).

2. Both nurse participants and nonparticipants do not perceive a clinical ladder program will decrease clinical nurse turnover rates.

This conclusion parallels Zimmer (1972). Zimmer reported a clinical ladder offering would not result in...
nurses remaining in clinical practice but clinical ladders should be considered. Clifford and Horvath (1990) indicated that a program alone would not improve retention rates, but retention is promoted when nurses are satisfied with their clinical practice. Turnover rates among clinical nurses are reduced in some hospitals after clinical ladder programs are offered cited Gates (1984), Ulsafer-van Lanen, (1981), and Alt, Bates, Gilmore, Houston and Stoner (1980).

Need for a Clinical Ladder Program Conclusion

3. The ladder participants' need for a program is greater than that of nonparticipants.

Criteria for Advancement Factor Conclusion

4. Clinical nurse program nonparticipants are different from participants in their perceptions of the advancement criteria for a clinical ladder program.

Recommendation

1. The researcher recommends that hospitals assess the clinical nurses perceived need for a clinical ladder program to assure the program is congruent with the hospital's clinical nurses need.

2. The researcher recommends that hospitals assess the practicing clinical nurses' perceptions of a desired job enrichment method as an initial step in the formulation of plans to recruit potential nurses and retain existing ones.

Clinical ladder programs of the 1990s must address the needs of clinical nurses (French, 1988). In a follow up study of Magnet Hospitals identified in 1984, clinical
nurses continue to view clinical ladders as a method to advance clinically (Kramer & Schmalenberg, 1988).

del Bueno (1982) cited the need for the nursing profession to study clinical ladder programs since they require financial resources to design and implement regardless of nurses participation status.

Respondents and Nurse Managers Perceptions Nurse Job

Conclusion

1. Nurses' managers differ from clinical nurses in their perception of the degree of skill variety and feedback from agents the clinical nurses' job offers.

Discriminate Variables Between Participation Status

Conclusion

1. A model was found that increased the researchers ability to discriminate between participants and nonparticipants in a clinical ladder program. Variables explaining nurses participation status were the JDS subconcepts of task identity, task significance, feedback from the job, general satisfaction, growth satisfaction, and security. The perception predictor areas were the need for a ladder program and the criteria for advancement. The work-related characteristics identified as predictors were: work schedule of evenings only and rotate 2 shifts, hours worked per shift of eight and 10, case assignment method and years in present nurse position.
Recommendations

1. The researcher recommends that the model be tested with other data to further assess the model's explanatory power.

Summary of recommendations for Practice

The researcher recommends that hospitals:

a. Develop an appropriate data base for establishing an ongoing profile of its clinical nurses, determining the hospitals requirements for nurse resources and projecting the individual and work-related needs of its nurses into the 1990s and beyond.

b. Offer ongoing continuing education programs to meet clinical nurses needs for individual and work related growth recognizing nurses' adult learning needs.

c. Use an assessment tool such as, the Job Diagnostic Survey (JDS) instrument as a guide in planning and evaluating job enrichment changes such as a clinical ladder program (Hackman & Oldham, 1975, 1974).

d. Assess the practicing clinical nurses perceptions of a desired job enrichment method as an initial step in the formulation of plans to recruit potential nurses and retain the existing ones.

e. Assess the clinical nurses perceived need for a clinical ladder program to assure the program is congruent with the hospital's clinical nurses need.
Recommendations for Future Research

Clinical career ladder programs and nurses participation status studies were not reported in the literature reviewed. Therefore, this study provides a foundation for future research studies of clinical career ladder programs which advance nurses providing direct patient care. Some recommendations for further research are offered in this section.

An important area of potential research is the replication of this study to test the model reported in this study in other Voluntary Hospitals of America (VHA) regions or other hospitals offering clinical ladder programs. Through further examination of the model and the variables potentially contributing to clinical nurses program participation status, a better understanding of clinical ladders could evolve. These contributions would enhance hospital administrative staff's ability to explain clinical nurses' program participation status.

A second major area is further study of hospital clinical career ladder programs as related to participation status. The findings of this study both parallel and differ from findings cited in literature reviewed. The literature implies that nurses desire clinical career advancement programs which provide opportunities for individual and work related growth. The proposed benefits of a clinical ladder program are that nurses are rewarded and recognized for their levels of practice thus increasing job satisfaction.
and decreasing turnover rates. The findings of this study did not completely support the findings of previous research.

There is also opportunity for further research related to the predictors of nurses participation status identified in this study. In particular, the identified variables contributing to nurse program participation status were work-related components of the clinical nurses job and nurses perceptions of clinical ladder programs. An analysis of each of these identified contributing variables could be beneficial to hospital administrative staff in making decisions regarding job enrichment strategies such as offering a clinical ladder program.

Clearly this study provides ample opportunity for other researchers to learn more about clinical ladders and nurses' participation status. The use of the results reported in this study to further knowledge about these programs is encouraged.

Since 1970, clinical advancement programs have been suggested as one method of resolving the hospital nurse shortage and retaining clinical nurses, yet little is known about the impact of these programs on meeting clinical nurses' needs to the degree that nurses will remain in direct patient care practice as a result of those programs.

The findings of this study offer a beginning upon which further research can be built. Also, the findings of the study contribute practical information about clinical nurses
and their program participation status. These contributions can be used by hospital administrative staff in providing decision making data regarding the offering of these programs for clinical nurses providing direct patient care. In addition, further research is needed as nurses seek solutions to resolving the current and continuing nursing shortage in hospitals.
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APPENDIX A

Job Diagnostic Survey Concepts and Subconcepts Defined
JOB DIAGNOSTIC SURVEY CONCEPTS AND
SUBCONCEPTS DEFINED (Hackman and Oldham, 1974, 1975)

JDS: Core Job Characteristics

Skill Variety is the degree to which a job requires a variety of different activities in carrying out the work, involving the use of a number of different skills and talents of the person.

Task Identity is the degree to which the job requires completion of a whole and identifiable piece of work— that is, doing a job from beginning to end with a visible outcome.

Task Significance is the degree to which the job has a substantial impact on the lives of other people, whether those people are in the immediate organization or in the world at large.

Autonomy is the job characteristic that leads to feelings of personal responsibility for work outcomes. The degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to used in carrying it out.

Feedback from the Job is the degree to which carrying out the work activities required by the job results in the employee obtaining direct and clear information about the effectiveness of his or her performance.

Feedback from Agents is the degree to which the employee receives clear information about his or her job performance from supervisors or from co-workers.
Dealing with Others is the degree to which the job requires employees to work closely with other people in carrying out the work activities (including dealing with other organization members and with external organizational "clients").

JDS: Motivating Potential Score (MPS)

The Motivating Potential Score (MPS) is the sum of scores for skill variety, task identity, and task significance times the score for autonomy and job feedback. A job high in motivating potential creates conditions such that if the jobholder performs well, he or she is likely to experience a reinforcing state of affairs as a consequence. Hence, job characteristics set the stage for internal motivation and do not cause employees to be internally motivated, to perform well, or to experience job satisfaction.

JDS: Critical Psychological States

Experienced meaningfulness of the work is the degree to which the employee experiences the job as one which is generally meaningful, valuable, and worthwhile.

Experienced responsibility for work outcomes is the degree to which the employee feels personally accountable and responsible for the results of the work he or she does.

Knowledge of results is the degree to which the employee knows and understands, on a continuous basis, how effectively he or she is performing the job.

JDS: Individual Growth Need Strength

Individual Growth Need Strength is a mediating variable
according to Hackman and Oldham's Job Characteristic Model of Motivation (1976). Growth need strength can be described as the degree to which an individual wishes job opportunities for meeting the psychological needs of learning, personal accomplishment, and self-direction.

Would like format is one of two separate measures of growth need strength. Respondents are asked to indicate directly how much they would like to have a number of specified conditions present in their jobs some of which focus on growth-relevant aspects of the job.

Job choice is the other measure of growth need strength. Respondents indicate their relative preference for pairs of hypothetical jobs. In each item a job with characteristics relevant to growth need satisfaction is paired with a job which has the potential for satisfying one of a variety of other needs.

**JDS: Affective Outcomes**

Internal Work Motivation is the degree to which the employee is self-motivated to perform effectively on the job.

General Job Satisfaction is an overall measure of the degree to which the employee is satisfied and happy with the job.

Individual Growth Need Satisfaction is the degree to which the job meets the psychological needs of learning, personal accomplishment, and self-direction.

**JDS: Context Satisfaction**

Pay is the degree to which the employee is content with
the salary he or she receives for doing the job.

Job Security is the degree to which the employee is content with the stability of his or her position.

Supervision is the degree to which the employee is content with the amount and quality of the supervision received on the job.

Co-workers (social) is the degree to which the employee is content with the social aspects of the job.
APPENDIX B

Instrument Part I, Part II and Part III
Dear Clinical Nurse:

Your help is needed to understand the impact of clinical ladder programs on meeting clinical nurses' job enrichment needs and enhancing hospitals' nurse recruitment and retention efforts. Clinical nurses' names were randomly selected from a list of clinical ladder participants and non-participants provided by nursing administration. Your participation in this study is voluntary and you may be assured of complete confidentiality. If you choose not to respond, please return the unanswered instrument in the enclosed envelope.

The instrument should take less than 30 minutes to complete. If you wish clarification or assistance in completing the instrument, please call the investigator in nursing service during the day. I will be at your hospital for three days after you receive the instrument packet. After this time you may call me collect at 1-504-293-4026 after 5 pm.

Please return the completed instrument in the enclosed envelope to nursing service. To obtain an abstract of the study results, print your name and address on the enclosed card and place in an identified box located in nursing service. While in nursing service, please sign the participation sheet to receive your historical official U.S. stamps commemorating nurses and nursing!

Thank you for participating in this study.

Sarah Kay A. Thornhill, R.N.
PART I

PERCEPTIONS OF A CLINICAL LADDER PROGRAM

DEFINITION:
Please use the following definition of a clinical ladder program when completing the questionnaire:

A system which recognizes and rewards clinical nurses for education, clinical experience, and expert clinical skills while providing direct patient care in a hospital setting.

INSTRUCTIONS:
The following statements are associated with attitudes toward a clinical ladder program as a job enrichment strategy. Each represents an opinion and there are no right or wrong answers. You may agree with some statements and disagree with others. The extent to which you agree or disagree is what is important.

Read each statement carefully and decide if you AGREE OR DISAGREE. Circle the letter that most accurately reflects your degree of agreement or disagreement with the statement.

SA - STRONGLY AGREE: I strongly agree with the statement.
A - AGREE: I agree with the statement not strongly.
U - UNDECIDED: I am neutral toward the statement, or I just do not know enough about the subject.
D - DISAGREE: I disagree with the statement, but not strongly.
SD - STRONGLY DISAGREE: I strongly disagree with the statement.

Example:
A. A clinical ladder program offering is a method of rewarding only nurse educators. SA A U D SD
A hospital clinical ladder program offering . . . .

1. increases the retention rate among clinical nurses. SA A U D SD
2. considers employed nurses individual clinical practice needs. SA A U D SD
3. considers years clinical nurse experience as a ladder promotion criteria. SA A U D SD
4. is a method to promote nurses desiring to remain in clinical bedside nursing practice. SA A U D SD
5. motivates clinical nurses to move to higher levels of clinical practice by increasing the nurses knowledge and skill level. SA A U D SD
6. rewards clinical nurses for providing direct patient care. SA A U D SD
7. attracts clinical nurses from hospitals not offering a program. SA A U D SD
8. includes clinical nurses' educational status as criteria for each promotional level. SA A U D SD
9. is not needed because clinical nurses are satisfied with current hospital promotion policies. SA A U D SD
10. places the responsibility and accountability of validating promotion criteria with the clinical nurse. SA A U D SD
11. is not needed since promotion to administrative positions provide adequate recognition and reward for clinical nurses. SA A U D SD
12. is not necessary because hospital nurses function according to the same clinical staff job description. SA A U D SD
13. increases nurses' participation in professional development programs. SA A U D SD
14. includes nurse certification as a criteria for promotion. SA A U D SD
15. recognizes clinical nurses varying levels of clinical abilities, responsibilities, and accountability. SA A U D SD
16. increases the job satisfaction level of participating clinical nurses. SA A U D SD
17. rewards clinical nurses according to job description criteria plus additional hospital activities. SA A U D SD
18. considers nurses' clinical expertise at each promotional level. SA A U D SD
19. is not needed since the practice of nursing provides sufficient rewards to induce nurses to remain in direct patient care settings. SA A U D SD
20. provides enrichment of the clinical nurses job. SA A U D SD
21. decreases the turnover rate among clinical nurses. SA A U D SD
22. is not needed since clinical nurses are rewarded for years of clinical experience. SA A U D SD
PART II

JOB DIAGNOSTIC SURVEY


On the following pages you will find different kinds of questions about the clinical nurse job. Specific instructions are given at the start of each section. Please read them carefully.

The questions are designed to obtain your perceptions of your clinical nurse job and your reactions to the job while participating or not participating in a clinical ladder program. The questions are designed to obtain your perceptions of your clinical nurse job and your reactions to the job.

There are no trick questions. Your individual answers will be kept completely confidential. Please answer each item as honestly and frankly as possible.

Thank you for your cooperation.

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your description as accurate and as objective as you possible can.

A sample question is given below.

A. To What extent does your job require you to work with mechanical equipment?

1  2  3  4  5  6  7

Very little; the job requires almost no contact with mechanical equipment of any kind.

Moderately. Very much; the job requires almost constant work with mechanical equipment.

You are to circle the number which is the most accurate description of your job.

If, for example, your job requires you to work with mechanical equipment a good deal of the time - but also requires some paperwork - you might circle the number six, as was done in the example above.

If you do not understand these instructions, please ask for assistance. If you do understand them, please begin.
Circle one

1. To what extent does your job require you to work closely with other people (either "clients", or people in related jobs in your own organization)?

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<td></td>
<td>Very little; dealing with other people is not at all necessary in the job.</td>
<td>Moderately; some dealing with others is necessary.</td>
<td>Very much; dealing with other people is an absolutely essential and crucial part of doing the job.</td>
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2. How much autonomy is there in your job? That is, to what extent does your job require you to decide on your own how to go about doing the work?

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<td>Very little; the job gives me almost no personal &quot;say&quot; about how and when the work is done.</td>
<td>Moderately; many things are standardized and not under my control, but I can make some decisions about the work.</td>
<td>Very much; the job gives me almost complete responsibility for deciding how and when the work is done.</td>
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3. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

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<td>Very little; my job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product of service.</td>
<td>Moderately; my job is a moderate-sized &quot;chunk&quot; of the overall piece of work; my own contributions can be seen in the final outcome.</td>
<td>Very much; my job involves doing the whole piece of work, from start to finish; the results of my activities are easily seen in the final product or service.</td>
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4. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

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<td></td>
<td>Very little; the job requires me to do the same routine things over and over again.</td>
<td>Moderate variety.</td>
<td>Very much; the job requires me to do many different things, using a number of different skills and talents.</td>
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5. In general, how significantly or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

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<td></td>
<td>Not very significant; the outcomes of my work are not likely to have important effects on other people.</td>
<td>Moderately significant.</td>
<td>Highly significant; the outcomes of my work can affect other people in very important ways.</td>
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6. To what extent do managers or co-workers let you know how well you are doing on your job?

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<td>Very little; people almost never let me know how well I am doing.</td>
<td>Moderately; sometimes people may give me &quot;feedback&quot;; other times they may not.</td>
<td>Very much; managers or co-workers provide me with almost constant &quot;feedback&quot; about how well I am doing.</td>
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7. To what extent does the job itself provide you with information about you work performance? That is, does the actual work itself provide itself provide clues about how well you are doing - aside from any "feedback" co-workers or supervisors may provide?

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<td>Very little; the job itself is set up so I could work forever without finding out how well I am doing.</td>
<td>Moderately; sometimes doing the job provides &quot;feedback&quot; to me; sometimes it does not.</td>
<td>Very much; the job is set up so that I get almost constant &quot;feedback&quot; as I work about how well I am doing.</td>
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SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job - regardless of whether you like or dislike your job.

Circle only ONE number using the following scale:

1 - Very inaccurate
2 - Mostly inaccurate
3 - Slightly inaccurate
4 - Uncertain
5 - Slightly accurate
6 - Mostly accurate
7 - Very accurate

1. The job requires me to use a number of complex or high level skills.  1 2 3 4 5 6 7
2. The job requires a lot of cooperative work with other people.  1 2 3 4 5 6 7
3. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.  1 2 3 4 5 6 7
4. Just doing the work required by the job provides many chances for me to figure out how well I am doing.  1 2 3 4 5 6 7
5. The job is quite simple and repetitive.  1 2 3 4 5 6 7
6. The job can be done adequately by a person working alone - without talking or checking with other with other people.  1 2 3 4 5 6 7
7. The supervisors and co-workers on this job almost never give me any "feedback" about how well I am doing in my work.  1 2 3 4 5 6 7
8. This job is one where a lot of other people can be affected by how well the work gets done.  1 2 3 4 5 6 7
9. The job denies me any chance to use my personal initiative or judgment in carrying out the work.  1 2 3 4 5 6 7
10. Supervisors often let me know how well they think I am performing the job.  1 2 3 4 5 6 7
11. The job provides me the chance to completely finish the pieces of work I begin.  1 2 3 4 5 6 7
12. The job itself provides very few clues about whether or not I am performing well.  1 2 3 4 5 6 7
13. The job gives me considerable opportunity for independence and freedom in how I do the work.  1 2 3 4 5 6 7
14. The job itself is not very significant or important in the broader scheme of things.  1 2 3 4 5 6 7
**SECTION THREE**

**Now please indicate how you personally feel about your job.**

Each of the statements below is something that a person might say about his or her job. You are to indicate your own personal feelings about your job by making how much you agree with each of these statements.

Circle only ONE number using the following scale:

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<th>Number</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>Disagree strongly</td>
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<tr>
<td>2</td>
<td>Disagree</td>
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<tr>
<td>3</td>
<td>Disagree slightly</td>
</tr>
<tr>
<td>4</td>
<td>Neutral</td>
</tr>
<tr>
<td>5</td>
<td>Agree slightly</td>
</tr>
<tr>
<td>6</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>Agree strongly</td>
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1. It's hard, on this job, for me to care very much about whether or not the work gets done right.  
   1  2  3  4  5  6  7

2. My opinion of myself goes up when I do this job well.  
   1  2  3  4  5  6  7

3. Generally speaking, I am very satisfied with this job.  
   1  2  3  4  5  6  7

4. Most of the things I have to do on this job seem useless or trivial.  
   1  2  3  4  5  6  7

5. I usually know whether or not my work is satisfactory on this job.  
   1  2  3  4  5  6  7

6. I feel a great sense of personal satisfaction when I do this job well.  
   1  2  3  4  5  6  7

7. The work I do on this job is very meaningful to me.  
   1  2  3  4  5  6  7

8. I feel a very high degree of personal responsibility for the work I do on this job.  
   1  2  3  4  5  6  7

9. I frequently think of quitting this job.  
   1  2  3  4  5  6  7

10. I feel bad and unhappy when I discover that I have performed poorly on this job.  
    1  2  3  4  5  6  7

11. I often have trouble figuring out whether I'm doing well or poorly on this job.  
    1  2  3  4  5  6  7

12. I feel I should personally take the credit or blame for the results of my work on this job.  
    1  2  3  4  5  6  7

13. I am generally satisfied with the kind of work I do in this job.  
    1  2  3  4  5  6  7

14. My own feelings generally are not affected much one way or the other by how well I do on this job.  
    1  2  3  4  5  6  7

15. Whether or not this job gets done right is clearly my responsibility.  
    1  2  3  4  5  6  7
Now please indicate how satisfied you are with each aspect of your job listed below.

Circle only ONE number using the following scale:

1 - Extremely dissatisfied
2 - Dissatisfied
3 - Slightly dissatisfied
4 - Neutral
5 - Slightly satisfied
6 - Satisfied
7 - Extremely satisfied

1. The amount of job security I have. 1 2 3 4 5 6 7
2. The amount of pay and fringe benefits I receive. 1 2 3 4 5 6 7
3. The amount of personal growth and development I get in doing my job. 1 2 3 4 5 6 7
4. The people I talk to and work with on my job. 1 2 3 4 5 6 7
5. The degree of respect and fair treatment I receive from my boss. 1 2 3 4 5 6 7
6. The feeling of worthwhile accomplishment I get from doing my job. 1 2 3 4 5 6 7
7. The chance to get to know other people while on the job. 1 2 3 4 5 6 7
8. The amount of support and guidance I receive from my supervisor. 1 2 3 4 5 6 7
9. The degree to which I am fairly paid for what I contribute to the organization. 1 2 3 4 5 6 7
10. The amount of independent thought and action I can exercise in my job. 1 2 3 4 5 6 7
11. How secure things look for me in the future in this organization. 1 2 3 4 5 6 7
12. The chance to help other people while at work. 1 2 3 4 5 6 7
13. The amount of challenge in my job. 1 2 3 4 5 6 7
14. The overall quality of the supervision I receive in my work. 1 2 3 4 5 6 7
SECTION FIVE

Now please think of the other people in your organization who hold the same job as you do. If no one has exactly the same job as you, think of the job which is most similar to you.

Please think about how accurately each of the statements describes the feelings of those people about the job.

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.

Circle only ONE number using the following scale:

1 - Disagree strongly
2 - Disagree
3 - Disagree slightly
4 - Neutral
5 - Agree slightly
6 - Agree
7 - Agree strongly

1. Most people on this job feel a great sense of personal satisfaction when they do the job well.

2. Most people on this job are very satisfied with the job.

3. Most people on this job feel that the work is useless or trivial.

4. Most people on this job feel a great deal of personal responsibility for the work they do.

5. Most people on this job have a pretty good idea of how well they are performing their work.

6. Most people on this job find the work very meaningful.

7. Most people on this job feel that whether or not the job gets done right is clearly their own responsibility.

8. People on the job often think of quitting.

9. Most people on this job feel bad or unhappy when they find that they have performed the work poorly.

10. Most people on this job have trouble figuring out whether they are doing a good or a bad job.
**SECTION SIX**

Listed below are a number of characteristics which could be present on any job. People differ about how much they would like to have each one present in their own jobs. We are interested in learning how much you personally would like to have each on present in your job.

Circle only ONE number using the following scale:

- 4 - Would like having this only a moderate amount (or less)
- 5 -
- 6 -
- 7 - Would like having this very much
- 8 -
- 9 -
- 10 - Would like having this extremely much

<p>| | | | | | | | | | | |</p>
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</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>High respect and fair treatment from my supervisor.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
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<tr>
<td>2.</td>
<td>Stimulating and challenging work.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
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<td>3.</td>
<td>Chances to exercise independent thought and action in my job.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
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<td>4.</td>
<td>Great job security.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
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<td>5.</td>
<td>Very friendly co-workers.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
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<tr>
<td>6.</td>
<td>Opportunities to learn new things from my work.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td></td>
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<tr>
<td>7.</td>
<td>High salary and good fringe benefits.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td></td>
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<tr>
<td>8.</td>
<td>Opportunities to be creative and imaginative in my work.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td></td>
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<tr>
<td>9.</td>
<td>Quick promotions.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Opportunities for personal growth and development in my job.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td></td>
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<tr>
<td>11.</td>
<td>A sense of worthwhile accomplishment in my work.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
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</tbody>
</table>
Please turn the page and complete section seven
SECTION SEVEN

People differ in the kinds of jobs they would most like to hold. The questions in this section give you a chance to say just what it is about a job that is most important to you.

For each question, two different kinds of jobs are briefly described. You are to indicate which of the jobs you personally would prefer - if you had to make a choice between them.

In answering each question, assume that everything else about the jobs is the same. Pay attention only to the characteristics actually listed.

Circle only ONE number using the following scale:

1 - Strongly prefer A
2 - Slightly prefer A
3 - Neutral
4 - Slightly prefer B
5 - Strongly prefer B

Two examples are given below.

<table>
<thead>
<tr>
<th>JOB A</th>
<th>JOB B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A job requiring work with mechanical equipment most of the day.</td>
<td>A job requiring work with other people most of the day.</td>
</tr>
</tbody>
</table>

If you like working with people and working with equipment equally well, you would circle the number 3, as has been done in the example.

Here is another example. This one asks for a harder choice - between two jobs which both have some undesirable features.

<table>
<thead>
<tr>
<th>JOB A</th>
<th>JOB B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A job requiring you to expose yourself to considerable physical danger.</td>
<td>A job located 200 miles from your home and family.</td>
</tr>
</tbody>
</table>

If you would slightly prefer risking physical danger to working far from your home, you would circle number 2, as has been done in the example.

Please ask for assistance if you do not understand exactly how to do these questions.
### JOB A

1. A job where the pay is very good.
2. A job where you are often required to make important decisions.
3. A job in which greater responsibility is given to those who do the best work.
4. A job in an organization which is in financial trouble - and might have to close down within the year.
5. A very routine job.
6. A job with a supervisor who is often very critical of you and your work in front of other people.
7. A job with a supervisor who respects you and treats you fairly.
8. A job where there is a chance you could be laid off.
9. A job in which there is a real chance for you to develop new skills and advance in the organization.
10. A job with little freedom and independence to do your work in the way you think best.
11. A job with very satisfying teamwork.
12. A job which offers little or no challenge.

### JOB B

1. A job where there is considerable opportunity to be creative and innovative.
2. A job with many pleasant people to work with.
3. A job in which greater responsibility is given to loyal employees who have most seniority.
4. A job in which you are not allowed to have any say whatever in how your work is scheduled, or in the procedures to be used in carrying it out.
5. A job where your co-workers are not very friendly.
6. A job which prevents you from using a number of skills that you worked hard to develop.
7. A job which provides constant opportunities for you to learn new and interesting things.
8. A job with very little chance to do challenging work.
9. A job which provides lots of vacation time and an excellent fringe benefit package.
10. A job where the working conditions are poor.
11. A job which allows you to use your skills and abilities to the fullest extent.
12. A job which requires you to be completely isolated from co-workers.


The Job Diagnostic Survey instrument is not copyrighted and therefore may be used without the authors' permission (Hackman & Oldham, 1980, P. 275).
PART III

DEMOGRAPHIC INFORMATION

INSTRUCTIONS

Please complete the demographic information section of the instrument by either writing in the information or checking the appropriate response. It is important to answer each question. You will not be identified individually and your response will be treated in confidence. Thank you for your cooperation.

1. The number of steps in your hospital's clinical ladder program. (Check one)
   - two
   - three
   - four
   - five

2. Are you currently participating in your hospital's clinical ladder program? (Check one)
   - Yes
   - No
   - No, but I plan to participate later

3. The item that best describes your position on the clinical ladder (if you answered yes to number 2): (Check one)
   - entry/beginning
   - first step
   - second step
   - third step/top of ladder

4. The item that best describes your clinical area of nursing practice: (Check one)
   - adult medical/surgical
   - adult critical care
   - pediatrics
   - emergency care
   - operating room
   - obstetrics/gynecology
   - other (Please specify) _____________________

5. Your current level of education is: (Check one)
   - Associate Degree
   - Bachelor of Science, Nursing
   - Diploma in Nursing
   - Masters in Nursing
   - Other (Please specify) _____________________

6. The number of years experience in clinical nursing is ______.

7. The number of years in your present clinical nurse position is ______.
8. Your current clinical nurse work schedule is: (Check one)
   ___ Days only
   ___ Evenings only
   ___ Nights only
   ___ Weekends only
   ___ Rotate all shifts
   ___ Rotate two shifts
   ___ Other (Please list) ________________________ •

9. The total number of hours per shift employed: (Check one)
   ___ eight hrs.
   ___ ten hrs.
   ___ twelve hrs.
   ___ Other (please list) ______

10. The method of patient care assignment on your unit: (Check one)
    ___ Case
    ___ Primary
    ___ Functional (task)
    ___ Team
    ___ Other _____________

11. What is your age? (Check one)
    ___ 20-25   ___ 36-40   ___ 51-55
    ___ 26-30   ___ 41-45   ___ 56-60
    ___ 31-35   ___ 46-50   ___ 61 and over

12. Your sex is: (Check one)
    ___ female
    ___ male

13. Your ethnic (cultural) group is: (Check one)
    ___ Asian
    ___ Black
    ___ Caucasian
    ___ Hispanic
    ___ Other (Please specify) ________________________

14. Additional comments about the topic of clinical ladders as a method to reward and recognize nurses providing direct patient care are appreciated. Please use the space below and on back for your comments.

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

   Your response to this instrument is greatly appreciated.
APPENDIX C

Nurse Manager Job Rating Form (JRF)
Dear Clinical Nurse Manager:

Your hospital clinical nurses' job has been enriched by offering a clinical ladder program. This study is designed to examine the individual and work-related characteristics of hospital clinical nurses when participating or not participating in the available clinical ladder program.

Some clinical nurses employed on your nursing unit have been randomly selected to participate in this study. The selected nurses are requested to assess the characteristics of the clinical nurse job. You are requested to complete the enclosed Job Rating Form to provide an additional assessment of the clinical nurse job and determine the clinical nurses' objective assessment of their job. The Job Rating Form consists of job descriptive items nearly identical in form and content to those on the instrument the clinical nurse completes.

Return the completed form in the envelope provided.

Thank you for your cooperation.

Sarah Kay A. Thornhill, R.N.
PART I

JOB RATING FORM

This questionnaire was developed as part of a Yale University study of jobs and how people react to them. The questionnaire helps to determine how jobs can be better designed, by obtaining information about how people react to different kinds of jobs.

You are asked to rate the characteristics of the following job:

Hospital Clinical Nurse providing direct patient care.

Please keep in mind that the questions refer to the job listed above, and not to your own job.

On the following pages, you will find several different kinds of questions about the job listed above. Specific instructions are given at the start of each section. Please read them carefully. It should take no more than 10 minutes to complete the entire questionnaire. Please move through it quickly.

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can. Try to make your description as accurate and objective as possibly can.

A sample question is given below.

A. To What extent does your job require you to work with mechanical equipment?

1 2 3 4 5 6 7

Very little; the job requires almost no contact with mechanical equipment of any kind. Moderately. Very much; the job requires almost constant work with mechanical equipment.

You are to circle the number which is the most accurate description of the job you are rating.

If, for example, your job requires you to work with mechanical equipment a good deal of the time - but also requires some paperwork - you might circle the number six, as was done in the example above.
1. To what extent does your job require you to work closely with other people (either "clients", or people in related jobs in your own organization)?

   1  2  3  4  5  6  7
   Very little; dealing with other people is not at all necessary in the job.

   Moderately; some dealing with others is necessary.

   Very much; dealing with other people is an absolutely essential and crucial part of doing the job.

2. How much autonomy is there in your job? That is, to what extent does your job require you to decide on your own how to go about doing the work?

   1  2  3  4  5  6  7
   Very little; the job gives me almost no personal "say" about how and when the work is done.

   Moderately; many things are standardized and not under my control, but I can make some decisions about the work.

   Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

3. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

   1  2  3  4  5  6  7
   Very little; my job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product of service.

   Moderately; my job is a moderate-sized "chunk" of the overall piece of work; my own contributions can be seen in the final outcome.

   Very much; my job involves doing the whole piece of work, from start to finish; the results of my activities are easily seen in the final product or service.

4. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

   1  2  3  4  5  6  7
   Very little; the job requires me to do the same routine things over and over again.

   Moderate variety.

   Very much; the job requires me to do many different things, using a number of different things, using a number of different skills and talents.

5. In general, how significantly or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

   1  2  3  4  5  6  7
   Not very significant; the outcomes of my work are not likely to have important effects on other people.

   Moderately significant.

   Highly significant; the outcomes of my work can affect other people in very important ways.

6. To what extent do managers or co-workers let you know how well you are doing on your job?

   1  2  3  4  5  6  7
   Very little; people almost never let me know how well I am doing.

   Moderately; sometimes people may give me "feedback"; other times they may not.

   Very much; managers or co-workers provide me with almost constant "feedback" about how well I am doing.

7. To what extent does the job itself provide you with information about your work performance? That is, does the actual work itself provide itself provide clues about how well you are doing - aside from any "feedback" co-workers or supervisors may provide?

   1  2  3  4  5  6  7
   Very little; the job itself is set up so I could work forever without finding out how well I am doing.

   Moderately; sometimes doing the job provides "feedback" to me; sometimes it does not.

   Very much; the job is set up so that I get almost constant "feedback" as I work about how well I am doing.
SECTION TWO

Please keep in mind that the questions refer to the Clinical Nurse job and not your job.

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job - regardless of whether you like or dislike your job.

Circle only ONE number using the following scale:

1. Very inaccurate
2. Mostly inaccurate
3. Slightly inaccurate
4. Uncertain
5. Slightly accurate
6. Mostly accurate
7. Very accurate

1. The job requires me to use a number of complex or high level skills. 1 2 3 4 5 6 7
2. The job requires a lot of cooperative work with other people. 1 2 3 4 5 6 7
3. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end. 1 2 3 4 5 6 7
4. Just doing the work required by the job provides many chances for me to figure out how well I am doing. 1 2 3 4 5 6 7
5. The job is quite simple and repetitive. 1 2 3 4 5 6 7
6. The job can be done adequately by a person working alone - without talking or checking with other with other people. 1 2 3 4 5 6 7
7. The supervisors and co-workers on this job almost never give me any "feedback" about how well I am doing in my work. 1 2 3 4 5 6 7
8. This job is one where a lot of other people can be affected by how well the work gets done. 1 2 3 4 5 6 7
9. The job denies me any chance to use my personal initiative or judgment in carrying out the work. 1 2 3 4 5 6 7
10. Supervisors often let me know how well they think I am performing the job. 1 2 3 4 5 6 7
11. The job provides me the chance to completely finish the pieces of work I begin. 1 2 3 4 5 6 7
12. The job itself provides very few clues about whether or not I am performing well. 1 2 3 4 5 6 7
13. The job gives me considerable opportunity for independence and freedom in how I do the work. 1 2 3 4 5 6 7
14. The job itself is not very significant or important in the broader scheme of things. 1 2 3 4 5 6 7

PART II

DEMOGRAPHIC INFORMATION

1. What is your job title? ________________________________

2. What is your age? (Check one)
   
   __ 20 - 25  __ 36 - 40  __ 51 - 55
   __ 26 - 30  __ 41 - 45  __ 56 - 60
   __ 31 - 35  __ 46 - 50  __ 61 and over

3. The number of years in your present position is _____.

   In the space below, please write down any additional information about the job you rated that you feel might be helpful in understanding that job.

Thank you for your cooperation.
APPENDIX D

Initial Personal Communications December 27, 1990
December 27, 1990

------------------, R. N.
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Dear Ms. -----------------

In June, 1990 ------------and I discussed a clinical ladder research study proposal; and in August, the proposal was approved. It was field tested in November by 116 randomly selected clinical nurses participating and not participating in a local hospital's clinical ladder program.

----------------------------- is one of six Gulf States Region Voluntary Hospitals of America with a clinical ladder program. Therefore, your hospital setting and assistance is vital to the completion of this research study. I have enclosed all necessary information for your hospital research committee's review. I would like to express my appreciation to you and each Research Committee member for considering my request to include ------------------ clinical nurses in this study.

Since the number of nurses will be complied from all six selected VHA hospitals, I am requesting the enclosed information form be completed and returned as soon as possible. I plan to begin data collection in January and will visit each hospital to select a random sample from the two clinical nurse groups.

When the study is completed, you will receive a copy of the complete research study.

Sincerely,

Sarah Kay A. Thornhill, R. N.
Clinical Nurse and Researcher

Enclosure: a. Clinical Ladder research Proposal
b. Research instruments
c. Request of Information Form & Return Envelope
CLINICAL LADDER RESEARCH STUDY
Request of Information Form

a. VHA Gulf States Region members with a clinical ladder program  (check your hospital only)

___ Forrest General Hospital, Hattiesburg, Miss.
___ Memorial Hospital, Gulfport, Miss.
___ North Mississippi Medical Center, Tupelo, Miss.
___ Ochsner Foundation Hospital, New Orleans, La.
___ Pendleton Memorial Methodist, New Orleans, La.
___ Rapides Regional Medical Center, Alexandria, La.

b. Your Hospital Research Committee's next scheduled review date is _____________________________.

c. Your Hospital Research Committee study approval or disapproval date was_____________________. (if the committee has met and taken action on the request).

d. Your hospital's current bed capacity is__________.

e. The total number of full time employed clinical nurses providing direct patient care in your hospital is ____________(full time = 40 hours or more per week).

f. The total number of clinical nurses enrolled in the clinical ladder program offered at your hospital is ____________(enrolled = any level on the clinical ladder).

g. Please list the name, address, and telephone number of a contact person at your hospital for assistance prior to and during my visit to your hospital:

___________________________ Name
___________________________ Address

________________________________ Telephone Number
Below are some tentative planned dates for data gathering at the six hospitals following research committee approval this month. Please check your hospital if the dates are convenient for you and your staff.

If the date is inconvenient for your hospital staff, please list your hospital and alternate dates in question i.

North Mississippi Medical Center
_______Jan. 17, 18, 19, 1991 (Thur., Fri., & Sat.)

Forrest General Hospital
_______Jan. 24, 25, 26, 1991 (Thur., Fri., & Sat.)

Memorial Hospital
_______Jan. 31, Feb. 1, 2, 1991 (Thur., Fri., & Sat.)

Rapides Regional Medical Center
_______Feb. 7, 8, & 9, 1991 (Thur., Fri., & Sat.)

Ochsner Foundation Memorial Hospital
_______Feb. 14, 15, 16, 1991 (Thur., Fri., & Sat.)

Pendleton Memorial Methodist
_______Feb. 21, 22, & 23, 1991 (Thur., Fri., & Sat.)

i. I would prefer the data collection visit days at my hospital are rescheduled on the dates listed:

________________________________________Hospital
________________________________________Dates (3 days)

THANK YOU FOR YOUR COOPERATION.

PLEASE RETURN THE COMPLETED INFORMATION FORM IN THE ENCLOSED SELF-ADDRESSED STAMPED ENVELOPE.
APPENDIX E

Second Personal Communications 1991
January 21, 1991

--------, R. N.
-------------------
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Dear -----

I will begin the clinical ladder research study at -------- -
-------- -------- this week. The dates are Thursday, January
24, Friday, January 25, and Saturday, January 26. On
Thursday, January 24, at 8:30 a.m. I will visit nursing
service and ask the secretary to contact you.

The following procedural steps are planned for data
collection at -------------------------:

Thursday, January 24, 1991-

a. Select a random sample from the two clinical
nurse groups using your hospital's list of full
time clinical nurses.

b. Identify the work schedule of each selected
nurse for personal distribution if feasible during
my three day visit.

c. Identify the nurse unit managers (head nurses)
of the randomly selected clinical nurses.

d. Complete instrument packets for distribution to
each elected clinical nurse.

e. Distribute packets to selected nurses and their
nurse managers during my three day visit to
Forrest General. If selected nurses are not
working during the three days, I will mail the
instrument packet.

f. Obtain addresses of clinical nurses selected
for non-response follow-up purposes only.

Friday, January 25, and Saturday, January, 26, 1991-

a. Continue distribution of packets to selected
clinical nurses during their scheduled work hours.
I look forward to my three day visit to your hospital and patient care nursing units.

Thank you for assisting me in this research study.

Sincerely,

Sarah Kay A. Thornhill, R. N.

cc. ---------------, R. N.
                -----------------------------
APPENDIX F

Initial Instrument Cover Letter
Dear Clinical Nurse:

Since 1970 clinical ladder programs have gained the attention of hospital nurse managers as a method to reward and recognize clinical nurses thereby enhancing the hospitals recruitment and retention efforts. Yet questions often exist concerning these programs. Are clinical ladder programs rewarding and recognizing hospital nurses providing direct patient care? Do hospital clinical nurses perceive these programs as a desired job enrichment strategy? What are the characteristics of clinical nurses who participate in an available clinical ladder program?

Your help is needed to answer these and other critical questions. As a clinical nurse providing direct patient care in a hospital offering a clinical ladder program, you are in a unique position to support this research project and to gain from the information collected.

This study is designed to help provide answers to the above questions and has been approved by nursing administration. Your response is critical to the success of this study. Study participation is voluntary and you may be assured your confidentiality will be maintained. The study results will be reported as group data without identifying individuals or individual hospitals. The identification number on the back of the instrument is for mailing purposes only to check your name and hospital off the mailing list when you return the completed instrument.

Please return the completed instrument in the enclosed envelope to nursing service within the next three days. While in nursing service, please sign the research project participation sheet and receive your official U. S. stamps commemorating nurses and nursing. You may also receive an abstract of study results by printing your name and address on the enclosed postcard and placing the card in an abstract box located in nursing service.

If you wish clarification or assistance, I will be available in nursing service for three days after your receive the instrument. If you have additional questions after my visit to your hospital, please call me collect at 1-504-293-4026 after 5:00 pm.

Thank you for your cooperation.

Sincerely,

Sarah Kay A. Thornhill, R. N.  
Graduate Student & Primary Researcher  
Louisiana State University

Dr. James W. Trott, Jr.  
Director and Co-Researcher  
Louisiana State University
APPENDIX G

Letter to Hospital Contact Nurse
February 25, 1991

---------, R. N.

Dear -----

The first data collection phase of the clinical ladder research study is complete. I have visited five hospital settings beginning January 24, and ending February 22, 1991. A random sample of ladder participants and non participants was selected from each hospital nurse group. Instrument packets were delivered to Head Nurses and then distributed to selected Nurses. I have begun to receive completed forms from the hospitals initially visited.

Beginning next week I will mail or again visit your hospital to distribute another instrument packet to those nurses not responding initially. I will call each hospital's contact person this week and discuss the distribution method to achieve an adequate response rate. A response rate of 75 to 85% of the total nurses sampled is desired to generalize the findings to the total nurse population. In addition, this response rate percentage of nurses in your hospital will provide adequate numbers to evaluate your hospital's clinical ladder program individually.

The follow-up instrument packet, smaller than the initial one, will contain a self-addressed stamped envelope for selected non-responding nurses to return the completed form directly to me. Selected nurses may still pick up their stamp in nursing service after completing the form. If you do not have any more stamps please let me know and I will order more.

Thank you for all your assistance during my initial visit to your hospital. Also, I am most grateful for your continued cooperation in aiding me to obtain an adequate response rate for this clinical nurse recognition research study.

Sincerely,

Sarah Kay A. Thornhill, R. N.

cc. ----------------, R. N.
APPENDIX H

Follow-up Letter to Nurse Managers
Dear Nurse Manager:

Six weeks ago a research study began in five Louisiana and Mississippi Regional Medical Center Hospitals offering a clinical ladder program. Each hospital's administrative staff and research committee granted study approval. The study focuses on individual and work-related variables of hospital clinical nurse participants and non participants in available clinical ladder program offerings. Nurses providing direct patient care are in a unique position to provide answers to critical questions concerning clinical ladders.

I visited each hospital and selected a random sample of clinical nurses from among the two groups. Selected nurses received an instrument packet from their Head Nurse and many nurses responded to the study initially. However, responses from all selected nurses representing each hospital's clinical nurse group is crucial to the success of this study. Study participation is voluntary and assurance of selected nurse's confidentiality will be maintained.

Please distribute another copy of the instrument to selected nurses on your unit. Perhaps they have delayed responding and have lost the first instrument copy.

Thank you for assisting me during the data collection phase of this study. Also, thank you for completing the Nurse Manager Job Rating Form Instrument designed to validate clinical nurses objective assessment of the clinical nurse job.

Sincerely,

Sarah Kay A. Thornhill, R. N.
APPENDIX I

Follow-up Instrument Cover Letter
Dear

Six weeks ago a research study began in five Louisiana and Mississippi Regional Medical Center Hospitals offering clinical ladder programs. Each hospital's administrative staff and research committee granted study approval. The study focuses on individual and work-related variables of hospital clinical nurse participants and non participants in available clinical ladder program offerings. Nurses providing direct patient care in hospitals offering a clinical ladder which rewards and recognizes clinical nurses are in a unique position to provide answers to critical questions concerning clinical ladders.

During my visit to each hospital, clinical nurses were randomly selected from a hospital list of clinical ladder participants and non participants. Each randomly selected nurse received an instrument packet from their unit head nurse and some responded by returning the completed instrument to nursing service. Responses from all selected nurses representing each hospital's clinical nurse group is crucial to answering critical clinical ladder questions. Your participation in this study is voluntary and you may be assured your confidentiality will be maintained. The study results will be reported as group data without identifying individual nurses or individual hospitals. The number on the back of the instrument is for non response follow-up purposes only.

Please help us with this most important study by returning the completed instrument in the enclosed, stamped, and self addressed envelope by Wednesday, March 20, 1991. An official 1964 Nursing Stamp has been reserved for you in nursing service as a "thank you" for your contribution. Please mail your completed instrument to me in the envelope provided. Place the card with your name and address in the stamp box to receive your stamp and a copy of the study results. Please call me collect at 1-504-293-4026 if you wish clarification or assistance.

Thank you for your cooperation. The 1964 Nursing Stamp is your reward and recognition for contributing to the success of this research study.

Sincerely,

Sarah Kay A. Thornhill, R. N.
Graduate Student & Primary Researcher
Louisiana State University

Dr. James W. Trott, Jr.
Director & Co-Researcher
Louisiana State University
APPENDIX J

Follow-up Post Card
Dear ----,

Recently, as a randomly selected nurse, you received a clinical ladder research study packet. If you have already returned the completed form, thank you for taking the time to participate in this study.

If you have not completed the form, please consider being a part of this research study. I would appreciate receiving your reply by Monday, May 6th or as soon as possible.

Sincerely,

S. Kay A. Thornhill, R.N.
APPENDIX K

Short Form Instrument Nonrespondents
Sarah Kay A. Thornhill, R. N.
3109 Woodland Ridge Blvd.
Baton Rouge, LA
(501) 293 4026

Dear Clinical Nurse:

Our study of nurse's participation in clinical ladders is entering the final stages. The issue of clinical ladders is one of great importance to the nursing profession. As a nurse myself, I am all too aware of the multitude of demands made on your limited time and do not wish to impose any more than necessary.

To ensure the highest quality results in our study, your help is needed. The attached one page form will allow you to make your input to the study. It will take but a few minutes of your time to complete. By completing and returning the attached form by June 1, 1991, you will be making a significant contribution to our profession.

Thanking you in advance for your assistance in this most important matter.
PERCEPTIONS OF A CLINICAL LADDER PROGRAM

DEFINITION:
Please use the following definition of a clinical ladder program when completing the questionnaire:

A system which recognizes and rewards clinical nurses for education, clinical experience, and expert clinical skills while providing direct patient care in a hospital setting.

INSTRUCTIONS:
The following statements are associated with attitudes toward a clinical ladder program as a job enrichment strategy. Each statement represents an opinion. There are no right or wrong answers. You may agree with some statements and disagree with others. The extent to which you agree or disagree is what is important.

Read each statement carefully and decide the degree to which you AGREE OR DISAGREE. When a letter does not adequately indicate your opinion, use the letter closest to your choice. Circle only ONE letter using the following scale:

- SA - STRONGLY AGREE: I strongly agree with the statement.
- A - AGREE: I agree with the statement but not strongly.
- U - UNDECIDED: I am neutral toward the statement, or I just do not know enough about the subject.
- D - DISAGREE: I disagree with the statement, but not strongly.
- SD - STRONGLY DISAGREE: I strongly disagree with the statement.

Example:
1. A clinical ladder program offering is a method of rewarding only nurse educators. SA A U D SD

1. motivates clinical nurses to move to higher levels of clinical practice by increasing the nurses knowledge and skill level. SA A U D SD

2. includes clinical nurses' educational status as criteria for each promotional level. SA A U D SD

3. is not needed because clinical nurses are satisfied with current hospital promotion policies. SA A U D SD

4. places the responsibility and accountability of validating promotion criteria with the clinical nurse. SA A U D SD

5. is not needed since promotion to administrative positions provide adequate recognition and reward for clinical nurses. SA A U D SD

6. increases nurses' participation in professional development programs. SA A U D SD

7. increases the job satisfaction level of participating clinical nurses. SA A U D SD

8. rewards clinical nurses according to job description criteria plus additional hospital activities. SA A U D SD

9. is not needed since the practice of nursing provides sufficient rewards to induce nurses to remain in direct patient care settings. SA A U D SD

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DEMOGRAPHIC INFORMATION

INSTRUCTIONS

Please complete the demographic information section of the instrument by either writing in the information or checking the appropriate response. It is important to answer each question. You will not be identified individually and your response will be treated in confidence. Thank you for your cooperation.

1. What is your clinical area of nursing practice?

2. Your current level of education is: (Check one)
   ___ Associate Degree
   ___ Bachelor of Science, Nursing
   ___ Diploma in Nursing
   ___ Masters in Nursing
   ___ Other (Please specify) _____________________

3. The number of years experience in clinical nursing is ______.

4. The number of years in your present clinical nurse position is ______.

5. Your current clinical nurse work schedule is: (Check one)
   ___ Days only
   ___ Evenings only
   ___ Nights only
   ___ Weekends only
   ___ Rotate all shifts
   ___ Rotate two shifts
   ___ Other (Please list) _____________________

6. The method of patient care assignment on your unit: (Check one)
   ___ Case
   ___ Primary
   ___ Functional (task)
   ___ Team
   ___ Other ___________________

7. What is your age? (Check one)
   ___ 20-25
   ___ 26-30
   ___ 31-35
   ___ 36-40
   ___ 41-45
   ___ 46-50
   ___ 51-55
   ___ 56-60
   ___ 61 and over

8. Your sex is: (Check one)
   ___ female
   ___ male

9. Your ethnic (cultural) group is: (Check one)
   ___ Asian
   ___ Black
   ___ Caucasian
   ___ Hispanic
   ___ Other (Please specify) _____________________

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APPENDIX L

Work Related Characteristics Information
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Clinical Nursing Practice Area by Participation Status

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**Note:** a Missing case was 1.
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APPENDIX M

Pooled Within-Groups Correlation Matrix:

Discriminating Variables
Table M-1

Pooled Within-Groups Correlation Matrix: Discriminating Variables (n=466)

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Intrinsic and extrinsic outcomes. \(^{b}\)JDS: Skill variety. \(^{c}\)JDS: Task identity. \(^{d}\)JDS: Task significance. \(^{e}\)JDS: Autonomy. \(^{f}\)JDS: Feedback from job itself. \(^{g}\)JDS: Feedback from agents. \(^{h}\)JDS: Dealing with others. \(^{i}\)JDS: Experienced meaningfulness of the work. \(^{j}\)JDS: Experienced responsibility for the work. \(^{k}\)JDS: Knowledge of results. \(^{l}\)JDS: General satisfaction. \(^{m}\)JDS: Internal work motivation. \(^{n}\)JDS: Growth need satisfaction. \(^{o}\)JDS: Satisfaction with job security. \(^{p}\)JDS: Satisfaction with compensation. \(^{q}\)JDS: Satisfaction with co-workers. \(^{r}\)JDS: Satisfaction with supervision. \(^{s}\)JDS: Individual growth need strength. \(^{t}\)Critical care units. \(^{u}\)Speciality care units. \(^{v}\)General care units. \(^{w}\)Educational level. \(^{x}\)Work days only.

(table continues)
Work evenings only. Work nights only. Work weekends only.

Rotate all shifts. Rotate two shifts. Work 8 hour shift.


Primary nursing. Functional nursing. Age.


Criteria for advancement clinical ladder. Years nursing experience. Years present nursing position. Gender.
VITA

Sarah Kay Alford Thornhill is a native Mississippian. She graduated from Tylertown High School, Tylertown, Mississippi where she was voted most likely to succeed. She received a diploma in nursing from The Gilfoy School of Nursing, Jackson, Mississippi and a baccalaureate degree in Nursing from the University of Tennessee. She was named an honor graduate and listed in Who's Who Among American Universities and Colleges. Later, she obtained a master of science degree in Nursing Administration from the University of Southern Mississippi and was inducted into the national honor nursing society, Sigma Theta Tau. While pursuing a doctorate at Louisiana State University she was elected a member of the Honor Society of Phi Kappa Phi.

Her professional career includes roles as a clinical nurse, nurse manager, nurse educator and as an evaluation consultant. As a clinical nurse and nurse manager, she has over 15 years experience in adult medical-surgical nursing in hospitals throughout the south. For the past 16 years she has taught nursing in diploma and baccalaureate educational programs. She served as an evaluation consultant to hospitals in staff development programs, nursing resource development and nursing practice issues. She has conducted staff development workshops, evaluated nurses continuing education programs and developed hospital management proposals for nursing resource development.
Her present faculty responsibilities include teaching baccalaureate and RN to BSN students nursing management, coordinating the RN to BSN nursing program and serving on the curriculum and evaluation committees.

She holds current membership in Phi Kappa Phi, Sigma Theta Tau, American Nurses' Association, National League for Nursing and American Vocational Association. In addition, she attends national, state and local level meetings.

She currently resides in Baton Rouge, Louisiana with her husband John Walter. They have been married for 33 years and have two children named Gary Lee and Amy Katherine.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Sarah Kay Alford Thornhill

Major Field: Vocational Education

Title of Dissertation: Individual and Work-Related Variables Contributing to Hospital Nurses' Participation or Non-Participation in Available Clinical Career Ladder Programs

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Gregg L. Drugg
Michael Burnett
Framed C. Lawrence
Joe Kotlik
Betty E. Harrison

Date of Examination:

July 17, 1991