INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.
Perceptions of quality of care in the nursing home

Bell, Mary Ann, M.S.
The University of Arizona, 1992

Copyright ©1992 by Bell, Mary Ann. All rights reserved.
PERCEPTIONS OF QUALITY OF CARE IN THE NURSING HOME

by

Mary Ann Bell

Copyright © Mary Ann Bell 1992

A Thesis Submitted to the Faculty of the
COLLEGE OF NURSING
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE
In the Graduate College
THE UNIVERSITY OF ARIZONA

1992
STATEMENT BY AUTHOR

This thesis has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgement of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the copyright holder.

SIGNED: [Signature]

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

[Signature]
Christine M. Sheehy
Assistant Professor

12/10/92 Date
ACKNOWLEDGEMENTS

I would like to thank my thesis committee, Dr. Christine Sheehy, Dr. Alice Longman, and Dr. Suzanne Van Ort, for their invaluable input.

I am grateful to my family, especially Chloe and Tessa, and my friends for their continued support during my educational endeavors. Lastly, I would like to thank doctoral students, Debbe Brooks and Alice Pasvogel, for their invaluable assistance with this project.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF ILLUSTRATIONS</td>
<td>6</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>7</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>8</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>9</td>
</tr>
<tr>
<td>Background of the Study</td>
<td>9</td>
</tr>
<tr>
<td>Statement of Problem</td>
<td>12</td>
</tr>
<tr>
<td>Purpose and Research Questions</td>
<td>13</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>14</td>
</tr>
<tr>
<td>Theoretical Framework</td>
<td>16</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>22</td>
</tr>
<tr>
<td>Summary</td>
<td>23</td>
</tr>
<tr>
<td>II. SELECTED REVIEW OF THE LITERATURE</td>
<td>25</td>
</tr>
<tr>
<td>Introduction</td>
<td>25</td>
</tr>
<tr>
<td>Formal Organizations</td>
<td>25</td>
</tr>
<tr>
<td>Family and Resident Perceptions</td>
<td>25</td>
</tr>
<tr>
<td>of Quality of Care</td>
<td>25</td>
</tr>
<tr>
<td>Quality of Care and Quality of Life</td>
<td>27</td>
</tr>
<tr>
<td>The Physical Environment</td>
<td>29</td>
</tr>
<tr>
<td>Organizational Characteristics</td>
<td>33</td>
</tr>
<tr>
<td>and Quality</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>38</td>
</tr>
<tr>
<td>III. METHODOLOGY</td>
<td>39</td>
</tr>
<tr>
<td>Introduction</td>
<td>39</td>
</tr>
<tr>
<td>Research Design</td>
<td>39</td>
</tr>
<tr>
<td>Sample and Setting</td>
<td>40</td>
</tr>
<tr>
<td>Protection of Human Subjects</td>
<td>41</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>42</td>
</tr>
<tr>
<td>The Quality of Care Scale</td>
<td>42</td>
</tr>
<tr>
<td>The Environment Description Scale</td>
<td>43</td>
</tr>
<tr>
<td>Data Collection</td>
<td>45</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>46</td>
</tr>
<tr>
<td>Summary</td>
<td>48</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS, Continued

IV. RESULTS OF DATA ANALYSIS ............................................. 49
   Description of the Nursing Staff ..................................... 49
   Reliability and Validity of the Instruments ......................... 50
   Results Related to Research Questions .............................. 52
      Research Question 1 ............................................... 52
      Research Question 2 ............................................... 54
      Research Question 3 ............................................... 56
      Research Question 4 ............................................... 57
   Summary ............................................................................ 59

V. DISCUSSION AND CONCLUSIONS ......................................... 62
   Findings Related to Theoretical Framework ......................... 62
   Study Limitations ......................................................... 66
   Implications for Nursing Practice and Research .................... 67
   Summary ............................................................................ 69

APPENDIX A: HUMAN SUBJECTS APPROVAL FOR FUNDED STUDY COLLEGE OF NURSING ....................... 71
APPENDIX B: HUMAN SUBJECTS APPROVAL FOR FUNDED STUDY HUMAN SUBJECTS COMMITTEE .................. 73
APPENDIX C: HUMAN SUBJECTS APPROVAL FOR CURRENT STUDY ................................................... 75
APPENDIX D: SUBJECT DISCLAIMER - NURSING STAFF ............................................................... 77
APPENDIX E: SUBJECT DISCLAIMER - RESIDENTS ................................................................. 79
APPENDIX F: SUBJECT DISCLAIMER - FAMILIES OF RESIDENTS .................................................. 81
APPENDIX G: QUALITY OF CARE SCALE ......................................................................................... 83
APPENDIX H: ENVIRONMENT DESCRIPTION SCALE ......................................................................... 86
APPENDIX I: CONSENT FOR INSTRUMENT DEVELOPMENT ........................................................ 88

REFERENCES ........................................................................... 90
## LIST OF ILLUSTRATIONS

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Theoretical Framework for Quality of Care in the Nursing Home</td>
<td>17</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal Consistency Reliability for Two Scales</td>
<td>53</td>
</tr>
<tr>
<td>2. Central Tendency and Dispersion Measures:</td>
<td></td>
</tr>
<tr>
<td>Quality of Care Scale</td>
<td>55</td>
</tr>
<tr>
<td>3. Pearson Product Moment Correlations Between</td>
<td></td>
</tr>
<tr>
<td>Quality of Care Scale and Environment Description Scale</td>
<td>58</td>
</tr>
<tr>
<td>4. Study Nursing Home: Resident-to-Nursing Staff Ratio</td>
<td>60</td>
</tr>
</tbody>
</table>
ABSTRACT

The purpose of this study was to determine the perceptions of residents, family members, and nursing staff regarding quality of care and the physical environment in the nursing home. Relationships among quality of care, the physical environment, and selected organizational characteristics were then described. The Quality of Care Scale (QoCS) and the Environment Description Scale (EDS) were given to a convenience sample of 100 subjects.

A significant difference in perceptions of quality of care was found between the nurse assistants and residents. Significant relationships were obtained between perceptions of quality of care and the physical environment for Registered Nurses, Licensed Practical Nurses, and families. Defining quality of care and determining the significance of the physical environment from the consumer perspective may contribute to both quality of life and quality of care in the nursing home.
CHAPTER I
INTRODUCTION

Nursing homes are the dominant setting for government subsidized (e.g., Medicaid) long term care (Rivlin, Weiner, Hanley & Spence, 1988) and a cause for serious concern regarding standards and quality (Butler, 1975; Institute of Medicine (IOM), 1986; Kelly, 1991; Robbins, Stum & Sarver, 1991). Quality of care is intimately associated with quality of life for residents in nursing homes; therefore, deficiencies have received increasing attention by researchers, legislators, and the public (Bowers & Becker, 1991; Savishinsky, 1991; Ullmann, 1985). Additionally, large numbers of Americans are expected to be affected as almost a third of the population is projected to spend at least some portion of their later years in nursing homes (Alwin, 1991).

Background of the Study

In the past, assessment of quality of care focused on structure and process (Brook, Davies-Avery, Greenfield, Harris, Lelak, Solomon & Waye, 1977). The structural perspective included such factors as ratio of staff to residents and the composition or mix of skill levels of
staff (Linn, 1974; Spector & Takada, 1991), determination of optimal nursing home bed size (Greenwald & Linn, 1971; Kart & Manard, 1976; Penchansky & Taubenhaus, 1965; Riportella-Muller & Slesinger, 1982; Tobin, 1974), and organizational characteristics such as public or private financial status (Epstein, 1981; Greenwald & Linn; Linn, 1966, 1974). Process orientations were directed toward the manner of care delivery, e.g., custodial versus restorative care, and conformance to regulatory requirements (Greenwald & Linn; Levey, Ruchlin, Stotsky, Kinloch & Oppenheim, 1973; Stryker-Gorden, 1979; Sheehy, 1988; Spector & Takada). Furthermore, previous attention has been on eliminating unacceptable or poor care, rather than achieving high quality of care (Williams, 1990).

Since neither the structural nor process approaches have provided much useful information as to which ways overall quality could be improved, investigators have recently sought to evaluate quality of care in terms of outcomes (Jahnigen, Kramer, Robbins, Klingbeil & DeVore, 1985; Linn, Gurel & Linn, 1977; Schipper, Clinch & Powell, 1990; Sheehy, 1988; Thorburn & Meiners, 1986; Weissert & Scanlon, 1985). For example, mental and functional status have been associated with resident outcomes (Lichtenstein, Federspiel & Schaffner, 1985; Liu & Manton, 1983, 1984) and reduction of catheter use and inclusion of skin care
programs have been related to improved resident outcomes (Spector & Takada, 1991). For persons who are institutionalized in nursing homes, their perceptions of care also constitute an important outcome. The process of institutionalization and becoming a nursing home resident frequently changes the expectations and the perceptions of needs, as well as, the status and actual needs of the resident (Tobin, 1974; Williams, 1990). Resident input is also an important dimension of resident rights (National Citizens' Coalition for Nursing Home Reform (NCCNHR, 1985). Subjective measures are relevant to paradigms of quality (Schipper, et al., 1990). Further, a critical dimension of quality is that "...care be conducted in a relationship of mutual respect and agreement" (Williams, 1990, p. 221). This is particularly important because for many, the nursing home is their home, not a temporary abode from which they will be discharged (IOM, 1986).

A contributing factor to quality of care and life in nursing homes (and which differs from quality considerations in hospitals) is the setting in which the care is provided (IOM, 1986). The nursing home setting is intended to be homelike. However, the nursing home is a unique environment composed of characteristics of a home and an institution (Litwak, 1985). The home is a world in which individuals can create a material environment that defines what they
consider significant (Csikszentmihalyi & Rochberg-Halton, 1981). One’s home or domicile is a symbol of self; it is a shelter that defines self-symbolic environment (Cooper, 1974; Csikszentmihalyi & Rochberg-Halton). Because one’s sense of home or abode is so important and since a nursing home represents a home for residents, it might be suspected that the physical environment of the institution would have an influence on perceptions of quality care and life there.

Residents, their families, and care providers all may have different perspectives and expectations as to what constitutes quality of care (Bowers, 1988). By considering quality of care as an outcome, and by gathering information from nursing staff, residents, and residents’ families, some consensus of what constitutes quality may be reached thereby leading to improvement of care (Kruzich, Clinton & Kelber, 1992; Sheehy, 1992). Relating these views of quality of care to impressions of the physical environment of the nursing home may serve to further expand the understanding of the concept of quality.

**Statement of the Problem**

The problem investigated in this study was perceptions of residents, family members of residents, and nursing staff with regard to quality of care in the nursing home setting. Were their perceptions related to impressions of the nursing
home's physical environment, and was there a relationship among quality of care, perceptions of the environment, and selected organizational characteristics? The data used in the present study are from the larger, funded study, "The Contextual Environment of Nursing Homes" (Sheehy, 1992).

Purpose and Research Questions

The purpose of this study was threefold: 1) to compare the perceptions of residents, family members and nursing staff regarding quality of care, 2) to determine the relationship between perceived quality of care and perceptions of the physical environment of the nursing home, and 3) to determine the relationship among quality of care, perceptions of the environment, and selected organizational characteristics of the nursing home.

The following research questions were posed:

1. What are the perceptions of residents, families of residents, and nursing staff members on quality of care?

2. How do these perceptions of residents, families of residents, and nursing staff members on quality of care compare to one another?

3. What is the relationship between residents, families of residents, and nursing staff members' perceptions of
quality of care and their perceptions of the physical environment of the nursing home?

4. What are the relationships among quality of care, perception of the environment, and selected organizational characteristics of facility bed size, facility ownership, and resident-to-nursing staff ratio?

**Significance of the Study**

The demand for long term care is increasing and is expected to increase dramatically with the aging of the U.S. population. Current projections estimate that, of the 2.2 million people who became 65 in 1990, at least one third will spend three months in a nursing home, 24% one year, and 9% will spend five or more years residing in nursing homes (Kemper & Murtaugh, 1991). Nursing home utilization by the elderly is expected to increase 76% over the next 30 years with associated costs tripling by the middle of the 21st century (Alwin, 1991).

Nursing home care in the United States is inconsistent and frequently less than adequate. The Institute of Medicine released a report in 1986 with recommendations for improvement in areas of quality of care, quality of life, physical environment, and nursing care (NCCNHR, 1985). To effect changes in these areas, some consensus must be
reached on what defines quality to the consumer and caregivers in the nursing home. Improving understanding and developing mutuality of perceptions are key to achieving and sustaining quality of care (Sheehy, 1992).

Health care consumers are more knowledgeable than ever and are demanding assurance of quality care. Additionally, with the advent of quality assurance, health professionals must demonstrate their accountability in providing care to clients, to their place of employment, and to regulatory agencies (Buck, 1987; Roberts, LeSage & Ellor, 1987). The nursing home is largely a nurse managed health care setting, one in which nursing personnel (i.e., Registered Nurses (RNs), Licensed Practical Nurses (LPNs), and Nursing Assistants (NAs), provide the majority of care and can therefore make the greatest impact on the quality of care (Mezey & Lynaugh, 1989). Information gained from assessing quality can identify educational needs of the nursing staff, decrease exposure to liability, recognize staff successes, improve the documentation of nursing care, and provide the potential for improving nursing practice and hence, quality of care (Roberts, et al., 1987). It is incumbent upon nurses to assess and strive to improve the quality of care and hence the quality of life for residents in nursing homes.
Theoretical Framework

Litwak's (1985) theory that the nursing home represents a union of primary and formal groups and Bowers' (1988) purposes of caregiving provided theoretical frameworks for this research. These two frameworks coalesced to form a third, which undergirded this study (Figure 1). In this framework, formal and primary groups combine their efforts to ensure quality of care, which consisted of preservative, preventive, anticipatory, supervisory, and technical components of caregiving, in the nursing home. Given the essential five components of caregiving, quality of care is likely to vary among nursing homes. A formal organization is a composite of characteristics, some of which are common to all bureaucracies and others which are unique to a particular facility. Certain characteristics inevitably impact the quality of care in the nursing home, and it is this relationship which must be clarified. Furthermore, the physical environment is a product of the organization and provides the setting in which care is delivered. It is this setting which is a contributing factor to quality of care and quality of life in nursing homes (IOM, 1986).

Primary groups consist of family and friends who exchange services on the basis of affection, duty or respect. Caregiving that occurs in primary groups is based on love or friendship, face-to-face contact, and long term
Figure 1. Theoretical Framework for Quality of Care in the Nursing Home
commitment (Litwak, 1985). Caregiving in primary groups is based on affective ties rather than expertise to perform the tasks. A single individual can perform many tasks, regardless of expertise, and in accordance with the recipient's wishes. That same primary care member usually has only one individual to care for, thus giving the caregiver greater flexibility in managing non-uniform or unpredictable tasks that meet the recipient's needs (Litwak, 1985).

By contrast, formal organizations are characterized by a group of individuals who are recruited on the basis of technical expertise, a division of labor, governed by rules and hierarchies, and motivated by economic incentives and impersonal ties (Weber, 1947). Subdividing tasks into smaller tasks with each performed by a certain individual increases the efficiency and economy of the system (Litwak, 1985).

With seemingly contradictory structures, it does not seem possible for the two organizational forms to coexist in the nursing home setting. However, Litwak (1985) purported that not only do they coexist, but that primary groups are necessary in order for formal organizations to function well. Some tasks can be accomplished using everyday experience (primary groups) and others require special
expertise (formal groups) for completion. Hence, primary and formal groups have complimentary goals.

Building on the work of Litwak (1985), Bowers (1988) sought to further explain the contributions of formal and informal groups. In a study on family caregiving in homes, Bowers (1988) concluded that family members did not define their caregiving work as a series of tasks, but rather they distinguished the type of care by its purpose. Family caregiving based on purpose included: (1) protective/preservative care which included preserving the parent's self-concept and the parent-child relationship; (2) preventive care or preventing physical harm; (3) anticipatory care which included anticipating and preparing for future events related to the parent; (4) supervisory care or the coordination or supervision of care provided by others; and (5) instrumental/technical care or the performance of direct physical care (Bowers, 1988). When this framework was applied to the families of residents in the nursing home setting, findings again confirmed the five purposes outlined for perceptions of care and the appropriateness of the organizing scheme for another setting. Family members expected that both preservative and technical care would be components of all tasks performed by nursing home staff (Bowers, 1988).
In formal organizations, caregiving consists of performing tasks which must be routinized in the interests of efficiency and economy (Litwak, 1985). In the nursing home, labor is divided according to skill, with certain individuals performing either a single task or select parts of one task depending upon their expertise. The result is a fragmentation of caregiving with many and often different individuals providing care.

Most tasks require both primary and formal groups in order to accomplish goals. In the nursing home, the formal organization is primarily represented by the nursing staff, as they provide direct resident care on a daily basis, and family members are the predominant primary group. Caregiving in the nursing home consists of both uniform and non-uniform aspects of care, thereby necessitating an interaction of both primary and formal groups for goal attainment (Litwak, 1985). Non-uniform or unpredictable tasks (e.g., toileting needs), are most effectively managed by primary groups who provide face-to-face, continual contact with the resident, whereas uniform tasks (e.g., bathing and feeding) can be more easily routinized by formal groups. Bowers (1988) found that good quality of care was perceived to be a collaborative process between family and staff rather than just a division of tasks between them.
Litwak (1985) hypothesized that caregivers who are economically rather than affectively motivated will discover methods of making the work more manageable, predictable, and efficient. In the nursing home, economically motivated workers may cut corners risking the quality of care (Bowers & Becker, 1991). Conversely, staff members may perceive scheduling routines to be mandatory for the completion of their work, whereas individualizing care is viewed as spoiling the resident (Bowers, 1988). By contrast, Bowers (1988) found that family members perceived that qualitatively good care in the nursing home should include attention to preservative, preventive, anticipatory, and supervisory, as well as, technical aspects of care. Families perceived that staff did not provide preservative care and generally related poor care to a failure to provide one or more types of that care (Bowers, 1988).

To achieve the desired goals, in this case quality of care, it is necessary to maintain both the primary and formal groups. In order to do this, both formal and informal groups must modify their structures to minimize conflict (Litwak, 1985). Through a process of matching, a formal group task may be changed to resemble a primary group task or a primary group task may be converted to a routine (formal) task. For example, the routinization of such tasks as eating, room furnishing, and emotional support can
be partially compensated for if the resident's family provides special foods on occasion, special items for the room, and emotional support with weekly contacts (Litwak, 1985). It is through mutual interest and goal-directed efforts that the primary group (families) and the formal group (nursing staff) should strive to provide quality of care, which must consist of preservative, preventive, anticipatory, supervisory, and technical components of caregiving, for the nursing home resident.

**Definition of Terms**

**Nursing Home Physical Environment:** Physical environment was measured by the Kasmar Environment Description Scale (1970) which yields a quantifiable impression of the overall physical environment.

**Quality of Care:** Quality of care was operationalized by the Quality of Care Scale (Sheehy, 1992). The scale is organized and based on the five purposes of quality of care identified by Bowers (1988) to be of most importance to families: preservative/protective, preventive, anticipatory, supervisory, and technical/instrumental care.

**Perceptions:** Perceptions was defined as the ability to perceive, comprehend, and understand, by means of the senses, a concept or a specific idea (Guralnik, 1970).
Organizational Characteristics: Organizational characteristics were defined as the distinguishing traits and features of a systematized whole; a consolidation of elements which form a structure (Guralnik, 1970). For this study, the systematized structure was the nursing home and the selected characteristics were facility bed size, facility ownership, and resident-to-nursing staff ratio. Information regarding these organizational characteristics was obtained from facility records.

Summary

The concept of quality of care has been studied from structure and process perspectives and most recently in terms of outcome. In an attempt to quantify quality of care delivered in the nursing home, outcomes such as resident functional status have been measured. The physical environment of the nursing home, and its meaning as both a home and institution differs significantly from acute care hospitals; thereby complicating the measurement of certain outcomes. Quality of life is intimately associated with the quality of care in the nursing home. By studying quality of care as an outcome and by examining the perceptions of residents, family members, and nursing staff, better understanding of what constitutes good quality of care can
be gained. This knowledge can then be used in effecting positive changes in the nursing home setting.
CHAPTER II
REVIEW OF THE LITERATURE

Introduction
The selected review of the literature for this study was organized according to Litwak's (1985) framework of formal and informal groups, Bowers' (1988) purposes of caregiving, and the researcher's framework which conceptualized quality of care in the nursing home as the sum of purposes of caregiving provided by both formal and informal groups. This chapter is organized as follows: perceptions of quality of care, quality of care and quality of life, the physical environment, and organizational characteristics and quality.

Formal Organizations
Family and Resident Perceptions of Quality of Care
Bowers (1988) used a grounded theory approach to investigate family caregiving in the nursing home setting. In a study of family members (N=28) of nursing home residents, family members were asked to evaluate the care provided by the staff through direct observation, indirect observation, and assessment of outcomes. On the basis of family interviews, Bowers (1988) ascertained that quality of
care by the staff should include both preservative and technical care. Furthermore, families perceived quality care to be a collaboration between staff and family, not a division of labor between the two groups. Because of their access to biographical expertise, the family members not only claimed responsibility for teaching staff members how to deliver high quality care but implemented this strategy with respect to teaching the preservative care aspect. Families also considered that assisting their relative to maintain control over their environment was another vital aspect of preservative care.

Robbins, et al. (1991), interviewed family members (N=25) of nursing home residents regarding quality of care and analyzed the content of the interviews using the Minnesota Contextual Content Analysis (MCCA) computer analysis program. The authors found that families often shared similar perceptions of quality and were satisfied overall with both the quality of care and life for the residents. Specifications of what constituted quality were not elucidated.

Stein, Linn and Stein (1986) studied how the stress of institutionalization impacted the residents' perception of quality of care. The 20-item Stresses in Institutional Care Scale, including five subscales (r=.62 to.93), was administered to residents (N=111) upon admission to the
nursing home, at one month, and at three months after admission. All nursing homes were independently rated from excellent to poor by a social worker and nurse who were familiar with the facility and care, but who were not employed by the facility. The global rating was based on their experience with that home. Intraclass correlation between the two raters was performed ($r = .80$). The authors found that for those in nursing homes rated excellent, the residents’ perceived quality of care with regard to their need for tender loving care, declined in one month and again in three months. For those in good and poor homes, time did not appear to increase or lessen their level of concern regarding this measure.

**Quality of Care and Quality of Life**

Quality of life is a recurring theme in the quality of care literature. The NCCNHR (1985) interviewed residents ($N = 455$) of nursing homes with the purpose of defining quality of care as interpreted by the resident and explicating how to achieve both quality of life and care for them. The respondents identified staff to be the most important indicator of quality of care with environmental factors ranking second. According to the residents, quality care consisted of individualized and personalized care and allows independence and autonomy. One limitation of this study was that the sample was not solely representative of
the elderly, as residents from 20-102 years of age were included.

Harel (1981) interviewed residents (N=125) on seven measures of well-being, which included continuity with things and people, personal life, integration, basic needs, and social needs gratification. The residents ranked continuity of social ties with one’s own cohort as the most important to their life satisfaction.

In an attempt to examine both organizational and resident variables and their relationship to residents’ satisfaction with nursing homes, Kruzich, et al. (1992), studied residents (N=289) from 76 different nursing home units. Additionally, nurse aides (N=283), all charge nurses, directors of nursing, and home administrators were surveyed. Nursing home satisfaction was measured by the 17-item Satisfaction with Nursing Home Scale, which has a reported reliability coefficient of .88 (Kane & Kane, 1987). The MEAP (Moos & Lemke, 1984) was used for environmental assessment. In addition to organizational variables, resident variables were assessed with a variety of instruments, including ADL scales and a health index. With respect to organizational variables, there was a lack of predictive power on resident functions. Organizational variables explained 11% of resident satisfaction with the home and resident variables explained 17% of the variation.
When combined, 21% of the variation was accounted for in nursing home satisfaction. Additional findings associated with higher resident satisfaction with the nursing home included: environmental attractiveness, lower proportion of skilled nursing residents on their unit, and residents who made the choice to live at a particular facility (Kruzich, et al., 1992).

The Physical Environment

When evaluating quality of care in nursing homes, elements of the physical environment must be considered. Aspects of the physical setting contribute to one’s overall impression of the environment and the ways in which it influences people (Sheehy, 1992). Some environments are more conducive to positive affective states, whereas others may elicit more negative emotional responses (Alexander, Anninou, Black & Rheinfrank, 1987).

People are sensitive to perceptual cues within their architectural environments (Kasmar, 1970). Such cues, which include the purpose of a space, the behavior appropriate to the space, and the type of persons who live in a given space, may be interpreted differently by individuals (Kasmar, 1970). Neutra (1954) purported that architecture not only shapes and conditions human responses, but reflects one’s behavior and living. In studies of milieu therapy, researchers found that impressions of a psychiatric hospital
varied greatly for mental health clients and "normal" clients (Baker, Davies & Sivadon, 1959; Berger & Good, 1963). In recognizing that individuals are sensitive to the environment and its influence, it becomes important to elicit individual impressions to develop a safe and pleasing home and work environment for nursing home residents and nursing staff.

Numerous studies in environmental psychology have focused on the importance of environmental symbolism, or the notion that physical objects and places acquire social meaning through time and experience (Csikszentmihalyi & Rochberg-Halton, 1981; Stokols & Shumaker, 1981). Symbols have aspects of differentiation and integration. Those of differentiation are symbols of the self, the uniqueness of the individual, whereas symbols of integration represent the shared self or similarity between oneself and others (Csikszentmihalyi & Rochberg-Halton). In a study of families (N=82), Csikszentmihalyi and Rochberg-Halton (1981) found that the most cherished objects in the home were furniture, visual artwork, photographs, books, and television in descending order of importance. These objects served as expressions of our image of ourselves (Cooper, 1974).

In a review article, Garling (1982) described numerous studies done in Sweden on the meaning of environment,
affective response and activation level, and how these related to perceptions of pleasantness or negativity of the environment. The influence of light and illumination have been studied particularly in regard to seasonal changes and on affective illness, such as depression (Wehr & Rosenthal, 1989). The amount of physical space has been shown to correlate with affective states. In a study of community dwelling older adults, the incidence of depression decreased as the number of rooms in their abode increased (Murrell, Himmelfarb & Wright, 1983).

Color may evoke emotions or affect mood. The color red corresponds to greater warmth and less calming effect, while blue connotes calmness (Wright & Rainwater, 1962). Kwallek and Robbins (1988) found higher anxiety and stress scores in a study of 36 persons who spent time typing in a red colored room as opposed to those who spent time typing in a blue colored room. Although the samples for these studies were small, other researchers have confirmed the supposition that red produces a higher arousal state by measuring skin resistance and conductance levels (Jacobs & Suess, 1975; Wilson, 1966).

In a study focusing on the affective meaning of colors and lines, individuals (N=40) selected adjectives that best conveyed the meaning of color and lines in artwork shown to them (Hevner, 1935). Straight lines conveyed sadness and
dignity, angles conveyed robustness, and curves were more serene and lyrical.

Music evokes a variety of moods, feelings and emotions (Hevner, 1936, 1937). Two modes of music have been identified and correlated with affective moods. The major mode suggests gaiety and happiness, whereas the minor mode connotes sadness and melancholy. Hevner (1935) found that even those individuals with no musical ability or training could correctly identify the major and minor modes of music when given a list of descriptive adjectives.

There are few studies on how environment affects older persons. Kahana (1982) interpreted the concept of congruence, or person-environment match, between environmental characteristics and individual needs. In a study testing different congruence models, Kahana, Liang and Felton (1977) concluded that individual preference and institutional control correlated with morale in a sample (N=124) of elderly persons, with morale being higher for those persons whose needs were met in a particular institutional environment. Adapting the physical environment to the individual decreases stress and ultimately contributes to a sense of well-being for the older person.
Organizational Characteristics and Quality

Numerous studies have focused on the relationship between quality and organizational characteristics of the nursing home. Facility size and its relationship to quality of care has been a variable of interest. Just how nursing home size affects quality of care is not clear (Riportella-Muller & Slesinger, 1982). Using the 71-item Nursing Home Rating Scale (NHRS) in 26 nursing homes, Greenwald and Linn (1971) found that as nursing home size increases, the overall favorable impression of the home decreases. Linn (1974) demonstrated similar findings for nursing homes (N=40); as size increased, quality ratings declined (p=.01).

Riportella-Muller and Slesinger (1982) used data from 462 Wisconsin nursing homes regarding state regulatory violations and complaints registered with the state ombudsman. For this study, the complaint data were equated with perceived quality of care by nursing home residents and staff members. The results demonstrated that the larger nursing homes had both more complaints and violations with the total number of violations (r=.18) correlating significantly (p<.001) with complaints. Kosberg and Tobin (1972) analyzed data from the state Welfare Council, Hospital Planning Council, and other local and state agencies for 214 nursing homes to determine the extent of resources in a nursing home facility with regards to nursing
staff, staff mix, records, facilities, and medical
treatment. The extent of resources correlated positively
with the size of the nursing home. In a study of Ohio
proprietary nursing homes, Curry and Ratliff (1973) found
that residents of smaller facilities were less likely to be
isolated from family and friends than those in larger
nursing homes.

Facility ownership is an organizational characteristic
that has been frequently linked to quality of care in the
literature. Winn and McCaffree (1976) compared the ranking
of nursing homes by selected administrators with data from
the National Center for Health Statistics on aspects of
efficiency and effectiveness, resulting in no significant
difference on the basis of nursing home ownership. Levey,
et al. (1973), studied 129 nursing homes using a nine-
component aggregate quality of care scale and found no
significant differences in quality of care based on facility
ownership. Analyzing data from 461 New York nursing homes,
Elwell (1984) concluded similarly that ownership had no
significant effect on quality of care.

Fottler, Smith and James (1981) suggested that profit
and quality of care may be antithetical. In a study of
proprietary nursing homes (N=43), the authors examined
annual facility census and revenue reports submitted to the
state of California and found that profits increased when
the intensity of patient care services decreased.

Lemke and Moos (1989) used the Multiphasic
Environmental Assessment Procedure (MEAP) to measure the
resources of residential settings (N=132) for older persons
in terms of four dimensions: aggregate resident and staff
characteristics, social climate, physical features, and
policies and services. The MEAP consisted of four
instruments: the Resident and Staff Information Form
(alpha=.95), Physical and Architectural Features Checklist
(alphas=.70 to .72), Policy and Program Information Form
(alphas=.71 to .80), and Sheltered Care Environment Scale
(alphas=.52 to .69) (Moos & Lemke, 1984). Multivariate
analysis of variance was significant for facility
characteristics, e.g., building size and age, (F=6.69,
p<.001) and for quality indices (F=6.69, p<.001). These
authors concluded that non-profit facilities were superior
in areas that are difficult to regulate such as physical
environment, comfort, and social environment. One
limitation of this study was that sampling was done in a
variety of residential care settings, some of which were not
representative of the nursing home population.

The nursing care variable has been cited as one
affecting both structural and process characteristics of the
nursing home. In a study of nursing homes (N=40), Linn
(1974) found that nursing homes with a higher staff-to-patient ratio attained a more favorable rating, which was statistically significant ($p=.01$). Gottesman and Bourestom (1974) selected three observable measures that reflected quality of care in the nursing home, personal care and activities of daily living (ADLs), medical and rehabilitation services, and psychological-social services, and two measures indicating less desirable care, passive and null activity. The characteristics most strongly related to the amount of nursing care observed were: (1) private pay status of the residents, (2) Caucasian resident ethnicity, and (3) the nursing home was either non-profit or proprietary, with private pay residents composing at least two thirds of the home population.

Another line of inquiry in the literature has focused on the relationship between organizational characteristics and outcome measures of resident function. In a study by Linn, Gurel and Linn (1977), 1000 male patients who were discharged from a Veterans Hospital to 40 community nursing homes were followed at six months to reassess their functional status. Homes with greater Registered Nurse hours per patient were associated ($p=.05$) with patient survival, patient improvement, and patient discharge from the nursing home. Lewis, Cretin, Kane and Clark (1985) studied nursing home residents ($N=563$) and concluded that
those with the financial resources to pay for their own care were more likely to return home at the time of discharge from a nursing home.

Spector and Takada (1991) focused on resident outcomes of mortality and functional changes in a sample of Rhode Island nursing home residents (N=2500). The researchers found that resident outcomes were significantly improved (p=.01) when a skin care program was in place.

Lichtenstein, et al. (1985), studied 49 decedent/survivor pairs from 13 nursing homes who were admitted to the facility during the same year. The researchers concluded that activities of daily living status on admission was a discriminator between decedents and survivors. One limitation of the study was that activities of daily living scores were based on the initial nursing assessment, which was not performed exclusively by the same nurse.

There is either no linkage of input measures to output measures or no suggestions on how to improve quality of care in the aforementioned studies. By defining quality of care as an outcome and by gathering information from the residents, families of residents, and nursing care providers, decision makers can ascertain how organizational characteristics influence the individual resident. Input measures of quality are more valuable when related to the
needs of the residents served in the nursing home setting (Kruzich, et al., 1992).

**Summary**

The selected review of the literature was organized according to the theoretical frameworks of Litwak (1985) and Bowers (1988), which focused on formal and informal groups in the nursing home. Organizational characteristics, including bed size, facility ownership, resident-to-nursing staff ratio, and resident outcomes were discussed with respect to quality of care in the formal group setting. People influence and are influenced by their physical environment. Elements of the physical environment, including color, space, and physical objects, may contribute to one's overall perceptions of quality of care in the nursing home. The informal group perspective focused on family and resident perceptions of care. Quality of life for the resident is linked to perceptions of quality of care, thereby justifying an emphasis on subjective assessment provided by informal groups.
CHAPTER III
METHODOLOGY

Introduction
The purpose of this study was: (1) to compare the perceptions of residents, family members, and nursing staff regarding quality of care, (2) to determine the relationship between perceived quality of care and perceptions of the physical environment of the nursing home, and (3) to determine the relationships among quality of care, perceptions of the environment and selected organizational characteristics of the nursing home. The study was organized according to Litwak's (1985) and Bowers' (1988) models and the researcher's conceptualization of an expanded model which encompasses both. The methodological considerations for this study are addressed in this chapter. The research design, the study sample and setting, protection of human subjects, instrumentation, data collection procedures, and methods of data analysis are described.

Research Design
This study was a secondary analysis of data collected for the funded project, "The Contextual Environment of
Nursing Homes" (Sheehy, 1992). A cross-sectional descriptive design was used in collecting data on resident, family, and staff perceptions of quality of care and on their perceptions of the nursing home physical environment. The data from one nursing home were used for this study.

Organizational characteristics included facility ownership, bed size, and resident-to-nursing staff ratio. Facility ownership options were proprietary-independent, proprietary-chain, public-state, and public-federal. Bed size indicated the number of operating beds in use. Resident-to-staff ratio was measured as the average number of residents assigned to each member of the nursing staff per shift.

Sample and Setting

The study sample consisted of three groups (i.e., nursing home residents, family members of residents, and nursing staff), in one nursing home. All study participants were enrolled as a convenience sample. The resident sample consisted of 27 individuals. Criteria for inclusion were: (1) English speaking, (2) intact cognitive function, and (3) ability to read the questionnaire independently and write or verbalize their response to the questions. All participating residents were required to attain a minimum score of seven correct responses on the Short Portable
Mental Status Questionnaire (SPMSQ) (Pfeiffer, 1975). The SPMSQ was used as a screening tool to ascertain resident mental status. Family members (N=14) from the study nursing home were contacted. Contacts were made by the research assistants of the larger, funded project, "The Contextual Environment of Nursing Homes" (Sheehy, 1992). Staff members, including six RNs, 15 LPNs, and 38 NAs were identified from a directory of employees provided by the Director of Nursing of the facility. Temporary agency personnel who were on duty at the time of data collection were also invited to participate.

This study was conducted in one southern Arizona community nursing home. This 240-bed facility is proprietary and under the ownership of a national chain. Verbal consent to conduct the study was granted to the principal investigator for the funded study, "The Contextual Environment of Nursing Homes" (Sheehy, 1992).

**Protection of Human Subjects**

Approval was obtained from the Human Subjects Committee of the University of Arizona (Appendixes A, B and C). The study was given exempt status, therefore a disclaimer, rather than a consent form, was appropriate. This study is part of a larger funded project: "The Contextual Environment of Nursing Homes" (Sheehy, 1992).
The Subject Disclaimer preceded the questionnaire which was given to each participant (Appendixes D, E and F). Confidentiality was assured by use of numerical codes with the name matched list maintained separately.

Instrumentation

The variables quality of care and nursing home environment were operationalized by two instruments. The Quality of Care Scale (QoCS) (Sheehy, 1992), was used to measure perceived quality of care in the nursing home (Appendix G). Nursing home environment was measured using an abbreviated version of the Environment Description Scale (EDS) (Kasmar, 1970) (Appendix H).

The Quality of Care Scale (QoCS)

The QoCS is an instrument being developed by the principal investigator of the funded study, "The Contextual Environment of Nursing Homes" (Sheehy, 1992). The instrument is based on the conceptual domains of quality of care developed by Bowers (1988). Item statements were created from Bowers' qualitative findings with the author's permission (Appendix I). The categories measured by the instrument are caregiver role negotiation, preservative care, preventive care, supervisory care, and instrumental/technical care. Protective/preservative care referred to care which protects or maintains the resident's
self-concept or maintains the adult offspring's perceptions of that self (Bowers, 1988). Instrumental/technical care involved the performance of direct physical care tasks. Supervising or coordinating care provided by others denoted supervisory care. Bowers (1988) defined preventive care as that which prevents physical harm to the parent (resident). The scale is rated from one to five as "strongly agree" to "strongly disagree". A score of three indicates undecided. For the present investigation, the QoCS consisted of 30 items. The instrument has face validity based on qualitative findings. Construct validity was assessed for this sample by Principal Components factor analysis. Cronbach's alpha (Cronbach & Meehl, 1955) was calculated for the study sample.

The Environment Description Scale (EDS)

It has been suggested that people are sensitive to and respond to cues in the environment (Kasmar, 1970). The Environment Description Scale (EDS) (Kasmar, 1970) was developed with the aim of providing laypersons with a meaningful and relevant vocabulary for describing their physical environment. When the EDS was first developed, 197 pairs of adjectives were included. This number was reduced to 113 pairs after an initial study in which students (N=92) ranked the appropriateness of each adjective pair. To determine internal consistency reliability, an adjective
pair was eliminated if it had (1) a median at or below 6.00, (2) an interquartile range of 5.00 or larger, and (3) seven or more question mark ratings.

A second study was conducted by Kasmar to determine the appropriateness of the adjective pairs for describing specific environments. Sixty-four students rated the adjectives on their appropriateness in describing six environments (e.g., a library, a church). The same procedure for obtaining internal consistency reliability was followed as in the first study. The reliability coefficients for each specific environment and the combined environments were significant beyond the .01 level. The 66 adjective pairs which were retained had a median of 7.00 or greater, 75% of all ratings on appropriateness were above 7.50, and interquartile ranges were less than 3.00, and no more than 3% question marks on obtained ratings (Kasmar, 1970).

A third round was performed. The 66 remaining adjective pairs were set up as seven-point rating scales, with bipolar terms on either end of the continuum (e.g., colorful-drab). A sample of students (N=100) rated each of three rooms. For each item pair, respondents were instructed to select the number along the continuum that best conveyed their perception of the environment. The stability coefficient of room ratings was computed using the
Pearson Product Moment Correlation ($r = .68$) and found to be significant ($p > .01$) (Kasmar, 1970). Internal consistency reliability, construct validity, and stability coefficient/test retest reliability have been reported to be significant beyond the .01 level (Kasmar, 1970).

During the initial pilot phase of the funded nursing home study from which data were used (Sheehy, 1992), the EDS was again evaluated. Thirty of the most salient adjective pairs were selected. The 30-item instrument was given to nursing staff in two nursing homes other than the one employed in this study. The reported alphas were .94 and .95 respectively. To reduce the length of the questionnaire and redundancy in items, the EDS was further abbreviated to an 11-item pair form. The 11-item pair form was used in this study. Construct validity was assessed for this sample by Principal Components factor analysis. Cronbach's alpha (Cronbach & Meehl, 1955) was calculated to determine internal consistency reliability.

**Data Collection**

All subjects were recruited voluntarily to participate in the study. The residents and family members of residents were approached and invited to participate by the research assistant. A brief explanation of the study and the subject disclaimer was given. Residents were administered the
10-question SPMSQ verbally. If seven questions were answered correctly, the residents were instructed to complete the questionnaire while the research assistant remained nearby and available for questions. For those with disabilities of the upper extremities, the research assistant was available to mark chosen answers. The family members were asked to complete forms promptly and return them to the researcher or return them to deposit boxes maintained on all units.

The questionnaires for the staff participants were either handed to them personally or given to the shift charge nurse on the unit with a request that their co-workers on that shift be given one. Regardless of the method, a brief explanation of the study was given to the contact person with an invitation to participate. The staff members were asked to return their questionnaires to the deposit boxes. Information on selected organizational characteristics of the nursing homes was gathered from the Director of Nursing and the Administrators.

Data Analysis

Data were analyzed for the following research questions:

1. What are the perceptions of residents, families of residents, and nursing staff members on quality of care?
2. How do these perceptions of residents, families of residents, and nursing staff members on quality of care compare to one another?

3. What is the relationship between residents, families of residents, and nursing staff members' perceptions of quality of care and their perceptions of the physical environment of the nursing home?

4. What are the relationships among quality of care, perception of the environment, and selected organizational characteristics of facility bed size, facility ownership, and resident-to-nursing staff ratio?

Research question one was analyzed using measures of central tendency and dispersion. One-way analysis of variance (ANOVA) was used to compare the perceptions of quality of care of the nursing staff, residents, and family members in research question number two. Research question three was analyzed using Pearson's product moment correlation to describe the relationship between perceptions of quality of care and perceptions of the environment. Research question four was described primarily in qualitative terms, and in relationship to associations identified in research question three.
Summary

The methodology for this study was detailed in this chapter. The research design, the study sample and setting, protection of human subjects, data collection methods, and the plan for data analysis were described. The instrumentation employed for data collection was the developmental Quality of Care Scale (QoCS) and a refined Environment Description Scale (EDS).
CHAPTER IV
RESULTS OF DATA ANALYSIS

The results of the data analysis are presented in this chapter. The sample is described and the reliability and validity of the Quality of Care Scale (QoCS) and the Kasmar Environment Description Scale (EDS) are presented. Correlational statistics were used to describe the relationship between perceptions of quality of care and perceptions of the physical environment.

Description of the Nursing Staff

The convenience sample included 6 RNs, 15 LPNs, 38 NAs, 27 residents, and 14 family members from one southern Arizona nursing home. These numbers reflect a resident response rate of 100%; for the remaining groups, the numbers reflect a 50% response rate.

The age of nursing staff participants was as follows:
(1) RNs - 30-58 years with a mean age of 43 years (SD 9.8);
(2) LPNs - 20-52 years with a mean of 40 years (SD 10.6); and
(3) NAs - 19-57 years with a mean age of 35.7 years (SD 11.0). Four of the RN respondents were female, with 15 female LPNs, and 36 female NAs. The mean salary for RNs was $31,667 per annum (range $20,000-42,000), $18,887 for LPNs
(range $5,000-23,400), and $9,940 for NAs (range $5,000-14,000). Sixty-seven percent of the RN respondents were employed full time, as were 81% of the LPNs, and 90% of the NAs. Of the RN respondents, three had completed an Associate Degree in Nursing, one a Bachelors Degree in Nursing, and two had completed an Associate Degree in another area of study.

**Reliability and Validity of the Instruments**

The data used in the present study are part of a larger, funded study, "The Contextual Environment of Nursing Homes" (Sheehy, 1992). The internal consistency reliability of both the 30-item Quality of Care Scale (QoCS) and the 11-item Environment Description Scale (EDS) were obtained for this study using Cronbach's alpha (Cronbach & Meehl, 1955).

The QoCS was composed of five subscales: negotiation of care (NEGOT), preservation of the dignity of the resident (PSERV), technical aspects of the care rendered (TECH), the supervision of the care (SUPER), and the prevention of harm to the resident (PVENT). Initial analysis of the QoCs revealed an operational problem with the first subscale concerning negotiation of care (NEGOT). The negotiation scale was intentionally not administered to nursing home residents, because the questions were not appropriate for
the resident's perspective. The questions pertained to whether and how well, families were made to feel like partners in the negotiation of roles (i.e., between staff and family) in providing care to residents. Pilot data from the original two nursing homes (i.e., in the funded project) indicated that residents had little or no knowledge of their families' participation and negotiation of care. Therefore, questions in the three-item negotiation subscale were not administered to residents.

However, when data from the current investigation were analyzed, it was discovered that the SPSS statistical program, dropped nearly half of the sample size for the resident/family analysis, since the resident omissions were counted as missing data rather than non-administration/non-response. Therefore, the scale was revised to indicate the remaining four subscales, and all reliabilities (i.e., coefficient alphas) and evidence of validity (i.e., Principal Components factor analysis) for this study are based on instrument totals from the remaining four subscales.

Internal consistency reliability for the QoCS was determined for each of four subscales. Coefficient alpha was performed for two sample groups: (1) the combined nursing staff data (i.e., RN, LPN, NA), and (2) resident/family data. Internal consistency reliability was
determined for each of the subscales on the QoCS, rather than for the total scale. This was done because the sample size for this study (i.e., 59) was smaller than that recommended for analysis (i.e., five subjects per item) of a 30-item instrument. Fifty-nine subjects would not have been 50% of the number required (i.e., 135 subjects).

Coefficient alphas for the combined RN/LPN/NA group on the subscales of the QoCS ranged from .82 to .89 and for combined resident/family data ranged from .67 to .91. The RN/LPN/NA mean inter-item correlations ranged from .46 to .51 and for resident/family .27 to .65 (Table 1).

For the 11-item EDS, coefficient alpha for the combined RN/LPN/NA data was .92 and for resident/family .93. Mean inter-item correlations were .51 and .56, respectively (Table 1).

Principal Components factor analysis was performed to assess the construct validity of measures. For the QoCS, the instrument explained 75.8% of the variance. For the EDS, the instrument explained 69.2% of the variance.

Results Related to Research Questions

Research Question 1. What are the perceptions of residents, families of residents, and nursing staff members on quality of care?
Table 1. Internal Consistency Reliability for Two Scales

(1) Quality of Care Scale

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Combined RN/LPN/NA (n=59)</th>
<th>Combined Family/Resident (n=41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean inter-item</td>
<td>.46</td>
<td>.27</td>
</tr>
<tr>
<td>correlation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpha</td>
<td>.85</td>
<td>.67</td>
</tr>
<tr>
<td>Technical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean inter-item</td>
<td>.51</td>
<td>.43</td>
</tr>
<tr>
<td>correlation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpha</td>
<td>.89</td>
<td>.88</td>
</tr>
<tr>
<td>Supervisory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean inter-item</td>
<td>.49</td>
<td>.65</td>
</tr>
<tr>
<td>correlation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpha</td>
<td>.84</td>
<td>.91</td>
</tr>
<tr>
<td>Preventive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean inter-item</td>
<td>.51</td>
<td>.56</td>
</tr>
<tr>
<td>correlation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpha</td>
<td>.82</td>
<td>.86</td>
</tr>
</tbody>
</table>

(2) Environment Description Scale

<table>
<thead>
<tr>
<th>Category of Respondent</th>
<th>Combined RN/LPN/NA (n=59)</th>
<th>Combined Family/Resident (n=41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean inter-item</td>
<td>.51</td>
<td>.56</td>
</tr>
<tr>
<td>correlation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpha</td>
<td>.92</td>
<td>.93</td>
</tr>
</tbody>
</table>
Measures of central tendency and dispersion were used to analyze this question. The sample was normally distributed for all sample groups (Table 2) with regard to their perceptions of quality of care within each quality of care subscale. Overall mean scores were higher for the technical and preservative care subscales for all groups of respondents.

The data also indicated broad ranges among NAs, LPNs, and family members on the preservative subscale and among LPNs, NAs, residents, and family members on the technical subscale. Similarly, there were broad ranges among LPNs, NAs, and residents with regard to the subscales for supervisory care. Table 2 summarizes the measures of central tendency and dispersion.

**Research Question 2.** How do these perceptions of residents, families of residents, and nursing staff members on quality of care compare to one another?

One-way analysis of variance (ANOVA) was used to compare perceptions of quality of care among residents, families of residents, and nursing staff members. For each of the three subscales, preservative ($F=1.83$, $p=.13$), supervisory ($F=1.83$, $p=.15$), and preventive ($F=.99$, $p=.42$), no significant differences in perceptions of quality of care were found. On the fourth subscale (technical), a difference ($F=2.54$, $p=.046$) was found.
Table 2. Central Tendency and Dispersion Measures: Quality of Care Scale (n=100)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preservative Staff</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td>22.80</td>
<td>3.43</td>
<td>18-28</td>
</tr>
<tr>
<td>LPN</td>
<td>25.90</td>
<td>6.31</td>
<td>16-34</td>
</tr>
<tr>
<td>NA</td>
<td>28.90</td>
<td>5.77</td>
<td>11-35</td>
</tr>
<tr>
<td>Families</td>
<td>28.20</td>
<td>7.15</td>
<td>6-34</td>
</tr>
<tr>
<td>Residents</td>
<td>28.10</td>
<td>5.04</td>
<td>14-35</td>
</tr>
<tr>
<td><strong>Technical Staff</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td>29.30</td>
<td>4.89</td>
<td>20-34</td>
</tr>
<tr>
<td>LPN</td>
<td>34.40</td>
<td>5.64</td>
<td>26-45</td>
</tr>
<tr>
<td>NA</td>
<td>37.50</td>
<td>7.76</td>
<td>27-45</td>
</tr>
<tr>
<td>Families</td>
<td>38.00</td>
<td>6.05</td>
<td>27-45</td>
</tr>
<tr>
<td>Residents</td>
<td>33.10</td>
<td>9.79</td>
<td>12-45</td>
</tr>
<tr>
<td><strong>Supervisory Staff</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td>18.00</td>
<td>4.20</td>
<td>12-24</td>
</tr>
<tr>
<td>LPN</td>
<td>21.60</td>
<td>5.80</td>
<td>11-30</td>
</tr>
<tr>
<td>NA</td>
<td>22.50</td>
<td>5.60</td>
<td>5-30</td>
</tr>
<tr>
<td>Families</td>
<td>24.40</td>
<td>3.70</td>
<td>20-30</td>
</tr>
<tr>
<td>Residents</td>
<td>23.70</td>
<td>6.10</td>
<td>8-30</td>
</tr>
<tr>
<td><strong>Preventive Staff</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td>17.30</td>
<td>4.80</td>
<td>8-21</td>
</tr>
<tr>
<td>LPN</td>
<td>20.30</td>
<td>3.57</td>
<td>15-25</td>
</tr>
<tr>
<td>NA</td>
<td>20.80</td>
<td>4.07</td>
<td>8-25</td>
</tr>
<tr>
<td>Families</td>
<td>19.20</td>
<td>4.40</td>
<td>10-25</td>
</tr>
<tr>
<td>Residents</td>
<td>19.80</td>
<td>4.96</td>
<td>9-25</td>
</tr>
</tbody>
</table>
When the total QoCS was analyzed, a significant difference ($F=3.40$, $p=.01$) was found between the resident and NA groups. Differences between the groups were analyzed using one-way analysis of variance (ANOVA). However, ANOVA does not indicate precisely where the between group differences have occurred. Therefore the Tukey procedure was computed (Munro, Visintainer & Page, 1986). "Tukey's procedure makes use of the studentized range applicable to pairwise comparisons of means" (Steel & Torrie, 1980, p. 185). It uses a single value for including the statistical significance of all differences (Steel & Torrie). "All pairs of means constitute a family, and error rate is familywise..." (Steel & Torrie, 1980, p. 185). The procedure consists of computing a critical value and applying it to differences between all pairs of means. The Tukey Procedure detected a difference, significant at the 0.05 level of probability, between the NA group and the resident group regarding their perceptions of quality of care. The average score on the OoQS for residents was significantly lower ($\bar{X}=97.63$) than that for NAs' scores ($\bar{X}=116.08$).

Research Question 3. What is the relationship between residents, families of residents, and nursing staff members' perceptions of quality of care and their perceptions of the physical environment of the nursing home?
Perceptions of the physical environment were measured by the Environment Description Scale (EDS) (Kasmar, 1970). The Pearson Product Moment Correlation was calculated to examine the relationship between perceptions of quality of care and perceptions of the physical environment of the nursing home. Statistically significant relationships were found between perceptions of quality of care and the physical environment of the nursing home for RNs ($r = .78$, $p = .01$), LPNs ($r = .83$, $p = .01$), and family members ($r = .79$, $p = .01$). The strong positive correlations indicated that the respondents perceived a relationship between quality of care and physical environment (Table 3). In addition, ANOVA was used to compare the differences between groups on their perceptions of the physical environment. Further analysis by the Tukey Procedure showed a significant difference ($F = 3.66$, $p = .008$) regarding perceptions of the environment between the RN group ($\bar{X} = 44.17$) and the resident group ($\bar{X} = 62.89$).

Research Question 4. What are the relationships among quality of care, perception of the environment, and selected organizational characteristics of facility bed size, proprietary status, and resident-to-nursing staff ratio?

Correlations were previously presented for the relationship between quality of care and perception of the physical environment. Information regarding selected
Table 3. Pearson Product Moment Correlations Between Quality of Care Scale and Environment Description Scale

<table>
<thead>
<tr>
<th>Category of Respondent</th>
<th>RN</th>
<th>LPN</th>
<th>NA</th>
<th>Family</th>
<th>Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>.78</td>
<td>.83</td>
<td>.28</td>
<td>.79</td>
<td>.02</td>
</tr>
<tr>
<td>Significance Level</td>
<td>.01</td>
<td>.01</td>
<td>NS</td>
<td>.01</td>
<td>NS</td>
</tr>
</tbody>
</table>

Legend: NS=Not Significant
organizational characteristics of the nursing home was obtained from facility records. The designated nursing home had a bed capacity of 240 with an average utilization rate of 223 beds for the fiscal quarter during which the data were collected. The facility is proprietary and is owned by a national chain. The number of licensed nursing personnel, which include both RNs and LPNs, and NAs varies with three shifts in a 24-hour period (Table 4). The licensed staff-to-resident ratio was 1:17 for day shift, 1:26 for evening shift, and 1:29 for the night shift, and the NA-to-resident ratio was 1:8, 1:10, and 1:18, respectively. No inferential analysis was performed on the selected organizational characteristics, therefore they are discussed in Chapter V.

Summary

The results of data analysis were presented in this chapter. The demographic characteristics of the sample were outlined. Descriptive statistics were used to present findings from the QoCS subscales and the EDS. The sample was normally distributed for all groups with regard to their perceptions of quality of care within each care subscale. Three of the care subscales showed no significant differences among groups regarding their perceptions of quality of care, with a difference noted on the fourth
Table 4. Study Nursing Home: Resident-to-Nursing Staff Ratio

<table>
<thead>
<tr>
<th>Shift</th>
<th>7-3</th>
<th>3-11</th>
<th>11-7</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAs</td>
<td>29</td>
<td>24</td>
<td>12</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>233</td>
<td>233</td>
<td>233</td>
<td>233</td>
</tr>
<tr>
<td>Licensed</td>
<td>14</td>
<td>9</td>
<td>8</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>233</td>
<td>233</td>
<td>233</td>
<td>233</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>33</td>
<td>21</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>233</td>
<td>233</td>
<td>233</td>
<td>233</td>
</tr>
</tbody>
</table>
(technical) subscale. The methods for determining internal consistency reliability for the QoCS and the EDS and validity for the QoCS were reported.

Correlational statistics revealed a significant positive relationship between perceptions of quality of care and perceptions of the physical environment for the RN, LPN, and family respondents. A significant difference was found between the RN group and the residents with regard to their perceptions of the physical environment. Information regarding the organizational characteristics of bed size, facility ownership, and the resident-to-nursing staff ratio was presented.
CHAPTER V
DISCUSSION AND CONCLUSIONS

The study findings which support the theoretical framework are presented in this chapter. The study limitations, conclusions, and implications for nursing practice and research are discussed in this final chapter.

Findings Related to Theoretical Framework
There were no significant differences among nursing staff, residents, and family members with regard to their perceptions of quality of care within each care subscale on the QoCS in the study nursing home. Overall mean scores were noticeably higher within the preservative and technical subscales of care, indicating that these were rated more favorably overall than the other two subscales. This finding suggests that quality of care was perceived to be better in the areas of preservative and technical care, as opposed to preventive, and supervisory care in this nursing home. The study groups perceived that the technical or physical aspects of care were adequate to good. In addition the groups perceived that attention was given to maintenance of dignity for the residents. Conversely, the lower scores
on the preventive and supervisory care subscales indicated that these care components were weaker.

Bowers (1988) noted that preservative and technical care would be components of all tasks performed by the nursing staff in the course of resident care in order to attain quality caregiving in the nursing home. A lack of the preservative care component was evident in Bowers' (1988) qualitative study results, whereas the results of this study suggest that respondents regarded both preservative and technical care favorably. Wide ranges were found among several groups in the preservative, technical, and supervisory subscales indicating variability within the study sample.

Although no significant differences were detected for the individual care subscales, a significant difference was found between the NA and resident respondents on the total QoCS, indicating a wider range of perceptions by residents. This suggests that residents held more variable opinions regarding quality of care than did the NAs and could indicate a dissatisfaction with respect to specific care domains, which the resident considers important. It could also indicate ambivalence in their perceptions or in their willingness to express their perceptions, or simply different perceptions of caregiving.
The difference in perceptions of quality of care between residents and NAs may reflect a conflict between primary and formal groups in the nursing home. Certain items addressed unpredictable tasks, which are less amenable to routinization without sacrificing individualized primary group caregiving (Litwak, 1985). Furthermore, a lack of autonomy, independence, and personalized care may influence the resident's perceptions of quality of care (NCCNHR, 1985).

A strong positive relationship was detected between perceptions of quality of care in the nursing home and the physical environment of the nursing home for three groups of respondents. These findings suggest that as quality of care was rated better by RNs, LPNs, and family members, perceptions of pleasantness of the environment increased and/or vice versa. Furthermore, the findings suggest that individuals do respond to perceptual cues in the environment (Kasmar, 1970). Whether these cues include color (Hevner, 1937; Kwallek & Robbins, 1988; Wright & Rainwater, 1962), music (Hevner, 1935, 1936), objects (Cooper, 1974; Csikzentmihalyi & Rochberg-Halton, 1981), or physical space (Murrell, Himmelfarb & Wright, 1983) was not determined in this study. In general, respondents perceived that the physical environment of this nursing home was attractive, clean, well-lit, well-kept, uncluttered, and free of
unpleasant odors. Interestingly, there was no significant correlation between perceptions of the physical environment and quality of care for the resident group. There was a significant difference in perceptions of the environment between the RN respondents and the residents suggesting that the residents ranked their physical environment more favorably on most items than did the RNs employed by the facility. Possible interpretations of the resident responses include a disparity in perceptions of their environment, a reluctance to share accurate perceptions, diminished sensory capacities, and different interpretation of the descriptive adjective choices on the Environment Description Scale. It is also possible that for many residents, the facility is still an institution, regardless of what is done to the physical plant.

The information about selected organizational characteristics of bed size, facility ownership, and resident-to-nursing staff ratio were obtained from facility records and were not analyzed statistically. The bed utilization was quite stable, as were staffing patterns during the three month fiscal period. The number of RNs and LPNs were categorized only as licensed personnel, which does not give an accurate picture of professional versus practical nursing staff-to-resident ratios. The number of RNs surveyed was 12 (respondents=6), representing nearly all
of the RNs employed by the facility. From this number, it could be inferred that the number of RNs in direct caregiver roles is few and that at any given time the RN-resident ratio would be very low. The total licensed personnel-to-resident ratio was low, varying from 1:17 to 1:29 or an average of 2.38 nursing hours per patient day. For the state of Arizona, the average number of nursing hours per patient day (calculated as the combined number of RNs, LPNs, and NAs per 24 hours) was 3.3 hours (Arizona Department of Health Services (ADHS), 1990), which confirmed that the licensed personnel-to-resident ratio was indeed low.

In summary, there were no significant differences in quality of care among study groups. Preservative and technical components of care were rated more favorably than preventive and supervisory components. Residents rated overall care less favorably than did NAs. A positive relationship was found between perceived quality of care and the physical environment of the nursing home for several of the sample groups. It was determined that resident-to-nursing staff ratio in this nursing home was lower than average for Arizona nursing homes.

**Study Limitations**

The small sample size limits the conclusions that can be drawn from this study. Bias may have been introduced by
using a convenience rather than a random sample. The generalizability of this study may be limited by the fact that data from this study represented only one of the four study sites included in the funded project, "The Contextual Environment of Nursing Homes" (Sheehy, 1992).

A final limitation was that some participants, particularly the residents, expressed difficulty in understanding some of the terminology used in the questionnaire. This resulted in missing data or possible misinterpretation of the questions, which could have affected study results.

**Implications for Nursing Practice and Research**

Further research is needed to determine perceptions of quality of care in the nursing home. By eliciting the perceptions of nursing staff, family members, and residents regarding quality of care, a consensus of what constitutes quality of care in the nursing home may be reached (Kruzich, et al., 1992; Sheehy, 1992). Specific interventions can then be introduced so quality of care may be improved.

Determining the significance of physical environment for nursing home residents and how it impacts their perceived quality of care may contribute to both resident satisfaction and quality of life. From the perspective of quality assurance, the information gained from studying
perceptions of quality of care could decrease exposure to liability, improve care in accordance with mutual expectations of the residents and nursing staff, and provide the potential for improving both nursing practice and quality of care in the nursing home setting (Roberts, et al., 1987).

Further research is needed to determine both perceptions of quality of care and perceptions of the physical environment in the nursing home from the consumer perspective. Further studies with a larger sample size and conducted in other nursing homes of differing organizational characteristics is indicated in order to facilitate a comparison among nursing homes on organizational characteristics such as bed size, facility ownership, and resident-to-nursing staff ratio and to determine what relationships are important to quality of care delivered in a given facility. It has been suggested that nursing homes with a higher staff-to-resident ratio attained a more favorable rating with respect to quality of care (Gottesman & Bourestom, 1974). Facility bed size and ownership are both organizational variables that have been linked to quality of care in the literature.

Further research examining not only the physical environment, but the other contextual environmental factors of nursing homes would expand the knowledge base not only
for nursing, but for multiple disciplines seeking to define both caregiving and quality of life for the many elderly residents dwelling in nursing homes.

**Summary**

The purpose of this study was to compare the perceptions of residents, family members, and nursing staff regarding quality of care and the physical environment in the nursing home and to determine the relationships among quality of care, the physical environment, and selected organizational characteristics.

A significant difference in perceptions of quality of care was found only on the total QoCS between the residents and the NA respondents. A strong positive relationship was found between perceptions of quality of care and perceptions of the physical environment for RNs, LPNs, and family members. There was a significant difference in perceptions of the environment between RNs and the residents. Selected organizational characteristics were discussed.

Recommendations for further research included further studies with other samples and repetition in additional nursing home settings.
APPENDIX A

HUMAN SUBJECTS APPROVAL FOR

Funded Study

College of Nursing
APPENDIX A

MEMORANDUM

TO: Christine Sheehy, DPA, RN
FROM: Leanna Crosby, D.N.Sc., R.N. Director of Intramural Research
DATE: May 10, 1992
SUBJECT: Human Subjects Review: "The Contextual Environment of Nursing Homes"

Your research project has been reviewed and approved by William Denny, M.D., Chairman of the University of Arizona Human Subjects Committee, and deemed to be exempt from review by their full committee. You will be receiving a confirmation letter from Dr. Denny. In addition, your project has been reviewed and approved by the College of Nursing Human Subjects Review Committee.

We wish you a valuable and stimulating experience with your research.

LC/ga
APPENDIX B
HUMAN SUBJECTS APPROVAL FOR
FUNDED STUDY
HUMAN SUBJECTS COMMITTEE
June 2, 1992

Christine Sheehy, D.P.A., R.N.
College of Nursing
Arizona Health Sciences Center

RE: THE CONTEXTUAL ENVIRONMENT OF NURSING HOMES

Dear Dr. Sheehy:

We have received documents concerning your above cited project. Regulations published by the U.S. Department of Health and Human Services [45 CFR Part 46.101(b) (2) exempt this type of research from review by our Committee.

Please be advised that approval for this project and the requirement of a subject's consent form is to be determined by your department.

Thank you for informing us of your work. If you have any questions concerning the above, please contact this office.

Sincerely yours,

William F. Denny, M.D.
Chairman
Human Subjects Committee

cc: Departmental/College Review Committee
APPENDIX C

HUMAN SUBJECTS APPROVAL

FOR CURRENT STUDY
MEMORANDUM

TO: Mary Ann Bell
FROM: Leanna Crosby, D.N.Sc., R.N. Director of Intramural Research
DATE: October 1, 1992

Your request to complete a secondary data analysis of the data collected by Dr. Chris Sheehy has been approved by the Office of Nursing Research.

We wish you success in your research.

LC/ga
APPENDIX D

SUBJECT DISCLAIMER - NURSING STAFF
APPENDIX D

SUBJECT DISCLAIMER FOR REGISTERED NURSES, LICENSED PRACTICAL/VOCATIONAL NURSES AND NURSING ASSISTANTS

THE CONTEXTUAL ENVIRONMENT OF NURSING HOMES

You are being asked to voluntarily participate in a study exploring factors related to the quality of care in nursing homes. Participation involves completing the questionnaire packet. Although there may not be any direct benefits to you, there are no known risks. Completion of the questionnaire will take place in a location convenient for you and will last approximately twenty minutes. A master list of names will be kept by the research assistant in the College of Nursing for follow-up purposes. No one else except myself will have access to the list. Your identity will not be revealed and your confidentiality will be maintained in all reports of the project.

You are being asked to give your opinion on the statements in the questionnaire packet. By completing the questionnaire you will be giving your consent to participate in the study. You may choose not to answer some or all of the questions, if you so desire. Whatever you decide, your job will not be affected in any way. You may ask questions at any time during the study.

The purpose of this project is to evaluate the environment of nursing care delivery in nursing homes.

Please note that because some questions have been deleted from the questionnaire in the course of revising it, numbers are not consecutive and some may appear to be missing. Simply ignore this fact and respond to all questions.

Thank you for your assistance.

_________________________

Date

Christine M. Sheehy, DPA, RN
Assistant Professor
University of Arizona, College of Nursing
Principal Investigator
Phone number (602) 626-2354
APPENDIX E

SUBJECT DISCLAIMER - RESIDENTS
APPENDIX E

SUBJECT DISCLAIMER FOR RESIDENTS

THE CONTEXTUAL ENVIRONMENT OF NURSING HOMES

You are being asked to voluntarily participate in a study exploring factors related to the quality of care in nursing homes. Participation involves completing the questionnaire packet and/or responding verbally to one or two open-ended questions. You may be asked to allow a tape recording of your verbal response(s). Although there may not be any direct benefits to you, there are no known risks. The interview will take place in a location convenient for you and will last approximately twenty minutes. A master list of names will be kept by the research assistant in the College of Nursing for follow-up purposes. No one else except myself will have access to the list. Your identity will not be revealed and your confidentiality will be maintained in all reports of the project.

You are being asked to give your opinion on the statements in the questionnaire packet and/or verbally to interview questions. By completing the questionnaire, and/or verbally answering questions, you will be giving your consent to participate in the study. You may choose not to answer some or all of the questions, if you so desire. Whatever you decide, your care will not be affected in any way. You may ask questions at any time during the study.

The purpose of this project is to evaluate the environment of nursing care delivery in nursing homes.

Please explain to residents that because some questions have been deleted from the questionnaire in the course of revising it, numbers are not consecutive and some may appear to be missing. Simply ignore this fact and respond to all questions.

Thank you for your assistance.

_________________________
Date

Christine M. Sheehy, DPA, RN
Assistant Professor
University of Arizona, College of Nursing
Principal Investigator
Phone number (602) 626-2354
APPENDIX F

SUBJECT DISCLAIMER - FAMILIES OF RESIDENTS
APPENDIX F

SUBJECT DISCLAIMER FOR FAMILIES OF RESIDENTS

THE CONTEXTUAL ENVIRONMENT OF NURSING HOMES

You are being asked to voluntarily participate in a study exploring factors related to the quality of care in nursing homes. Participation involves completing the questionnaire packet and/or responding verbally to one or two open-ended questions. You may be asked to allow a tape recording of your verbal response(s). Although there may not be any direct benefits to you, there are no known risks. The interview will take place in a location convenient for you and will last approximately twenty minutes. A master list of names will be kept by the research assistant in the College of Nursing for follow-up purposes. No one else except myself will have access to the list. Your identity will not be revealed and your confidentiality will be maintained in all reports of the project.

You are being asked to give your opinion on the statements in the questionnaire packet and/or verbally to interview questions. By completing the questionnaire, and/or verbally answering questions, you will be giving your consent to participate in the study. You may choose not to answer some or all of the questions, if you so desire. Whatever you decide, the care of your family member who is resident here, will not be affected in any way. You may ask questions at any time during the study.

The purpose of this project is to evaluate the environment of nursing care delivery in nursing homes.

Please note that because some questions have been deleted from the questionnaire in the course of revising it, numbers are not consecutive and some may appear to be missing. Simply ignore this fact and respond to all questions.

Thank you for your assistance.

Christine M. Sheehy, DPA, RN
Assistant Professor
University of Arizona, College of Nursing
Principal Investigator
Phone number (602) 626-2354
APPENDIX G

QUALITY OF CARE SCALE
APPENDIX G
Quality of Care Scale (QoCS) (Sheehy, 1992)

**Instructions:**
Circle the number that most closely indicates how you feel about each statement. The left set of numbers indicates degree of disagreement. The right set of numbers indicates degree of agreement. The center number (which is 3) means "undecided." Please use it as little as possible. The more strongly you feel about the statement, the further from the center you should circle, with disagreement to the left and agreement to the right.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>189.</td>
<td>Nursing staff work in partnership with families to meet residents' needs.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>190.</td>
<td>Nursing staff ask families for suggestions as to how to improve the care of residents.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>192.</td>
<td>Nursing staff help families to fulfill a role in the care of residents.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>197.</td>
<td>Staff behave and speak to residents in a respectful way.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>199.</td>
<td>Residents in this facility are treated as individuals.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>202.</td>
<td>The personal appearance of residents is usually not messy, especially from food stains.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>204.</td>
<td>Toileting and continence problems are handled in such a way as to avoid embarrassment as much as possible.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>206.</td>
<td>Residents are rehabilitated by encouraging them to dress and feed themselves as much as possible.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>210.</td>
<td>Residents are allowed to decide such things as when to go to bed, when to schedule a hair appointment, whether to refuse medications, and what to wear.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>212.</td>
<td>Important information about how to personalize care of residents is passed on from one shift to another.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>213.</td>
<td>Nursing staff are skillful in the care they provide.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>214.</td>
<td>Care is provided in a way that does not insult, belittle or upset residents.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>220.</td>
<td>If residents have symptoms that their condition is worsening, nursing staff recognize these.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>221.</td>
<td>Transfers of residents from bed to chair (or toilet) are done skillfully.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>222.</td>
<td>Staff recognize when residents have symptoms of a new disease or illness.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>223.</td>
<td>Staff recognize when residents have side effects from medications.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>224.</td>
<td>Staff are familiar with the details of a residents' special diets.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>225.</td>
<td>The amount of contact residents receive with registered nurses is acceptable.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>229.</td>
<td>Registered nurses in this facility provide adequate supervision to nursing assistants.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>230.</td>
<td>One can be confident that residents receive quality care on all shifts.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>231.</td>
<td>Residents receive quality care whether families are present or not.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>233.</td>
<td>One can be secure in knowing that residents' needs are responded to quickly.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>234.</td>
<td>Residents are encouraged to express concerns about care to nursing staff.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>235.</td>
<td>There is security in knowing that familiar nursing staff are assigned to residents.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>236.</td>
<td>It is obvious from the mood and behavior of residents, that high quality care is provided here.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>237.</td>
<td>Appropriate safety measures are taken to keep residents from falling or being injured.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>238.</td>
<td>Restraints and/or tranquilizing medications are used only as a last resort to prevent injury to residents.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>239.</td>
<td>The nursing care provided here prevents or lessens physical and mental deterioration of residents.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>240.</td>
<td>Nursing staff anticipate the safety needs of residents.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>241.</td>
<td>The care provided is effective in preventing such things for residents as skin breakdown, and mouth and gum problems.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
APPENDIX H

ENVIRONMENT DESCRIPTION SCALE
Environment Rating Scale (ERS) (Kasmar, 1977)

A set of adjectives are intended to describe the nursing home environment. Circle the number that is closest to the item which you feel best describes the nursing home. The left set of numbers indicates more negative characteristics. The right set of numbers indicates more positive characteristics. The center number (which is 4) is to be used as little as possible.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

- attractive
- cheerful
- clean
- colorful
- fresh odor
- gay
- good lighting
- quiet
- pleasant odor
- uncluttered
- well kept
APPENDIX I

CONSENT FOR INSTRUMENT DEVELOPMENT
APPENDIX I

Effectiveness of the (Nursing Assistant's) Workstyle Scale and
Nursing Home Quality of Care Scale

The above cited scales were developed by Christine M. Sheehy from the qualitative research work as published in the following sources:


The research project in which the measures will currently be used is titled *The Contextual Environment of Nursing Homes*. At the conclusion of the study, I will submit to Barbara Bowers a brief summary of the study findings, including information concerning the psychometric properties of the instruments which were based upon her work. According to the findings in this pilot project, the instruments may be refined and used in my further research on nursing home care. All use of the instruments in grant submissions and publications will include citation of the above sources.

Christine M. Sheehy, DPA, RN
Print or type name 602/626-2354
Area code and telephone number

I am aware of and endorse Christine M. Sheehy's use of my qualitative findings in support of her instrument development and testing, and associated research.

Barbara J. Bowers 6/12/97

Please sign both copies, retain one for your records and return one to:

Christine M. Sheehy, DPA, RN
University of Arizona
College of Nursing
Tucson, Arizona 85721
REFERENCES
REFERENCES


Sheehy, C.M. (1992, June-December). *The contextual environment of nursing homes*. Biomedical research support grant, University of Arizona-College of Nursing, Tucson, AZ.


