Learning Needs of Ostomy Patients: A Comparison of Nurse and Patient Perceptions

Linda K. Burdette

South Dakota State University

Follow this and additional works at: http://openprairie.sdstate.edu/etd

Part of the Nursing Commons

Recommended Citation


http://openprairie.sdstate.edu/etd/657
LEARNING NEEDS OF OSTOMY PATIENTS:
A COMPARISION OF NURSE AND PATIENT PERCEPTIONS

BY
LINDA KAY BURDETTE

A thesis submitted in partial fulfillment
of the requirements for the degree
Master of Science
Major in Nursing
South Dakota State University
1988
LEARNING NEEDS OF OSTOMY PATIENTS:
A COMPARISON OF NURSE AND PATIENT PERCEPTIONS

This thesis is approved as a creditable and independent investigation by a candidate for the degree, Master of Science, and is acceptable for meeting the thesis requirements for this degree. Acceptance of this thesis does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Sharon Leech-Horland, RN, Ph.D. Date
Thesis Advisor

Marge Hegge, RN, ED. D. Date
Coordinator of Graduate Education
ACKNOWLEDGEMENTS

The author wishes to express gratitude to the following whose assistance, counsel, support, and encouragement were essential to the completion of this thesis:

To Dr. Sharon Leech-Hofland, thesis and academic advisor;

To my husband, Dan, and my children, Dana and Bradley, for their support and patience throughout this period;

To the medical-surgical and E.T. nurses who participated in this study;

To the members of the Ostomy Associations who participated in this study;

To Kathy Franz, typist;

To Tom Clemens, English instructor;

To Dr. W. Lee Tucker, the Experimental Station Statistician;

To my colleagues at St. Luke's Midland for their continued support.

iii
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Acknowledgments</th>
<th>iii</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Figures</td>
<td>vii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>viii</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>1. Statement of the Problem and Objectives of the Study</td>
<td>1</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>2</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>2</td>
</tr>
<tr>
<td>Objectives of the Study</td>
<td>4</td>
</tr>
<tr>
<td>Operational Definitions</td>
<td>5</td>
</tr>
<tr>
<td>Organization of the Thesis</td>
<td>8</td>
</tr>
<tr>
<td>2. Review of Literature and Conceptual Framework</td>
<td>10</td>
</tr>
<tr>
<td>Patient Education</td>
<td>10</td>
</tr>
<tr>
<td>Ostomy Patient Education</td>
<td>14</td>
</tr>
<tr>
<td>Patient and Nurse Perception</td>
<td>17</td>
</tr>
<tr>
<td>Compliance</td>
<td>20</td>
</tr>
<tr>
<td>Summary of Literature Review</td>
<td>22</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>CONCEPTUAL FRAMEWORK</td>
<td>24</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>25</td>
</tr>
<tr>
<td>3. METHODOLOGY</td>
<td>28</td>
</tr>
<tr>
<td>Approach</td>
<td>28</td>
</tr>
<tr>
<td>Sample</td>
<td>28</td>
</tr>
<tr>
<td>Research Tool</td>
<td>30</td>
</tr>
<tr>
<td>Method of Collecting Data</td>
<td>32</td>
</tr>
<tr>
<td>Procedure for Analysis of Data</td>
<td>33</td>
</tr>
<tr>
<td>Variables</td>
<td>33</td>
</tr>
<tr>
<td>4. ANALYSIS OF RESEARCH FINDINGS</td>
<td>35</td>
</tr>
<tr>
<td>Descriptive Analysis</td>
<td>35</td>
</tr>
<tr>
<td>Ostomy Patients</td>
<td>35</td>
</tr>
<tr>
<td>Summary of Descriptive Analysis of Ostomy Patients</td>
<td>39</td>
</tr>
<tr>
<td>Medical-Surgical Nurses</td>
<td>40</td>
</tr>
<tr>
<td>E.T. Nurses</td>
<td>41</td>
</tr>
<tr>
<td>Summary of Descriptive Analysis of Medical-Surgical and E.T. Nurses</td>
<td>44</td>
</tr>
<tr>
<td>Rank of Importance</td>
<td>44</td>
</tr>
<tr>
<td>Time Periods</td>
<td>50</td>
</tr>
<tr>
<td>HYPOTHESES TESTING</td>
<td>52</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Summary of Hypotheses Testing.</td>
<td>60</td>
</tr>
<tr>
<td>5. SUMMARY, CONCLUSIONS, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS.</td>
<td>62</td>
</tr>
<tr>
<td>Summary of the Research Problem and Design</td>
<td>62</td>
</tr>
<tr>
<td>Major Findings and Conclusions</td>
<td>64</td>
</tr>
<tr>
<td>Major Findings</td>
<td>64</td>
</tr>
<tr>
<td>Conclusions</td>
<td>66</td>
</tr>
<tr>
<td>Implications of Research</td>
<td>66</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>69</td>
</tr>
<tr>
<td>Recommendations for Future Study</td>
<td>70</td>
</tr>
<tr>
<td>BIBLIOGRAPHY.</td>
<td>72</td>
</tr>
<tr>
<td>APPENDICES</td>
<td></td>
</tr>
<tr>
<td>A. Research Tool</td>
<td>80</td>
</tr>
<tr>
<td>B. Summary of Analysis of Variance.</td>
<td>90</td>
</tr>
<tr>
<td>Figure</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>1. Conceptual Framework</td>
<td>25</td>
</tr>
</tbody>
</table>
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Type of Ostomy by Frequency and Percentage</td>
<td>37</td>
</tr>
<tr>
<td>2.</td>
<td>Reason for Ostomy by Frequency and Percentage</td>
<td>38</td>
</tr>
<tr>
<td>3.</td>
<td>Frequency and Percentage of E.T. Nurse Participation in Patient Care</td>
<td>39</td>
</tr>
<tr>
<td>4.</td>
<td>Years of Nursing Experience by Frequency and Percentage</td>
<td>41</td>
</tr>
<tr>
<td>5.</td>
<td>Age of Subject Groups by Frequency and Percentage</td>
<td>52</td>
</tr>
<tr>
<td>6.</td>
<td>Nurse Education Level by Nurse Group</td>
<td>43</td>
</tr>
<tr>
<td>7.</td>
<td>Information Needs Rated Very Important by Frequency and Percentage</td>
<td>47</td>
</tr>
<tr>
<td>8.</td>
<td>Technical Ostomy-Mangement Skill Needs Rated Very Important by Frequency and Percentage</td>
<td>48</td>
</tr>
<tr>
<td>9.</td>
<td>Emotional Support Needs Rated Very Important by Frequency and Percentage</td>
<td>50</td>
</tr>
<tr>
<td>10.</td>
<td>Summary of Analysis of Variance of the Importance of Learning Needs</td>
<td>56</td>
</tr>
<tr>
<td>11.</td>
<td>Analysis of Variance of Placement of Information Needs</td>
<td>91</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Analysis of Variance of Placement of Emotional Support Needs</td>
<td>93</td>
</tr>
</tbody>
</table>
CHAPTER 1

Statement of the Problem and Objectives of the Study

Introduction

In today's world of advanced technology and scientific knowledge many more surgical treatments are available to extend life than in the past. For some, the problems of adaptation can be overwhelming and the rehabilitation process may be long and difficult. For example, persons with ostomies must deal with the impact of surgery on their self-image, activities of daily living, and future health needs. To assist the patient with the reorganization of their self-image, daily activities, possible loss of bowel or bladder control, and the fear of rejection it is essential that an individualized plan of care be developed (Gross, 1979). Patient education is an integral part of the plan of care.

Patient education has gained increased recognition in recent years. Patient education is more than just giving information to the patient. J. M. Wolle defines patient education as "activities planned to encourage patients with acute or chronic conditions to participate actively and appropriately in their treatment and rehabilitation" (Falvo, 1985). Dr. Scott Simonds, Chairman of
the Health Education Department at the University of Michigan provides the following definition: Patient education is the process of influencing behavior, producing changes in knowledge, attitudes, and skills required to maintain and improve health (Rankin, 1983).

Quality patient education requires that professional nurses provide quality, individualized educational interventions. To accomplish this goal, the professional nurse must incorporate the learning priorities identified by the patient into the plan of care. Therefore, a study of the relationship of patient and nurse perceptions of learning needs should be beneficial to patient care and the advancement of professional nursing practice.

**Statement of the Problem**

The problem under investigation is: What is the relationship between the perceptions of enterostomal therapy nurses (E.T. nurses), medical-surgical nurses, and ostomy patients regarding learning needs of the ostomy patients?

**Significance of the Study**

More than 100,000 people in the United States
undergo ostomy surgery each year. Also, the United Ostomy Association "guesstimates that there are approximately 1,500,000 persons with ostomies in the United States and Canada" (Gross, 1979). These figures indicate the need for specialized programs of patient education and the necessity for congruence among health care professionals and ostomy patients.

The health care challenges of the 1980s are unique. While the nursing profession is being asked to increase quality of care by offering specialized programs of patient care, they are being asked to decrease cost and shorten patient hospital stays.

Under the prospective payment system (PPS) imposed by Medicare, Medicaid, and third party insurance companies, cost containment is a reality. The diagnostic related group (DRG) system, mandates that patients are discharged earlier. For example, the DRG acuity system stipulates that the length of hospital stay for a patient with a permanent colostomy or ileostomy with or without complications range from eleven to fifteen days (Federal Register, 1987). At a 160 bed, acute care hospital in South Dakota the length of hospital stay for a colostomy has decreased from twenty days in 1983 to thirteen days in 1987.
Patient education does improve quality of care by reducing complications and increasing compliance (Stanton, 1987). Stanton concludes, after a review of over fifty empirical studies, that patient education will reduce patient length of hospital stay and cut medical costs (Stanton, 1987). Therefore, from a quality of care standpoint as well as a cost containment perspective, patient education does provide a significant positive impact on care.

It is also essential that the approach to patient education must consider patient learning needs. Lauer, Murphy, and Powers conclude that teaching the information which patients have identified as important and relevant enhances learning and health-related decision making (Lauer, 1982).

Objectives of the Study

The study will attempt to identify areas of agreement and disagreement between the ostomy patient's perception and the nurse's perception of learning needs. In order to achieve this purpose, the objectives of the study were:

1. Determine the different perceptions regarding the importance of content items offered in an
ostomy patient education program when comparing:

a. Medical-surgical nurses and ostomy patients;
b. E.T. nurses and ostomy patients;
c. Medical-surgical nurses and E.T. nurses.

2. Determine the different perceptions regarding time placement of patient education content items when comparing:

a. Medical-surgical nurses and ostomy patients;
b. E.T. nurses and ostomy patients;
c. Medical-surgical nurses and E.T. nurses.

Operational Definitions

For the purpose of this study the following operational definitions were used.

Types of Surgery. This study included terms describing three types of surgery that may be indicated when the small intestine, large intestine, bladder or uretha are obstructed or diseased. They are:

Urostomy surgery. Removal of the bladder with creation of a permanent abdominal urostomy.
Ileostomy surgery. Removal of the rectum and entire large intestine with the creation of a permanent end abdominal ileostomy.

Colostomy surgery. Removal of the rectum and a portion of the large intestine with the creation of a permanent end abdominal colostomy.

Medical-Surgical nurse. A Registered Nurse (R.N.), who is responsible for utilizing the nursing process to provide total nursing care for a group of patients. This R.N. has completed a nursing education program of two, three or four years. General knowledge of ostomy care is included in the education process.

Enterostomal Therapy nurse (E.T.). A Registered Nurse, who has successfully completed an accredited Enterostomal Therapy Nursing Education Program and ascribes to the scope of ET nurse practice as defined by the International Association of Enterostomal Therapy (IAET).

Learning Needs. The needs of ostomy patients are fundamental human psychophysiologic needs and consist of:

Information Needs. This is the need the patient has to obtain information. Information needs are met by working within the cognitive domain. The cognitive domain refers to actual knowledge and understanding an individual
has or is given about a certain subject (Falvo, 1985). For the purpose of this study Information Needs are the sum of questions 1-13, 22, 23, 29 and 30 in the questionnaire (see Appendix A).

**Technical Ostomy-Management Skill Needs.** This is the need to acquire the technical skills necessary to integrate the ostomy into everyday life. The psychomotor domain is involved in the mastery of these skills. For the purpose of this study, Technical Ostomy-Management Skills Needs are the sum of questions 14-21 of the questionnaire (see Appendix A).

**Emotional-Support Needs.** These needs address the self-concept/self-esteem process. The affective domain deals with changing or modifying feeling and values. For the purpose of this study, Emotional-Support Needs are identified by the sum of questions 24-28 of the questionnaire (see Appendix A).

**Time Period for Teaching-Learning Experience.** Subjects will be asked to indicate the time when it is most beneficial for each item to be presented to the patient. The three time periods are:

**Preoperative Time Period.** The time period that begins when it is decided that a surgical procedure is needed and ends with the beginning of the operation. One
of the primary goals of patient education during this time is prevention of psychological stress.

Postoperative Time Period. The time period that begins with the end of the operation and ends with discharge from the hospital. The patient education goal for this time period is to help the patient acquire knowledge, demonstrate skills and relate to the social milieu.

Post Hospital Time Period. The time period that begins with hospital discharge and continues for six weeks. The goal of the post hospital time period is to help the patient recover his/her physical well-being, perfect self care, and resume usual social roles.

Ostomate. A person who has undergone surgery resulting in the creation of ostomy.

Organization of the Thesis

The remainder of this thesis will be organized as follows:

1. Chapter 2 will be a discussion of selected literature pertinent to the study, the theoretical perspective, and the research hypotheses.

2. Chapter 3 will present the research design and methodology.
3. Chapter 4 will report on the analysis of the research data.

4. Chapter 5 will include a summary of the thesis, conclusions, and implications of the findings, limitations of this study, and recommendations for further research.
CHAPTER 2

Review of Literature and Conceptual Framework

This chapter will discuss the review of literature and the conceptual framework. The review of literature, divided into three sections, cites the literature relevant to the completion of this study. Section one will discuss literature related to patient education issues. Section two will contain information related to patient and nurse perceptions. Section three will contain a review of literature related to patient compliance.

Patient Education

Section one of this literature review discusses patient education. This section will focus on two main areas: (1) a general discussion of patient education issues and (2) the specific educational needs of ostomy patients.

Patient education is an integral component of patient care. Professional nurses believe that education has a positive impact on quality of patient care. Marietta Stanton's survey of professional nurses in 1986 supported the view that nurses perceive themselves as the primary educators of their patient population (Stanton,
Stanton also discusses the impact of prospective pricing on hospital operations. Stanton recommended that a lump-sum reimbursement be allocated for patient education. A 0.3 percent to 0.5 percent of the institution's budget has been recommended. Stanton states that patient education ultimately decreases healthcare expenditures and produces a benefit/cost ratio better than over seven to one. Therefore, according to Stanton, patient education is a potent tool from an economic perspective.

In the best seller, *Megatrends*, author John Naisbett argues that society is caught between an industrial society and an information-giving society (Naisbett, 1982). Health care workers must realize the importance of giving information to the recipients of health care. Patient education is essential as consumers demand more information. Secondly, Naisbett points out that "there is developing a new health model as society changes from institutional help to self-help." The third megatrend is from "representative" to "participatory" (Naisbett, 1982). This will dictate a change in the producer-consumer relationship. Naisbett concluded that society must find more ways to solicit consumer input and incorporate that information into our educational programs.
Patient education implementation within the general acute-care hospital setting involves a deliberate, well-planned approach. Stanton developed a conceptual model for implementing patient education within this setting. Stanton focused her approach to patient education at two separate levels: one, the management system; and two, the individual program implementation system (Stanton, 1985). The management level is represented by those elements that allow the hospital to continuously develop and implement programs to meet defined needs of the community. This level consists of six essential elements: a policy for patient education, a committee specifically addressing issues related to patient education, a budget for patient-education activities, a patient education coordinator, a resource area for patient education materials, and a planned system of evaluation or documentation with audit.

The second level, individual program implementation enables staff to meet the needs of a particular consumer segment. This level is identified by Stanton as the series of steps associated with the design, implementation and evaluation of patient education programs.

The relationship of these two levels was explored by Stanton. The results of the investigation demonstrated
a significant relationship between the presence of management level and the individual program implementation level (Stanton, 1985). As the number of management elements increased, so did the degree of instructional technology in individual programs. The model presents an approach for integrating patient education programming into existing hospital services.

The development of a philosophy of patient education is essential. This philosophy will be influenced by the number and types of patients and nursing personnel (Clark, 1980). Patient education theories are now organized and purposeful. An organization may choose a model that reflects institutional values, attitudes and behaviors.

Change theory involves concepts related to planning for change and the use of appropriate change strategies. Change theorists are also concerned with organization development, the change agent role and resistance to change. Greiner's theory has four concepts: plan, power, relationships, and tempo (Clark, 1980). Clark maintains these concepts should be the framework for a patient education program. The nurse shares power by encouraging the patient's active participation. The relationship is reflected in assessing readiness to learn,
teaching-learning environment, and patient feedback. Tempo is planned through assessment and individualization (Clark, 1980).

Andragogy is self-directed learning and focuses on the adult-to-adult relationship (Fox, 1986). It implies mutuality and a collaboration effort between the nurse and the patient (Clark, 1980). The nurse and the patient identify the needs, goals, and evaluation (Fox, 1986). Andragogy is an educational-behavior theory. It has been shown that the patient who is more knowledgeable is more likely to adhere to the therapeutic plan (Clark, 1980).

Clark has identified fifty learning theories, but the concept that occurs most frequently in patient education is reinforcement (Clark, 1980). Reinforcement is an event that strengthens the tendency for a response to be repeated (Clark, 1980). The professional nurse utilizes positive reinforcement through encouragement and praise of the patient for efforts and achievement.

Ostomy Patient Education. Literature reflects that ostomy patient teaching should include the following essential content: (1) anatomic and physiological alteration and their significance to daily living; (2) management of ostomy drainage and appliance management and care; (3) stoma care and peristomal skin care; (4) inci-
sion and wound care; (5) medications and precautions required because of absorption and eliminations alterations; (6) nutritional requirements; (7) odor control; (8) sexual implications; (9) clothing; (10) activities; and (11) signs and symptoms that indicate a need for medical attention (Dudas, 1982; Alterescu, 1987; Rideout, 1987; Petillo, 1987).

The International Association of Enterostomal Therapy (IAET) developed nine key issues to be considered in providing comprehensive quality care to ostomy patients (Donovan, 1975). The following key issues guide the Enterostomal Therapy nurse (ET nurse) in her practice:

1. The nursing process in the care of ostomy patients, in any setting, is based on a philosophy of comprehensive rehabilitation.

2. The nurse is aware that a person who is given an altered route of elimination via an abdominal stoma needs a human environment which can support him/her through the loss of controlled elimination with its accompanying societal stigma.

3. The nurse understands that ostomy surgery compromises body image and that grief, anger, loneliness, and fear are some of the expected emotional responses and that emotional disorganization can occur.

4. The nurse uses her knowledge of pathophysiology in observing the stoma and in assessing physiologic manifestations of pathologic changes, and communicates these appropriately to other health professionals.

5. The nurse accepts the responsibility for the
coordinated of the physical care and management of the stoma until such time as the patient has the ability and knowledge to assume self management.

6. The nurse guides the patient step by step to master the necessary information and techniques with which to manage the ostomy, using her knowledge of principles of learning and teaching, growth and development. When necessary and appropriate, a significant other person is involved.

7. The nurse recognizes that guidance is often needed to help ostomy patients return to normal interactive social patterns; this includes appropriate responses to the reactions of others in the patient's life.

8. The nurse helps the ostomy patient to plan resumption of all possible prior activities.

9. The nurse recognizes the patient's need for post-hospital learning and support, including preparation for life-long preventive maintenance.

Watson identified the needs of ostomy patients based on fundamental human psychophysiological needs (Watson, 1985). The model consists of three areas: (1) information needs; (2) technical ostomy-management skill needs; (3) emotional support needs. Watson also structured these needs in the framework of major time periods of hospitalization. For each time period, specific needs within each area have been identified. Watson suggests that this model should be tested by ET nurses in studies conducted in clinical settings.
Patient and Nurse Perceptions

This section will include review of literature of studies focusing on patient and nurse perceptions of learning needs. Little research has documented whether patient and nurse perceptions of learning needs are in agreement. This researcher was unable to locate research studies regarding ostomy patient's perceptions of learning needs.

There are studies that have examined patient perceptions of learning needs. For example, J. S. Dodge investigated medical-surgical patients' perceptions of the type of information they needed and the relative importance they attributed to receiving various types of information (Dodge, 1969). Karlick and Yarcheski indicate that Dodge's study was the pioneer in identifying the learning needs of patients (Karlick, 1987). In interviews with patients only, Dodge identified thirty-two categories of learning needs. The most important knowledge item identified by patients regarded information about their diagnosis (Dodge, 1969).

A study by H. Goddard and M. Powers explored the patient and nurse perceptions of specific information items related to hemodialysis (Goddard, 1982). The greatest area of difference in the two groups pertained to
diet and fluid restrictions. The patients assigned highest priority to the safety of their fistulae. The nurses viewed information on blood pressure and diet significantly more important than patients did. Goddard and Powers attributed this incongruence to the nurses' knowledge of interrelated physiological processes in specific types of chronic renal failure.

Gerard and Peterson examined the patient and nurse perceptions of the importance of learning needs of cardiac patients in an effort to learn how congruent the perceptions were (Gerard, 1984). Learning about risk factors was of primary concern to patients. However, nurses ranked risk factors as almost lowest among the eight categories of information. This discrepancy was seen by the investigators as an area of potential conflict in nurse and patient expectations. The nurses placed the highest importance on patients learning about their medications.

Karlick and Yarcheski replicated the Gerard and Peterson study in a different setting and with a different sample (Karlick, 1987). They attempted to duplicate the previous findings. As found in the original study, nurses rated the category of medications statistically significantly higher in importance than did the patients.
Patients ranked the category of risk factors as the most important to learn. These findings were replicated from the original study. However, nurses in this study ranked risk factors higher in importance than did the nurses in the original study.

Both the Gerard and Karlick studies showed the ranking order of importance of learning needs between nurses and patients to be incongruent. The findings of this replication has contributed to the nursing knowledge base in the area of learning needs of the cardiac patient.

A study by E. Casey explored the heart attack patient's perception of learning needs and compared their perceptions with those of physicians and nurses (Casey, 1984). The results indicated that physicians, patients and nurses generally agreed on the relative importance of various types of information that should be included in patient education programs for heart-attack patients. All three groups rated the most important topics as signs and symptoms of a heart attack, personal risk factors and medications. Information regarding support organizations was rated least important by physicians and nurses.

Lauer, Murphy and Powers compared patient and nurse perceptions of learning needs of cancer patients (Lauer, 1982). The rank ordering of twenty general
information items according to importance revealed that nurses and patients were not congruent in the priorities of patient learning. Nurses felt that patients needed most to know self-care, availability of financial assistance, and how to talk to family and friends. The patients felt it was most important to understand their diagnosis, the plan of treatment, self care, and what to expect during diagnostic procedure (Lauer, 1982). The investigators concluded that teaching cancer patients the information which they have identified as important and relevant should enhance learning and health-related decision making.

Compliance

The third section of this literature review examines the concept of compliance. Rankin and Duffy suggest that compliance is when the client internalizes the teaching and makes informed choices about applying the teaching to his/her life (Rankin, 1983). Falvo defines compliance as the degree to which the patient follows the recommendations given by the health professional (Falvo, 1985).

Over the past ten years, research in patient compliance has been extensive. Empirical studies have
focused on effective strategies for improving compliance with drug regimes (Haynes, 1987; Becker, 1980; Maiston, 1970). Some of the interventions tested have been ineffective or impractical in practice setting. Haynes has identified five major principles that may promote compliance:

(1) Specific instructions regarding a simple short-term regimen are usually sufficient for compliance.

(2) Multiple strategies are required for long-term regimens, but no combination of interventions has demonstrated lasting effects.

(3) Cueing is an effective strategy to increase compliance with medication taking and appointment attendance of people who have chronic conditions.

(4) Rewards help sustain behavior change, but when the rewards are removed the behavior tapers off.

(5) Counseling, group discussions, social support, and self-monitoring have effectively increased compliance (Haynes, 1987).

The sequence of behaviors and outcomes involved in compliance with a behavior change is complex. Green has identified that adherence to health behavior interventions refers not only to participation compliance but also to alteration in behavior patterns (Cameron, 1987). However,
it is difficult to measure alterations in behavior patterns and the extent of the behavior change. Cameron has concluded that we need additional basic information about the determinant of health behaviors and the effectiveness of interventions. Information about the health consequences of altering behavior patterns is lacking in compliance research (Cameron, 1987).

Summary of Literature Review

The review of literature included studies related to patient and nurse perceptions, patient education issues and compliance issues.

In general, the literature reviewed suggested that patient education and compliance processes have been empirically studied. Specifically the studies indicate that:

(1) Patient education was perceived by nurses as a major role function.

(2) The health care challenges of the 1980s are impacting patient education in the health care setting. Patient education has been shown to decrease healthcare expenditures. Patient education is essential as consumers demand more information. Our society is changing from institutional help to self-help.
(3) Patient education should be implemented in a well-planned approach. A philosophy is essential and will be influenced by patient types and nursing personnel. Patient education theories are organized and purposeful.

(4) Literature reflects the essential content for ostomy patient education. Eleven areas should be included in a comprehensive program. The IAET has established standards for the basis of care of the ostomy patient.

(5) Research documenting congruence of patient and nurse perceptions of learning needs is limited. Studies on nurse and patient perceptions have focused on hemodialysis, cardiac, heart attack and cancer patients. No studies were located regarding ostomy patient’s perceptions of learning needs.

(6) Understanding compliance is necessary for effective patient education. Five major principles have been identified to promote compliance. More research is necessary regarding effectiveness of interventions.

In review, the literature review supports the contention that to provide effective patient education the nurse and patient perceptions must be congruent.
Conceptual Framework

The conceptual framework of this study reflects the review of literature. In this study, the learning needs of the ostomy patient consisted of (1) information needs; (2) technical ostomy-management skill needs; and (3) emotional support needs (Watson, 1985). A means to examine these needs is to structure them within the framework of the major time periods of hospitalization of the ostomy patient (Figure 1).

Emotional-support needs are concerned with the self concept/self esteem process. Technical ostomy management needs address the self-care skills that the patient must master to achieve independence. Information needs are more global. Information needs include anatomy and physiology; activities of daily living; and nutrition. Lifelong preventive maintenance is a major learning task for the ostomy patient.

In order to increase professional credibility, our approaches must be anchored in research. This model should be considered a tentative, theoretical approach to meet the needs of ostomy patient. Ms. Watson, RN, ET, ScD states that her model needs further refinement and development (Watson, 1985). By testing this model in practice a better understanding of the congruence of
patient and nurse perceptions of learning needs will be achieved.

<table>
<thead>
<tr>
<th>Time Period for Teaching-Learning Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse Perceptions</td>
</tr>
<tr>
<td>Patient Perceptions</td>
</tr>
<tr>
<td>Learning Needs</td>
</tr>
</tbody>
</table>

Figure 1
Conceptual Framework

**Hypotheses**

The review of the literature and the conceptual framework enables one to generate the following null hypotheses:

1. There is no difference between the ostomate's perceptions and the medical-surgical nurse's perceptions regarding the importance of learning needs as related to:

   1a. Information needs
lb. Technical ostomy-management skill needs

lc. Emotional support needs.

(2) There is no difference between the ostomate's perceptions and the ET nurse's perceptions regarding the importance of learning as related to:

  2a. Information needs
  2b. Technical ostomy-management skill needs
  2c. Emotional support needs

(3) There is no difference between the medical-surgical nurse's perceptions and the ET nurse's perceptions of the importance of learning needs related to:

  3a. Information needs
  3b. Technical ostomy-management skill needs
  3c. Emotional support needs

(4) There is no difference between all the subject groups in the placement of information needs in the following time periods:

  4a. Preoperative
  4b. Postoperative
  4c. Post hospital

(5) There is no difference between all the sub-
ject groups in the placement of technical ostomy management skill needs in the following time periods:

5a. Preoperative
5b. Postoperative
5c. Post hospital

(6) There is no difference between all the subject groups in the identification of emotional support needs in the following time periods:

6a. Preoperative
6b. Postoperative
6c. Post hospital
CHAPTER 3
Methodology

The research methodology used for this study is reviewed in this chapter. This included a discussion of the approach, sample, research tool, method of collecting data, procedure used in the analysis of data, and the identification of variables.

Approach

The research approach for this study was a survey, utilizing a questionnaire based on the literature review and conceptual framework. The study's aim was to compare patient and nurse perceptions regarding learning needs of ostomy patients. By the use of a self-report survey, perceptions were compared in sample subjects.

Sample

The study consisted of three sample groups obtained from five different accessible populations. The first population consisted of the ostomy members of an ostomy association in the northeast part of a north central state. This population was comprised of thirty-two members over the age of eighteen. The second
population consisted of the ostomy members of an ostomy association in the southeast part of the same north central state. This population was comprised of fifty-two members over the age of eighteen.

The third population was the active members of the North Central Region of the IAET. The population consisted of ninety-nine ET nurses.

The fourth population consisted of nurses from surgical and urology units of a 160 bed regional medical center in the northeast part of a north central state. This population consisted of thirty-three professional registered nurses.

The fifth population consisted of nurses from surgical and urology units from a 486 bed regional medical center in the southeast section of the same north central state. This population consisted of ninety-six professional registered nurses.

The purposive sample for this study consisted of fifty-one ostomy clients; sixty-seven ET nurses and sixty-three medical-surgical nurses who returned the completed questionnaire by a designated time indicated on the cover letter.
Research Tool

The questionnaire (Appendix A) was developed based on a review of the literature and the conceptual framework. The purpose of the questionnaire was to measure the extent of congruence when comparing patient and nurse perceptions of ostomy patient learning needs.

The self-administered questionnaire consisted of two sections. Section one of the ostomy patient questionnaire included questions related to demographic information as age, sex, race, religion, education, marital status, type of ostomy, date of ostomy surgery, reason for surgery, and ET nurse participation in care. Section one of the medical-surgical nurse and ET nurse questionnaire included questions related to demographic information as age, sex, type of nursing education, number of years nursing experience in identified areas, ET nurse experience, and ET nurse board certification.

Section two of the questionnaire was identical for all subject groups. This section consisted of specific knowledge items directed toward ostomy patient education. The items utilized in this section were based on the conceptual framework and the IAET Standard of Practice. Using a seven-point, Likert-type scale, nurse and patient subjects rated the importance of the knowledge items for
the ostomy patient. Responses ranged from very important (a value of 7) to not important (a value of 1). Therefore, a value of seven on the scale represented that the item was very important for ostomy patient education and a value of one represented that the item was not important for ostomy patient education.

In section two, all subjects were also asked to indicate the time period when it was most beneficial for the ostomy patient to receive the information. Three time periods were identified as preoperative, postoperative, and post hospital. All subjects were instructed to select one time period per knowledge item.

Section two also included an open-ended question that asked subjects to list additional knowledge items, to rate the importance of the item, and to indicate the time period for the patient to receive this knowledge.

A cover letter accompanied each questionnaire. The cover letter identified the researcher, explained the purpose of the study, and informed the respondent that consent to participate in the study was evidenced by return of the questionnaire by a designated time. Cover letters were individualized to each of the subject groups.

The questionnaire was pretested for content validity by two Board Certified ET nurses. The question-
naire was also pretested for clarity and time requirements by two ostomy patients and six staff nurses. Based on their suggestions, revisions were made in the questionnaire prior to distribution.

Method of Collecting Data

The data for this study was collected during the spring of 1988 based on the following process:

1. Permission to administer the questionnaire was obtained from the Directors of Nursing at the two hospitals involved in the study.

2. Verbal permission was obtained from officers of participating Ostomy Associations and the North Central Region of IAET.

3. The questionnaire was mailed to the following target populations: ostomy patients (n=84); medical-surgical nurses (n=129); ET nurses (n=99). A stamped self-addressed return envelope was provided for the return of the completed questionnaire to the researcher.

4. One week prior to the deadline stated in the cover letter, a second mailing was done to all potential respondents who had not returned the questionnaire.
Procedure for Analysis of Data

Questionnaires were returned by fifty-one ostomy patients (61 percent), sixty-seven ET nurses (68 percent), and sixty-three medical-surgical nurses (49 percent). An electronic computer was utilized for statistical analysis to facilitate speed and accuracy.

The data were analyzed to: (1) provide a descriptive analysis of the subject groups; and (2) to determine the congruency of patient, staff nurse and ET nurse perceptions of the importance and placement learning needs of the ostomy patients.

The descriptive analysis was based on frequency and percentage listing of the individual responses in Section one of the questionnaire.

The hypotheses were tested using analysis of variance (ANOVA) and categorical data analysis.

The significance level for the purpose of this study was 0.05.

Variables

The variables in this study were:

1. The dependent variable (Y) was the importance of the three categories of learning needs and the most optimum time for the teaching learning experience.

2. The independent variable (X) was the nurse and
the patient perceptions.

3. Moderator variables were nurse and patient background. Previous studies by Lauer and Dodge have shown no relationship between nurse and patient backgrounds and the degree of importance attributed to learning needs (Lauer, 1982; Dodge, 1969). Research studies have shown that age, sex and type of ostomy have no significant effect on adjustment (Watson, 1985; Maklebust, 1985).
CHAPTER 4
Analysis of Research Findings

This chapter presents a descriptive analysis of the data and the results of hypotheses testing.

Descriptive Analysis

Frequency and percentage listings of the data were obtained from the three subject groups responses to the questionnaire. The descriptive analysis was based on that data. An electronic computer was utilized for statistical analysis to facilitate speed and accuracy.

Ostomy Patients

Fifty-one (61 percent) ostomy subjects returned the questionnaire. Thirty-three (64.7 percent) respondents were male. Eighteen (35.3 percent) respondents were female. All were white (Caucasian).

Age. Thirty-one (60.9 percent) respondents were 65 or older. Seventeen (33.4 percent) respondents were 49–64 years and four (5.7 percent) respondents were less than 49 years. Table 5 reflects a comparison of patient and nurse ages (see page 42).

Religion. Forty (78.4 percent) respondents were Protestant and eleven (21.6 percent) respondents were
Catholic.

**Education.** Twenty-four (47.1 percent) respondents had completed high school. Twenty-one (41.2 percent) respondents had completed college; and six (11.8 percent) respondents indicated completion of grade school.

**Marital Status.** Thirty-eight (74.5 percent) respondents were married and six (11.8 percent) respondents were widowed. Four (7.8 percent) respondents had never been married; one (2 percent) respondent was separated; and two (3.9 percent) respondents were divorced.

**Employment Status.** Fifteen (29.4 percent) respondents were currently employed and five (9.8 percent) respondents were unemployed. Thirty-one (60.8 percent) respondents were retired.

**Type of Ostomy.** As indicated by Table 1, twenty-five (50 percent) respondents had a colostomy; sixteen (32 percent) respondents had a urostomy; and nine (18 percent) had an ileostomy.
Table 1
Type of Ostomy by Frequency and Percentage

<table>
<thead>
<tr>
<th>Ostomy Type</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colostomy</td>
<td>25</td>
<td>50.0</td>
</tr>
<tr>
<td>Ileostomy</td>
<td>9</td>
<td>18.0</td>
</tr>
<tr>
<td>Urostomy</td>
<td>16</td>
<td>32.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Number of Years with Ostomy. Nineteen (38 percent) respondents reported that they had their ostomy for 1-5 years; fifteen (30 percent) respondents reported having their ostomy for 6-10 years; and nine (18 percent) respondents indicated having an ostomy for 11-15 years. Three (6 percent) respondents reported having an ostomy for 16-20 years and four (8 percent) respondents have had an ostomy for over 20 years. Thirty-eight years of living with an ostomy was reported by one respondent.

Reason for Surgery. As indicated by Table 2, thirty-six (72 percent) respondents indicated that cancer was the reason for their ostomy surgery. Nine (18 percent) respondents reported that ulcerative colitis; two (4 percent) respondents reported Crohn's disease; and one
(2 percent) respondent reported diverticulitis as the reason for surgery.

Table 2
Reason for Ostomy Surgery by Frequency and Percentage

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ulcerative Colitis</td>
<td>9</td>
<td>18.0</td>
</tr>
<tr>
<td>Crohn's Disease</td>
<td>2</td>
<td>4.0</td>
</tr>
<tr>
<td>Diverticulitis</td>
<td>1</td>
<td>2.0</td>
</tr>
<tr>
<td>Cancer</td>
<td>36</td>
<td>72.0</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>4.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Permanent Ostomy. Forty-nine (98 percent) respondents had a permanent and one (2 percent) respondent had a temporary ostomy.

Family Member with an Ostomy. Fifty-one (100 percent) respondents reported that they did not have a family member with an ostomy.

E.T. Nurse Participation. As indicated by Table 3, thirty (61.2 percent) respondents indicated that an E.T. nurse had participated in their care; fourteen (28.6
percent) respondents reported that an E.T. nurse was not involved in their care; and five (10.2 percent) respondents did not know if an E.T. nurse was involved in their care.

Table 3
Frequency and Percentage of E.T. Nurse Participation in Patient Care

<table>
<thead>
<tr>
<th>Participation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>30</td>
<td>61.2</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>28.6</td>
</tr>
<tr>
<td>I don't know</td>
<td>5</td>
<td>10.2</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Summary of Descriptive Analysis of Ostomy Patients. The typical respondent was a white married Protestant male over the age of 65 years and retired. Fifty percent of the respondents had a colostomy for 1-5 years. Seventy-two percent indicated the ostomy resulted from a diagnosis of cancer. The respondents indicated that sixty percent of the time an E.T. nurse was involved in their care.
Medical-Surgical Nurses

Sixty-three (49 percent) subjects returned the questionnaire. Sixty-two (98.4 percent) respondents were female and one (1.6 percent) respondent was male.

Age. As indicated by Table 5 (page 37), thirty-three (54.1 percent) respondents were 20-29 years of age. Twenty (32.8 percent) respondents were 30-39 years of age. These figures indicated that 86.9 percent of the respondents were below the age of forty.

Education. As indicated by Table 6 (page 38), twenty-six (41 percent) respondents had an Associate degree in Nursing; twenty-two (34.9 percent) respondents had a Bachelor's degree in Nursing; and thirteen (20 percent) respondents were a Diploma graduate.

Nursing Experience. Table 4 indicates the years of nursing experience in medical, surgical and urological nursing. Twenty-four (38.6 percent) respondents had 1-5 years medical nursing experience; thirty (48.4 percent) respondents had 1-5 years of surgical nursing experience; and eleven (17.7 percent) respondents had 1-5 years of urological nursing experience. Forty-two (67.7 percent) respondents had no urological nursing experience. Thirty-one (50 percent) respondents indicated 1-5 years of ostomy nursing experience. Six (9.7 percent) respondents
reported no ostomy nursing experience.

Table 4

Years of Nursing Experience by Frequency and Percentage

<table>
<thead>
<tr>
<th>Years</th>
<th>Medical Nursing</th>
<th></th>
<th>Surgical Nursing</th>
<th></th>
<th>Urology Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>0</td>
<td>28</td>
<td>45.2</td>
<td>12</td>
<td>19.4</td>
<td>42</td>
</tr>
<tr>
<td>1-5</td>
<td>24</td>
<td>38.6</td>
<td>30</td>
<td>48.4</td>
<td>11</td>
</tr>
<tr>
<td>6-10</td>
<td>6</td>
<td>9.6</td>
<td>15</td>
<td>24.2</td>
<td>6</td>
</tr>
<tr>
<td>11-15</td>
<td>4</td>
<td>6.4</td>
<td>5</td>
<td>8.0</td>
<td>2</td>
</tr>
<tr>
<td>15+</td>
<td>.1</td>
<td>1.6</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100.0</td>
<td>62</td>
<td>100.0</td>
<td>62</td>
</tr>
</tbody>
</table>

E.T. Nurses

Sixty-seven (68 percent) subjects returned the questionnaire. Sixty-six (98.5 percent) were female and one (1.5 percent) was a male.

Age. As indicated by Table 5, four (6 percent) respondents were 20-29 years of age; thirty-three (49.2 percent) were 30-39 years of age; and sixteen (24 percent) respondents were 40-49 years of age.
Table 5
Age of Subject Groups by Frequency and Percentage

<table>
<thead>
<tr>
<th>Age</th>
<th>Ostomates</th>
<th>Medical-Surgical Nurses</th>
<th>E.T. Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Per-</td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td>Cent</td>
<td></td>
<td>Cent</td>
</tr>
<tr>
<td>20-29</td>
<td>1</td>
<td>2.0</td>
<td>33</td>
</tr>
<tr>
<td>30-39</td>
<td>2</td>
<td>4.0</td>
<td>20</td>
</tr>
<tr>
<td>40-49</td>
<td>1</td>
<td>2.0</td>
<td>4</td>
</tr>
<tr>
<td>50-59</td>
<td>10</td>
<td>19.7</td>
<td>3</td>
</tr>
<tr>
<td>60-69</td>
<td>15</td>
<td>29.0</td>
<td>1</td>
</tr>
<tr>
<td>70-79</td>
<td>16</td>
<td>31.5</td>
<td>0</td>
</tr>
<tr>
<td>80-89</td>
<td>6</td>
<td>11.8</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
<td>100.0</td>
<td>61</td>
</tr>
</tbody>
</table>

**Education.** As indicated by Table 6, eight (11.9 percent) respondents had an Associate Degree in Nursing; twenty-five (37.3 percent) respondents had a Diploma in Nursing; and twenty-one (31.3 percent) had a Bachelor's degree in Nursing.
### Table 6
Nurse Education Level by Nurse Group

<table>
<thead>
<tr>
<th>Nursing Education</th>
<th>Medical-Surgical Nurses</th>
<th>E.T. Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>26</td>
<td>41.3</td>
</tr>
<tr>
<td>Diploma</td>
<td>13</td>
<td>20.6</td>
</tr>
<tr>
<td>BS (Nursing)</td>
<td>22</td>
<td>34.9</td>
</tr>
<tr>
<td>BS (Non-Nursing)</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Masters (Nursing)</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Masters (Non-Nursing)</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Board Certification.** Forty-seven (73.4 percent) respondents were board certified as E.T. nurses and seventeen (26.6 percent) respondents were not.

**E.T. Experience.** Thirty-four (54 percent) respondents indicated 1-5 years experience as an E.T. nurse; twenty-two (34.9 percent) respondents reported 6-10 years experience; and seven (11.2 percent) reported 11-15 years experience.
Summary of Descriptive Analysis of Medical Surgical and E.T. Nurses.

The typical medical-surgical nurse was a white female between the ages of twenty and forty. The respondent was generally an Associate degree graduate. She had 1-5 years of medical or surgical nursing experience. Seventy-five percent of the respondents had 1-10 years of ostomy nursing experience.

The typical E.T. nurse respondent was a white female between the ages of thirty and fifty. She had either a diploma or a Bachelor's degree in Nursing. The respondent was generally a Board Certified E.T. Nurse with 1-5 years of experience in the E.T. nurse role.

Rank of Importance.

Each subject was asked to rank how important they believed that each type of information was for the ostomy patient. Responses ranged from very important (a value of 7) to not important (a value of 1). There were three categories of learning needs. The category of information needs consisted of seventeen items. On a scale of one to seven, the mean for the ostomate group was 6.14; medical surgical nurses mean was 6.39; and the mean for E.T. nurses was 6.29.

Table 7 indicates by frequency and percentage the
information items that received a rank of very important (value of 7). Information about stoma discharge was given a rank of very important by thirty-four ostomate respondents (73.9 percent), thirty-four medical-surgical nurses (54.8 percent), and forty E.T. nurses (62.5 percent) ranked this item very important on the scale. Twenty-nine ostomy respondents (65.9 percent) indicated that information on medications that may affect ostomy function was very important (rank of 7). Thirty medical-surgical nurses (49.2 percent) and thirty-three E.T. nurses (50.0 percent) ranked this item very important.

Dietary modifications to decrease odor or flatus was ranked very important by twenty-six E.T. nurses (39.4 percent); thirty-five medical-surgical nurses (55.6 percent); and twenty-three ostomates (52.3 percent). Dietary modifications to prevent or manage constipation and/or diarrhea was also less frequently ranked very important by E.T. nurses (34.8 percent or 23 respondents). Twenty-four ostomates (54.5 percent) and thirty-seven medical-surgical nurses (58.7 percent) ranked this item very important.

How to dress with an ostomy was ranked very important by thirty-eight medical-surgical nurses (60.3 percent). While only seventeen ostomates (39.5 percent)
and twenty-five E.T. nurses (38.5 percent) ranked this item very important (value of 7).

The Technical Ostomy-Management skill needs category consisted of eight items. The means for the subject groups were: ostomates - 6.28; medical-surgical nurses - 6.54; and E.T. nurses - 6.30.

Table 8 indicates by frequency and percentage the technical ostomy-management skill items that were ranked very important (value of 7). Sixty-two E.T. nurses (95.4 percent) ranked pouch application as very important as a technical skill. However, only thirty-three ostomates (73.3 percent) and fifty-three medical-surgical nurses (84.1 percent) ranked this item very important. Information on how to do a colostomy irrigation was ranked very important by twenty-five ostomates (71.4 percent); forty-two medical-surgical nurses (66.7 percent) and only twenty-nine E.T. nurses (44.6 percent). Information regarding care of equipment was ranked very important by twenty-seven ostomates (64.3 percent); thirty-five medical-surgical nurses (55.6 percent); and only thirty-one E.T. nurses (47.7 percent). Principles of skin care was ranked very important by fifty-two medical-surgical nurses (82.5 percent); fifty-four E.T. nurses (81.8 percent); and only thirty-one ostomates (68.9 percent).
Table 7
Information Needs Rated Very Important* by Frequency and Percentage

<table>
<thead>
<tr>
<th><strong>Item</strong></th>
<th><strong>Ostomates</strong></th>
<th><strong>Medical-Surgical Nurses</strong></th>
<th><strong>E.T. Nurses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>1</td>
<td>41</td>
<td>87.2</td>
<td>56</td>
</tr>
<tr>
<td>2</td>
<td>34</td>
<td>73.9</td>
<td>34</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>66.7</td>
<td>37</td>
</tr>
<tr>
<td>4</td>
<td>32</td>
<td>71.1</td>
<td>42</td>
</tr>
<tr>
<td>5</td>
<td>23</td>
<td>52.3</td>
<td>31</td>
</tr>
<tr>
<td>6</td>
<td>29</td>
<td>65.9</td>
<td>30</td>
</tr>
<tr>
<td>7</td>
<td>39</td>
<td>84.8</td>
<td>48</td>
</tr>
<tr>
<td>8</td>
<td>31</td>
<td>67.4</td>
<td>38</td>
</tr>
<tr>
<td>9</td>
<td>25</td>
<td>55.6</td>
<td>38</td>
</tr>
<tr>
<td>10</td>
<td>23</td>
<td>52.3</td>
<td>35</td>
</tr>
<tr>
<td>11</td>
<td>24</td>
<td>54.5</td>
<td>37</td>
</tr>
<tr>
<td>12</td>
<td>27</td>
<td>60.0</td>
<td>39</td>
</tr>
<tr>
<td>13</td>
<td>21</td>
<td>50.0</td>
<td>29</td>
</tr>
<tr>
<td>14</td>
<td>17</td>
<td>39.5</td>
<td>38</td>
</tr>
<tr>
<td>23</td>
<td>20</td>
<td>43.5</td>
<td>34</td>
</tr>
<tr>
<td>29</td>
<td>15</td>
<td>34.9</td>
<td>29</td>
</tr>
<tr>
<td>30</td>
<td>26</td>
<td>57.8</td>
<td>34</td>
</tr>
</tbody>
</table>

*Very important = value of 7 on scale of 1 to 7

**See Appendix A for descriptions of items
Table 8

Technical Ostomy-Management Skill Needs Rated Very Important* by Frequency and Percentage

<table>
<thead>
<tr>
<th><strong>Item</strong></th>
<th>Ostomates Frequency</th>
<th>Ostomates Percent</th>
<th>Medical-Surgical Nurses Frequency</th>
<th>Medical-Surgical Nurses Percent</th>
<th>E.T. Nurses Frequency</th>
<th>E.T. Nurses Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>33</td>
<td>73.3</td>
<td>53</td>
<td>84.1</td>
<td>62</td>
<td>95.4</td>
</tr>
<tr>
<td>15</td>
<td>30</td>
<td>68.2</td>
<td>39</td>
<td>61.9</td>
<td>34</td>
<td>51.5</td>
</tr>
<tr>
<td>16</td>
<td>31</td>
<td>68.9</td>
<td>34</td>
<td>54.8</td>
<td>42</td>
<td>63.6</td>
</tr>
<tr>
<td>17</td>
<td>25</td>
<td>71.4</td>
<td>42</td>
<td>66.7</td>
<td>29</td>
<td>44.6</td>
</tr>
<tr>
<td>18</td>
<td>27</td>
<td>64.3</td>
<td>35</td>
<td>55.6</td>
<td>31</td>
<td>47.7</td>
</tr>
<tr>
<td>19</td>
<td>31</td>
<td>68.9</td>
<td>52</td>
<td>82.5</td>
<td>54</td>
<td>81.8</td>
</tr>
<tr>
<td>20</td>
<td>25</td>
<td>55.6</td>
<td>40</td>
<td>63.5</td>
<td>31</td>
<td>47.0</td>
</tr>
<tr>
<td>21</td>
<td>28</td>
<td>63.6</td>
<td>46</td>
<td>73.0</td>
<td>40</td>
<td>60.6</td>
</tr>
</tbody>
</table>

*Very important = value of 7 on scale of 1 to 7

**See Appendix A for descriptions of items

The category of emotional support needs consisted of five items. The means for the subject group were: ostomates - 5.96; medical-surgical nurses - 6.44; and E.T. nurses - 6.38.

Table 9 indicates by frequency and percentage the emotional support items that were ranked very important.
by the three subject groups. Twenty-three ostomates (56.1 percent) ranked information on the effects of surgery on their sexuality as very important. Thirty-seven medical-surgical nurses (59.7 percent) and forty-three E.T. nurses (66.2 percent) ranked this item very important.

Discussion about the concerns for the future was ranked very important by twenty-two ostomates (53.7 percent); forty-one medical-surgical nurses (65.1 percent); and thirty-seven E.T. nurses (58.7 percent). Information about the possible impact on the ostomate's job was ranked very important by nineteen ostomates (48.7 percent); thirty-seven medical-surgical nurses (58.7 percent); and thirty-five E.T. nurses (53.8 percent). A visit by an ostomy visitor as an emotional support item was ranked very important by twenty-seven ostomates (61.4 percent); thirty-six medical-surgical nurses (57.1 percent); and thirty-two E.T. nurses (52.4 percent).
Table 9

Emotional Support Needs Rated Very Important* by Frequency and Percentage

<table>
<thead>
<tr>
<th><strong>Item</strong></th>
<th>Ostomates Frequency</th>
<th>Per-cent</th>
<th>Medical-Surgical Nurses Frequency</th>
<th>Per-cent</th>
<th>E.T. Nurses Frequency</th>
<th>Per-cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>23</td>
<td>56.1</td>
<td>37</td>
<td>59.7</td>
<td>43</td>
<td>66.2</td>
</tr>
<tr>
<td>26</td>
<td>22</td>
<td>53.7</td>
<td>41</td>
<td>65.1</td>
<td>37</td>
<td>58.7</td>
</tr>
<tr>
<td>27</td>
<td>19</td>
<td>48.7</td>
<td>37</td>
<td>58.7</td>
<td>35</td>
<td>53.8</td>
</tr>
<tr>
<td>28</td>
<td>27</td>
<td>61.4</td>
<td>36</td>
<td>57.1</td>
<td>32</td>
<td>52.4</td>
</tr>
</tbody>
</table>

*Very important = value of 7 on scale of 1 to 7

**See Appendix A for description of items

Time Periods.

Each subject was asked to indicate the time period when it would be most beneficial for a person to receive this information. Three time periods were identified. Subjects were asked to choose only one time period for each item.

In the information needs category two items revealed differences between the subject groups. The ostomate group indicated that information regarding stoma discharge should be received in the postoperative time
period (65 percent). While 49.2 percent of the medical-surgical nurses indicated the information should be received in either the preoperative or the postoperative time period. The E.T. nurse group (51.5 percent) indicated that this information should be received in the preoperative time period. The ostomate group (45 percent) indicated that information regarding body alterations due to stoma should be received in the postoperative time period. Medical-surgical nurses (66.1 percent) and E.T. nurses (73.4 percent) indicated this information should be received in the preoperative time period.

One item in the technical ostomy-management skills category revealed an incongruence among subject groups. The ostomate (81.8 percent) and medical surgical nurses (90.2 percent) indicated that information describing how to do irrigation should be given in the postoperative time period. E.T. nurses (53.1 percent) indicated this information should be given in the post hospital period.

Emotional support needs category consisted of five items. Four items revealed incongruence between subject groups. The ostomates (43.9 percent) indicated that discussion regarding feelings related to altered body image and function should occur in the post hospital period. Medical-surgical nurses (49.2 percent) identified
the preoperative time period for the discussion and the E.T. nurses (47 percent) indicated the postoperative period.

Information on the effects of surgery on sexuality should be provided in the post hospital time period according to the ostomates (39.5 percent). Medical-surgical nurses (43 percent) and E.T. nurses (43.9 percent) indicated the preoperative time period.

The ostomates (40.5 percent) indicated that feelings related to the concern for the future should be discussed in the post hospital period. Medical-surgical nurses (40 percent) and E.T. nurses (45.3 percent) indicated the preoperative time period.

The ostomate group indicated that both the preoperative (40 percent) and post hospital (40 percent) time periods were most appropriate for information regarding possible impact on their job. Medical-surgical nurses (37.9 percent) indicated the post hospital period and E.T. nurses (39.4 percent) indicated the preoperative time period for presenting information regarding how an ostomy may impact their job.

Hypotheses Testing

The statistical tests used to complete objectives 1 and 2, on page 4 of this study were analysis of variance
(ANOVA) and categorical data analysis. The significance level was 0.05. For presenting purposes, the null hypothesis will be stated followed by a statement of statistical results. "All subject groups" refers to a combination of ostomates, medical-surgical nurses and E.T. nurses. "Both nurse groups" refers to a combination of medical-surgical nurses and E.T. nurses.

Analysis of variance (ANOVA) was conducted on the ostomy patient group to determine if the type of ostomy made a significant difference in the importance of learning needs. The level of probability obtained by ANOVA related to information needs was 0.8300; technical ostomy-management skill needs was 0.4472; and emotional support needs was 0.7680. Therefore, the type of ostomy was not significant.

Null Hypothesis 1. There is no difference between the ostomates' perceptions and the medical-surgical nurses' perceptions regarding the importance of learning needs as related to:

Information needs.

The level of probability obtained by ANOVA on this variable was 0.059 and failed to reject the null hypothesis.

Technical ostomy-management skill needs.
The level of probability obtained by ANOVA on this variable was 0.069 and failed to reject the null hypothesis.

**Emotional support needs.**

The level of probability obtained by ANOVA on this variable was 0.004 and therefore the null hypothesis was rejected.

See Table 10 for a summary of the ANOVA results.

**Null Hypothesis 2. There is no difference between the ostomates' perceptions and the E.T. nurses' perceptions regarding the importance of learning needs as related to:**

- **Information needs.**

  The level of probability obtained by ANOVA on this variable was 0.209 and failed to reject the null hypothesis.

- **Technical ostomy-management skill needs.**

  The level of probability obtained by ANOVA on this variable was 0.925 and failed to reject the null hypothesis.

- **Emotional support needs.**

  The level of probability obtained by ANOVA on this variable was 0.0128. Therefore, the null hypothesis was rejected and the research hypothesis that there is a difference between the ostomate and E.T. nurse perceptions
was accepted.

Table 10 summarizes the ANOVA results.

Null Hypothesis 3. There is no difference between medical-surgical nurses' perceptions and E.T. nurses' perceptions of the importance of learning needs as related to:

Information needs.

The level of probability obtained by ANOVA on this variable was 0.361 and failed to reject the null hypothesis.

Technical ostomy-management skill needs.

The level of probability obtained by ANOVA on this variable was 0.0578 and failed to reject the null hypothesis.

Emotional support needs.

The level of probability obtained by ANOVA on this variable was 0.6820 and failed to reject the null hypothesis.

Table 10 summarizes the ANOVA results.

Null Hypothesis 4. There is no difference between all subject groups in the placement of information needs in the following time periods:

Preoperative

The level of probability obtained by categorical
Table 10

Summary of Analysis of Variance of the Importance of Learning Needs

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D/F</td>
<td>MS</td>
<td>Mean</td>
</tr>
<tr>
<td>Group</td>
<td>2</td>
<td>0.880</td>
<td>2.880</td>
</tr>
<tr>
<td>Residual</td>
<td>177</td>
<td>0.404</td>
<td>1.291</td>
</tr>
<tr>
<td>Ostomates</td>
<td>6.14</td>
<td></td>
<td>6.14</td>
</tr>
<tr>
<td>Medical-Surgical Nurses</td>
<td>6.39</td>
<td></td>
<td>6.39</td>
</tr>
<tr>
<td>E.T. Nurses</td>
<td>6.29</td>
<td></td>
<td>6.29</td>
</tr>
</tbody>
</table>

Means in the same column with different superscripts differ significantly (p ≤ .05)

* Significance (p ≤ .05)
data analysis was 0.0214 when comparing ostomates with medical surgical nurses and 0.9143 when comparing ostomates with both nurse groups. Therefore the null hypothesis was rejected and the research hypothesis that there is a difference among subject groups in time placement of information needs was accepted.

Postoperative

The level of probability obtained by categorical data analysis was 0.0262 when comparing ostomates and both nurse groups. Therefore the null hypothesis was rejected and the research hypothesis that there is a difference among subject groups in the placement of information needs was accepted.

Post Hospital

The level of probability obtained by categorical data analysis was 0.0001 when comparing ostomates and both nurse groups. Therefore, the null hypothesis was rejected and the research hypothesis that there is a difference among subject groups in time placement of information needs was accepted.

See Appendix B (Table 11) for a summary of these findings.

Null Hypothesis 5. There is no difference between all subject groups in placement of technical ostomy-management
skill needs in the following time periods:

**Preoperative**

The level of probability obtained by categorical data analysis was 0.954 when comparing ostomates and medical surgical nurses and 0.5663 when comparing ostomates and both nurse groups and failed to reject the null hypothesis.

**Postoperative**

The level of probability obtained by categorical data analysis was 0.171 when comparing medical surgical nurses and E.T. nurses and 0.0005 when comparing ostomates and both nurse groups, therefore rejecting the null hypothesis. The research hypothesis that there is a difference among subject groups in time placement of technical ostomy-management skill needs was accepted.

**Post Hospital**

The level of probability obtained by categorical data analysis was 0.8663 when comparing ostomates and E.T. nurses and 0.0201 when comparing medical surgical nurses with ostomates and E.T. nurses. Therefore, the null hypothesis was rejected. The research hypothesis that there is a difference among subject groups in time placement of technical ostomy-management skill needs was accepted. See Appendix B (Table 12) for a summary of
these findings.

**Null Hypothesis 6.** There is no difference between all subject groups in placement of emotional support needs in the following time periods:

**Preoperative**

The level of probability by categorical data analysis was 0.8937 when comparing ostomates and medical surgical nurses and 0.0147 when comparing ostomates and medical surgical nurse with E.T. nurses. The null hypothesis was rejected and the research hypothesis that there is a difference among subject groups in time placement of emotional support needs was accepted.

**Postoperative**

The level of probability by categorical data analysis was 1.000 when comparing medical surgical nurses and E.T. nurses and 0.1918 when comparing ostomates and both nurse groups. The null hypothesis was not rejected.

**Post Hospital**

The level of probability by categorical data analysis was 0.5289 when comparing medical surgical nurses and E.T. nurses and 0.0289 when comparing ostomates and both nurse groups. Therefore, the null hypothesis was rejected and the research hypothesis that there is a difference among subject groups in time placement of
emotional support needs was accepted. See Appendix B (Table 13) for a summary of these findings.

Summary of hypotheses testing. Based on the statistical testing the following hypotheses were accepted:

1. There is a relationship between the ostomate's perceptions and the medical-surgical nurse's perception regarding the importance of learning needs as related to emotional support needs.

2. There is a relationship between the ostomate's perception and the E.T. nurse's perception regarding the importance of learning needs related to emotional support needs.

3. There is a relationship among all subject groups in the placement of information needs in the preoperative, postoperative and post hospital time periods.

4. There is a relationship among all subject groups in the placement of technical ostomy-management skill needs in the postoperative and post hospital time periods.

5. There is a relationship among all subject groups in placement of emotional support needs in the preoperative and post operative time periods.

The following null hypotheses were not rejected at
the 0.05 level of significance:

1. There is no difference between the ostomate's perception and the medical-surgical nurse's perception regarding the importance of information and technical ostomy-management skill needs.

2. There is no difference between the ostomate's perception and the E.T. nurse's perception regarding the importance of information and technical ostomy-management skill needs.

3. There is no difference between medical-surgical nurses perception and E.T. nurse is perception of the importance of information, technical ostomy-management skill, and emotional support needs.

4. There is no difference among all subject groups in placement of technical ostomy-management skill needs in the preoperative time period.

5. There is no difference among all subject groups in placement of emotional support needs in the postoperative time period.
CHAPTER 5
Summary, Conclusions, Implications, Limitations and Recommendations.

The purpose of this chapter is to present:
1. A summary of the research problem and design.
2. A summary of major findings and conclusions as related to the objectives of the study.
3. A statement of implications derived from the research findings and conclusions.
4. A statement of limitations of the study.
5. Recommendations for further research.

Summary of the Research Problem and Design.

The creation of an abdominal stoma, alteration in body functions, new self care needs, and personal as well as social reactions are major stressors for the ostomy patient. According to Watson, the ostomy patient has learning needs that may be categorized as informational, technical, and emotional support needs (Watson 1985). These needs often become evident during specific phases of the rehabilitation process.

A review of selected literature indicated that patient education is an integral component of patient care and that nurses view themselves as the primary educators
of patients. The literature suggests that teaching patients the information that they have identified as important should enhance the learning experience. Therefore, the problem under investigation in this study was to determine whether there was congruence between the perceptions of ostomy patients, medical-surgical nurses, and E.T. nurses regarding importance and time placement of learning needs of the ostomy patients.

A questionnaire reflecting the review of literature and conceptual framework was designed and mailed to three subject groups (n=319). The questionnaire obtained data, which, through statistical testing with ANOVA and categorical data analysis, attempted to determine whether there was congruence of perceptions regarding importance and time placement of learning needs of the three subject groups. Questionnaires were returned by fifty-one ostomy patients; sixty-seven E.T. nurses; and sixty-three medical-surgical nurses who made up the non-random sample for this study.

The selected independent variables were the nurse and patient perceptions. The dependent variable was the importance of three categories of learning needs and the most optimum time placement for the ostomy patient to receive this information. Moderator variables were
patient and nurse background. Six null hypotheses related to the effects of the independent variable to the dependent variable were generated.

A descriptive analysis of the general characteristics of the ostomy patient group indicated that the typical respondent was male, married, over the age of 65 years, and retired. He had a colostomy for 1-5 years and the ostomy resulted from a diagnosis of cancer.

The typical medical-surgical nurse was female, between 20-40 years of age, with 1-5 years of medical or surgical experience. She had an Associate degree in Nursing.

The typical E.T. nurse respondent was female, between 30-50 years of age, with 1-5 years of experience in the E.T. nurse role. She had a Bachelor's degree in Nursing and was board certified.

Major Findings and Conclusions

The major findings and conclusions as related to the study were:

**Major Findings.** Objective 1 of the study was to determine whether there were different perceptions regarding the importance of content items offered in an ostomy patient education program when comparing:

1. Medical-surgical nurses and ostomy patients.
A difference in perceptions was found to be significant at the 0.05 level of probability in the importance of emotional support needs.

2. E.T. nurses and ostomy patients. A difference in perceptions of the importance of emotional support needs was statistically determined.

3. Medical-surgical nurses and E.T. nurses. In the three categories of learning needs, differences in perceptions were found not significant at the 0.05 level.

Objective 2 of the study was to determine whether there was a difference among the three subject groups in perception of time placement of the three learning categories. A difference in perception was found to be significant when comparing the medical-surgical nurses and the ostomy patients in the placement of information needs in the preoperative, postoperative, and post hospital time periods; and the emotional support needs in the post hospital time period.

A difference in perceptions between the E.T. nurses and the ostomy patients was found to be significant in the placement of information needs in the postoperative and post hospital time periods; technical ostomy-management skill needs in the postoperative time period; and emotional support needs in the preoperative and post...
hospital time periods.

Conclusions. An analysis of the data indicated that perceptions of medical surgical nurses and E.T. nurses are incongruent with the perceptions of ostomates regarding learning needs of ostomy patients. More specifically, the combined nurse group and the ostomate group were incongruent in the importance of emotional support needs. The placement of learning needs into time periods also showed a significant incongruence between the combined nurse groups and the ostomy patients. The perceptions regarding the importance of learning needs of both nurse groups when compared with each other were not significant.

Implications of Research.

Major implications of this study are:

1. The importance of learning needs in the information and technical ostomy-management skills categories was generally agreed upon by medical-surgical nurses, E.T. nurses and ostomy patients.

2. Incongruence in the importance of emotional support needs existed when both nurse groups were compared with the ostomy patient group. Both nurse groups rated the importance of emotional support needs higher than the ostomy patients. The nature of this incongruence may
suggest the differences in expected behaviors of men and women in our society. The typical ostomate was male and over 65 years of age and the typical nurse was female, between the ages of 20-40. It is important for nursing to understand that there may exist differences between the male and the female perceptions. Schaef indicates that for many men, healing is something "done" by the healer. In the female system, the healer facilitates the flow of helpful knowledge (Schaef, 1985). Nurses must understand that for many men feelings are seen as inferior to rational thinking.

3. The lower ranking of emotional support items by the ostomate group may indicate discomfort in discussing certain issues. The nurse needs to develop skills in facilitating discussions related to emotional and sexual issues. The nurse should be skilled in creating an environment that gives the patient permission to discuss these issues and concerns. In the emotional support area, the nurse must listen more than teach to discover hidden barriers.

4. There was a difference in perceptions of time placement of the three categories of learning needs. This difference was noted in the preoperative and post hospital periods. This incongruence indicates a need to increase
the awareness of consumers of the potential for patient education in the preoperative and post hospital time periods. To accomplish this goal, nursing must understand the specific phases of the rehabilitation process: preoperative, postoperative, hospital discharge, and post hospitalization periods. An understanding of client needs and the stage of adaptation (shock and panic, defensive retreat, acknowledgement, and adaptation/resolution) are necessary for the development of a plan of care. Nurses need to be knowledgeable of goals and objectives for each phase in this process.

5. One possible explanation for the above findings may be attributed to the different developmental stages that existed between the patient and nurses. The typical ostomate was male, over 65 and retired. According to Erikson, persons at this age are in an integrity vs. despair psychosocial crisis (Fagen, 1986). Integrity implies acceptance of having one life only. Persons at this stage are confronted with limitations and loss of functioning. The incongruences may be explained by examining the life span stages of each subject group. The nurse groups were in young adult and adult stages while ostomates were in the old age stage. Understanding the developmental tasks of each stage will assist the nurse in
individualizing the teaching plan. As the population of elderly continues to grow, nursing must understand the tasks that must be completed in each life span stage.

Limitations of the Study

The limitations of the study were:

1. The sample was non-random; therefore the generality of the findings and conclusions are restricted to the sample.

2. The wording of the questionnaire may have produced variations in responses due to individual interpretations of the items.

3. The categorization of the learning needs may have affected the statistical results because of researcher's content analysis of learning needs. The items in each category have not been tested previously for appropriateness. Content items of each category were reviewed by two E.T. nurses, who graduated from the same Enterostomal Therapy Education Program.

4. College education in the demographic data for the ostomate was not defined as Associate or Baccalaureate. This may have produced variations in responses regarding education.

5. The varied maturation of subjects related to the number of years with an ostomy may have influenced the
findings of the study. Sixty-eight percent of the ostomates reported that they had their ostomy for 1-10 years. Recall to the period of rehabilitation may have been difficult and confused with current learning needs.

**Recommendations for Future Study**

The author recommends the following areas for further study:

1. The study should be replicated using a random sample.

2. Additional study is recommended regarding the importance of the learning needs in each of the rehabilitation stages. A longitudinal study that examines the importance of learning needs in each stage would be helpful.

3. Future research should be conducted on the items placed in each learning category to validate their comprehensiveness and appropriateness for teaching.

4. A study should be conducted to determine if the length of time a person has had an ostomy affects how they rate the importance of items and their placement in time periods.

5. A study should be conducted to determine the most effective method or combination of methods for educating patients with ostomies.
6. The study should be replicated after an ostomy patient education has been implemented and evaluated.


Fox, V. "Patient Teaching: Understanding the Needs of the Adult Learner." *Association of Operating Room*


Green, C. "What can Patient Health Education Coordinators Learn from Ten Years of Compliance Research."


Hedrick, J. "Effects of E.T. Nursing Interventions on Adjustment Following Ostomy Surgery." Journal of
Enterostomal Therapy 14, no. 6 (1987): 229-239.
IAET Standards Committee. Standards of Enterostomal Nursing Practice. Santa Anna: International Association for Enterostomal Therapy, 1981.
Matthews, P. and Rittingson, R. "Improving Patient
Potts, M. et al.  "Views of Patients and Physicians Regarding the Importance of Various Aspects of Arthritis Treatment: Correlations with Health Status and Patient Satisfaction."  Patient Education and


Stanton, B. et al. "Perceived Adequacy of Patient Education and Fears and Adjustments after Cardiac


U.S. Federal Register. Rules and Regulations 52, no. 169 (September 1, 1987).


APPENDIX A

Research Tool
April 25, 1988

Dear Sioux Falls and Aberdeen Area Ostomy Association Members:

More than 100,000 persons undergo ostomy surgery each year. It is essential that health care professionals have a clear understanding of the learning needs of persons following ostomy surgery. The person who has an ostomy can provide a wealth of knowledge in this area.

The purpose of this study is to determine the learning needs that persons with ostomies have identified. I also wish to determine if these areas of need are also identified by nurses in hospitals and E.T. Nurses.

As a person with an ostomy, I am asking your help in this research project. Participation in this study will involve the completion of the enclosed questionnaire. It will take you less than 10 minutes.

All information obtained in this study will be confidential. The completion and return of the enclosed questionnaire constitutes your willingness to participate in this study. The number in the upper left hand margin is for the purpose of second mailing only. It will be removed when your questionnaire is removed. A self-addressed stamped envelope is provided for returning this questionnaire. Please complete the questionnaire and return to me by MAY 23, 1988.

Thank you for participating in this study. Your local ostomy association will receive the results of this study upon completion.

Sincerely yours,

Linda Burdette, RN, ET
St. Luke's Hospital
Aberdeen, South Dakota
(605) 229-3280
April 25, 1988

Dear Member of the North Central Region of IAET:

The health care challenges of the 80's are unique. The nursing profession is being asked to increase quality, decrease cost, and shorten lengths of stay. As ET nurses, we know that our practice can impact all of these areas. To meet these challenges, it is essential that the care of the ostomy patient by the ET nurse be predicted by research findings.

The purpose of this study is to compare the perceptions of the following groups: persons with ostomies, Registered Nurses, and ET Nurses. This study will attempt to identify areas of agreement and disagreement between the groups involved.

As a professional involved in the care of ostomy patients, I am asking you help in this research project. Participation in this study, will involve the completion of the enclosed questionnaire. It will take you less than 10 minutes.

All information obtained in this study is confidential. The completion and return of the enclosed questionnaire constitutes your willingness to participate in this study. The number in the upper left margin is for the purpose of second mailing only. It will be removed when your questionnaire is removed. A self-addressed stamped envelope is provided for returning this questionnaire. Please complete the questionnaire and return to me by May 23, 1988.

Thank you for participating in this study. The results of this study will be distributed in the North Central IAET Newsletter.

Sincerely yours,

Linda Burdette, RN, ET
St. Luke's Hospital
Aberdeen, South Dakota
(605) 229-3280
May 20, 1988

Dear Professional Registered Nurse:

The health care challenges of the 80's are unique. The nursing profession is being asked to increase quality, decrease cost, and shorten lengths of stay. More than 100,000 persons undergo ostomy surgery each year. To meet these challenges, it is essential that the care of the ostomy patient by the professional nurse be predicted by research findings.

The purpose of this study is to compare the ostomy patient's perception and the professional nurse's perception of learning needs. This study will attempt to identify areas of agreement and disagreement between patient and nurse perceptions.

As a professional involved in patient education, I am asking your help in this research project. Participation in this study will involve the completion of the enclosed questionnaire. It will take you approximately 15-20 minutes to complete.

All information obtained in this study is confidential. The completion and return of the enclosed questionnaire constitutes your willingness to participate in this study. The number in the upper left hand margin is for the purpose of second mailing only. It will be removed when your questionnaire is returned. A self-addressed stamped envelope is provided for returning this questionnaire. Please complete the questionnaire and return to me by JUNE 13, 1988.

Thank you for participating in this study. Your hospital unit will receive the results of this study. I hope they will benefit you in providing quality patient education.

Sincerely yours,

Linda Burdette, RN, ET
St. Luke's Hospital
Aberdeen, South Dakota
(605) 229-3280
OSTOMY ASSOCIATION MEMBER QUESTIONNAIRE

PLEASE ANSWER EACH ITEM. CHECK ( ) OR FILL IN THE APPROPRIATE BLANK SPACES FOR EACH OF THE FOLLOWING ITEMS.

1. WHAT IS YOUR SEX? _____MALE _____FEMALE

2. WHAT IS YOUR AGE? ______________YEARS (PLEASE WRITE IN.)

3. WHAT IS YOUR RACE? _____ASIAN _____OTHER (PLEASE WRITE IN.)

4. WHAT IS YOUR RACE? _____BLACK _____WHITE

5. WHAT IS THE HIGHEST EDUCATIONAL LEVEL YOU HAVE COMPLETED?
   _____GRADE SCHOOL _____JUNIOR HIGH SCHOOL
   _____HIGH SCHOOL _____COLLEGE

6. WHAT IS YOUR MARTIAL STATUS?
   _____MARRIED _____SEPARATED _____DIVORCED _____WIDOWED
   _____NEVER MARRIED

7. ARE YOU CURRENTLY EMPLOYED?
   _____YES _____NO _____RETIRED

8. WHAT TYPE OF OSTOMY DO YOU HAVE?
   _____COLOSTOMY _____ILEOSTOMY _____UROSTOMY
   _____I DON'T KNOW

9. WHAT WAS THE DATE OF YOUR OSTOMY SURGERY?
   __________________________(PLEASE WRITE IN MONTH AND YEAR.)

10. WHY WAS YOUR OSTOMY SURGERY NECESSARY?
    _____ULCERATIVE COLITIS _____DIVERTICULITIS
    _____CROHN'S DISEASE _____CANCER
    _____OTHER (PLEASE WRITE IN.)

11. _
11. IS YOUR OSTOMY PERMANENT?
   ______YES ______NO ______I DON'T KNOW

12. DOES ANY OTHER MEMBER OF YOUR FAMILY HAVE AN OSTOMY?
   ______YES (PLEASE WRITE IN THE TYPE.)___________
   ______NO

13. DID AN E.T. NURSE PARTICIPATE IN YOUR CARE?
   ______YES ______NO ______I DON'T KNOW
PROFESSIONAL NURSE QUESTIONNAIRE

PLEASE ANSWER EACH ITEM. CHECK ( ) OR FILL IN THE APPROPRIATE BLANK SPACES FOR EACH OF THE FOLLOWING ITEMS.

1. WHAT IS YOUR SEX? _____MALE _____FEMALE
2. WHAT IS YOUR AGE? ________YEARS (PLEASE WRITE IN.)
3. WHAT IS YOUR RACE? _____BLACK _____WHITE
   _____ASIAN _____OTHER (PLEASE WRITE IN.)
4. WHAT IS YOUR HIGHEST NURSING EDUCATIONAL PREPARATION?
   _____ASSOCIATE DEGREE _____DIPLOMA
   _____BS (NURSING) _____BS (NON-NURSING)
   _____MASTERS (NURSING) _____MASTERS (NON-NURSING)
   _____OTHER (PLEASE WRITE IN.)
5. HOW MANY YEARS OF NURSING EXPERIENCE DO YOU HAVE IN THE FOLLOWING AREAS? (FULL-TIME EQUIVALENT)
   _____MEDICAL NURSING
   _____SURGICAL NURSING
   _____UROLOGICAL NURSING
6. HOW MANY YEARS (IN FULL TIME EQUIVALENT) HAVE YOU BEEN INVOLVED WITH OSTOMY PATIENTS? ________YEARS (PLEASE WRITE IN.)
7. ARE YOU AN E.T. (ENTEROSTOMAL THERAPY) NURSE? _____YES _____NO
   IF YES, PLEASE ANSWER THE FOLLOWING QUESTIONS?
   ARE YOU BOARD CERTIFIED? _____YES _____NO
   HOW LONG HAVE YOU BEEN PRACTICING AS AN E.T. NURSE?
   (FULL TIME EQUIVALENT) ____________YEARS (PLEASE WRITE IN.)
COLUMN 1—FOR EACH ITEM, CIRCLE HOW IMPORTANT YOU FEEL THIS TYPE OF INFORMATION IS FOR THE OSTOMY PATIENT.

<table>
<thead>
<tr>
<th>NOT IMPORTANT</th>
<th>VERY IMPORTANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

COLUMN 2—FOR EACH ITEM, PLEASE CHECK (✓) THE TIME PERIOD WHEN YOU FEEL IT WOULD BE MOST BENEFICIAL FOR THE PERSON TO RECEIVE THIS INFORMATION.

- PREOP—BEFORE SURGERY
- POSTOP—AFTER SURGERY
- POST HOSP—UP TO 6 WEEKS AFTER DISCHARGE FROM THE HOSPITAL

CHECK ONE (1) TIME PERIOD ONLY.

<table>
<thead>
<tr>
<th>INFORMATION ITEM</th>
<th>COLUMN 1 IMPORTANCE</th>
<th>COLUMN 2 TIME PERIODS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOT 1 2 3 4 5 6 7</td>
<td>PREOP POSTOP POST HOSP</td>
</tr>
<tr>
<td>1. DISEASE AND/OR REASON FOR SURGERY</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>2. STOMA DISCHARGE</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>3. RESOURCES AVAILABLE COMMUNITY AND PROFESSIONAL</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>4. WHERE TO OBTAIN OSTOMY SUPPLIES</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>5. DIETARY MODIFICATIONS NECESSARY FOR TYPE OF OSTOMY</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>6. MEDICATIONS THAT MAY AFFECT OSTOMY FUNCTION</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>7. SIGNS AND SYMPTOMS THAT SUGGEST NEED FOR MEDICAL ATTENTION</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>8. HOW TO INTEGRATE OSTOMY MANAGEMENT INTO DAILY LIVING</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>INFORMATION ITEM</td>
<td>IMPORTANCE</td>
<td>TIME PERIODS</td>
</tr>
<tr>
<td>------------------</td>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>NOT 1 2 3 4 5</td>
<td>PRE OP POST HOSP</td>
</tr>
<tr>
<td>9. BODY ALTERATIONS DUE STOMA</td>
<td>1 2 3 4 5</td>
<td>17 18</td>
</tr>
<tr>
<td>10. DIETARY MODIFICATIONS NECESSARY FOR TYPE OF OSTOMY</td>
<td>1 2 3 4 5</td>
<td>19 20</td>
</tr>
<tr>
<td>11. DIETARY MODIFICATIONS TO PREVENT/MANAGE CONSTIPATION AND DIARRHEA</td>
<td>1 2 3 4 5</td>
<td>21 22</td>
</tr>
<tr>
<td>12. IMPORTANCE OF ADEQUATE FLUID INTAKE</td>
<td>1 2 3 4 5</td>
<td>23 24</td>
</tr>
<tr>
<td>13. APPROPRIATE FORM AND ROUTE OF MEDICATIONS FOR TYPE OF OSTOMY</td>
<td>1 2 3 4 5</td>
<td>25 26</td>
</tr>
<tr>
<td>14. POUCH APPLICATION</td>
<td>1 2 3 4 5</td>
<td>27 28</td>
</tr>
<tr>
<td>15. PRECISE EXPLANATION OF EACH PIECE OF EQUIPMENT</td>
<td>1 2 3 4 5</td>
<td>29 30</td>
</tr>
<tr>
<td>16. HOW TO MEASURE STOMA</td>
<td>1 2 3 4 5</td>
<td>31 32</td>
</tr>
<tr>
<td>17. HOW TO DO IRRIGATION</td>
<td>1 2 3 4 5</td>
<td>33 34</td>
</tr>
<tr>
<td>18. CARE OF EQUIPMENT</td>
<td>1 2 3 4 5</td>
<td>35 36</td>
</tr>
<tr>
<td>19. PRINCIPLES OF SKIN CARE</td>
<td>1 2 3 4 5</td>
<td>37 38</td>
</tr>
<tr>
<td>20. ODOR CONTROL</td>
<td>1 2 3 4 5</td>
<td>39 40</td>
</tr>
<tr>
<td>21. INCISION AND PERINEAL WOUND CARE</td>
<td>1 2 3 4 5</td>
<td>41 42</td>
</tr>
<tr>
<td>22. HOW TO DRESS WITH AN OSTOMY</td>
<td>1 2 3 4 5</td>
<td>43 44</td>
</tr>
<tr>
<td>23. HOW TO TRAVEL WITH AN OSTOMY</td>
<td>1 2 3 4 5</td>
<td>45 46</td>
</tr>
<tr>
<td>24. FEELINGS RELATED TO ALTERED BODY IMAGE AND FUNCTION</td>
<td>1 2 3 4 5</td>
<td>47 48</td>
</tr>
<tr>
<td>INFORMATION ITEM</td>
<td>IMPORTANCE</td>
<td>TIME PERIODS</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>NOT 1 2 3 4 5 6 7</td>
<td>PRE OP</td>
</tr>
<tr>
<td>25. EFFECTS OF SURGERY ON SEXUALITY</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>26. FEELINGS RELATED TO CONCERN FOR THE FUTURE</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>27. POSSIBLE IMPACT ON JOB</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>28. VISIT BY OSTOMY VISITOR</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>29. ADAPTIVE CHANGES THAT MAY BE NEEDED TO PARTICIPATE IN DESIRED ACTIVITIES</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>30. HOW TO COMMUNICATE SPECIAL NEEDS TO HEALTH CARE PROFESSIONALS</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Please list any additional information items and complete as above.

| 31.                                                                                 | 1 2 3 4 5 6 7 |       |
| 32.                                                                                 | 1 2 3 4 5 6 7 |       |
| 33.                                                                                 | 1 2 3 4 5 6 7 |       |

Please return this questionnaire by June 13, 1988 in the self-addressed stamped envelope.
APPENDIX B

Summary of
Analysis of Variance
Table 11

**Analysis of Variance of Placement of Information Needs**

<table>
<thead>
<tr>
<th>Source</th>
<th>Time Period</th>
<th>DF</th>
<th>Chi-Square</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 vs 2</td>
<td>Preoperative</td>
<td>1</td>
<td>5.29</td>
<td>0.0214*</td>
</tr>
<tr>
<td>1 &amp; 2 vs 3</td>
<td>Preoperative</td>
<td>1</td>
<td>0.01</td>
<td>0.9143</td>
</tr>
<tr>
<td>2 vs 3</td>
<td>Postoperative</td>
<td>1</td>
<td>0.34</td>
<td>0.5610</td>
</tr>
<tr>
<td>1 vs 2 &amp; 3</td>
<td>Postoperative</td>
<td>1</td>
<td>4.94</td>
<td>0.0262*</td>
</tr>
<tr>
<td>2 vs 3</td>
<td>Post hospital</td>
<td>1</td>
<td>0.09</td>
<td>0.7604</td>
</tr>
<tr>
<td>1 vs 2 &amp; 3</td>
<td>Post hospital</td>
<td>1</td>
<td>15.34</td>
<td>0.0001*</td>
</tr>
</tbody>
</table>

1 = ostomates  
2 = medical-surgical nurses  
3 = E.T. nurses  

* Significance (p < 0.05)
Table 12

Analysis of Variance of Placement of Technical Ostomy—Management Skill Needs

<table>
<thead>
<tr>
<th>Source</th>
<th>Time Period</th>
<th>D/F</th>
<th>Chi-Square</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 vs 2</td>
<td>Preoperative</td>
<td>1</td>
<td>0.00</td>
<td>0.9538</td>
</tr>
<tr>
<td>1 &amp; 2 vs 3</td>
<td>Preoperative</td>
<td>1</td>
<td>0.33</td>
<td>0.5663</td>
</tr>
<tr>
<td>2 vs 3</td>
<td>Postoperative</td>
<td>1</td>
<td>1.88</td>
<td>0.1705</td>
</tr>
<tr>
<td>1 vs 2 &amp; 3</td>
<td>Postoperative</td>
<td>1</td>
<td>12.24</td>
<td>0.0005*</td>
</tr>
<tr>
<td>1 vs 3</td>
<td>Post hospital</td>
<td>1</td>
<td>0.03</td>
<td>0.8663</td>
</tr>
<tr>
<td>2 vs 1 &amp; 3</td>
<td>Post hospital</td>
<td>1</td>
<td>5.40</td>
<td>0.0201*</td>
</tr>
</tbody>
</table>

1 = ostomates
2 = medical-surgical nurses
3 = E.T. nurses

* Significance (p ≤ 0.05)
Table 13

Analysis of Variance of
Placement of Emotional Support Needs

<table>
<thead>
<tr>
<th>Source</th>
<th>Time Period</th>
<th>D/F</th>
<th>Chi-Square</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 vs 2</td>
<td>Preoperative</td>
<td>1</td>
<td>0.02</td>
<td>0.8937</td>
</tr>
<tr>
<td>1 &amp; 2 vs 3</td>
<td>Preoperative</td>
<td>1</td>
<td>5.95</td>
<td>0.0147*</td>
</tr>
<tr>
<td>2 vs 3</td>
<td>Postoperative</td>
<td>1</td>
<td>0.00</td>
<td>1.0000</td>
</tr>
<tr>
<td>1 vs 2 &amp; 3</td>
<td>Postoperative</td>
<td>1</td>
<td>1.70</td>
<td>0.1918</td>
</tr>
<tr>
<td>2 vs 3</td>
<td>Post hospital</td>
<td>1</td>
<td>0.40</td>
<td>0.5289</td>
</tr>
<tr>
<td>1 vs 2 &amp; 3</td>
<td>Post hospital</td>
<td>1</td>
<td>4.77</td>
<td>0.0289*</td>
</tr>
</tbody>
</table>

1 = ostomates
2 = medical-surgical nurses
3 = E.T. nurses

* Significance (p ≤ 0.05)