Holistic comfort: Operationalizing the construct as a nurse-sensitive outcome

The structural and semantic complexities of the construct of comfort are explicated and a rationale is presented for operationalizing the construct for holistic nursing practice and research. A review of the literature about comfort provides theoretical support for the concept's taxonomic structure, which was presented in an earlier publication and is modified in the present article. In addition to being useful for generating assessment tools for practice, the taxonomic structure of comfort can be utilized to develop instruments for outcome research.

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COMFORT IS A COMPLEX construct in which nurses claim a disciplinary interest. "Nurses are the people best equipped to confront this isolation [of the patient] and bring *comfort* to the suffering. (emphasis added)"[1(p9)] But because of its complexity, comfort has eluded operationalization. The structure of comfort is complex because it entails a multidimensional, personal experience with differing degrees of intensity. It is thus a higher order construct presenting operational challenges that are not inherent in lower order concepts such as hope, contentment, certainty, or function. The latter concepts, however, are aspects of comfort.

In addition to having structural complexity, the construct is semantically complex. An analysis of the term comfort must specify whether it is a verb, a noun, or an adjective and whether it refers to a process

The author thanks Margaret England, PhD, for her assistance in clarifying the construct of comfort and emphasizing the need for a holistic perspective.

Adv Nurs Sci 1992;15(1):1–10

or an outcome. The analysis must also distinguish between comfort and its antonym, discomfort. It is not precise to say, "Pain, nausea, and fatigue represent dimensions of the broader concept of comfort."[2] These lower order concepts (pain, nausea, and fatigue) are, by definition, either aspects of *dis*comfort or *negative* aspects (absences) of comfort. Distinctions such as those above must be held consistently throughout an analysis of comfort. The purpose of this article is to operationalize comfort as a noun and a positive outcome of nursing care.

PERSPECTIVE

The perspective for operationalizing the gestalt of comfort comes from the nursing literature on holism. Guzzetta states that a holistic assessment evaluates the client's total state of being, including physical, psychologic, spiritual, and social responses.[3] Nurses recognize that such an assessment is necessary to identify overall patterns of interrelationships.[3] When a holistic assessment reveals a need or needs, nurses try to intervene and satisfy the needs; a positive result on any need affects the whole patient in a positive way. In addition, nurses are beginning to design interventions that will promote a positive mind–body interaction, satisfying many needs with one holistic intervention.

Nurses who are trying to measure the outcomes of holistic interventions presently lack holistic measurement devices with which to measure the effectiveness of the interventions.[3] Given the increasing nursing interest in a holistic paradigm,[4] a research imperative is to develop instruments that aid in the assessment process, and in planning and measuring the effectiveness of interventions that are designed to have a holistic and positive impact on patients' needs.

ASSUMPTION

The basic assumption of this article is that comfort is a desirable outcome for patient care. The following quotations from nursing texts and studies support this assumption. "It must never be lost sight of what observation is for. It is not for the sake of piling up miscellaneous information or curious facts, but for the sake of saving life and increasing health and comfort."[5(p70)] "A nurse is judged always by her ability to make her patient comfortable. Comfort is both physical and mental, and a nurse's responsibility does not end with physical care."[6(p95)] And, "Comfort evolves from an awareness that comfort needs will be met and that previous experienced comforts will be repeated."[7(p1431)] In these examples, comfort is pleasant, positive, multidimensional, and the result of purposive nursing action.

REVIEW OF THE LITERATURE ABOUT COMFORT

Comfort as a desirable outcome has been used as a standard of care in many nursing documents. The Department of Health, Education, and Welfare published a methodology for monitoring quality of care.[8] These standards indicated that the need for physical and mental comfort must be met by nurses if the delivered care is to be deemed "quality." The American Nurses Association composed a statement about the scope of gerontologic nursing. It stated, "Emphasis is placed on . . . maintaining life in dignity and comfort until death."[9(p23)] Comfort was also the fourth standard of care for

oncology patients as identified in the *Outcome Standards for Cancer Nursing Practice* developed by the Oncology Nursing Society and the American Nurses Association.[10] However, without an adequate theoretical or operational definition, evaluators could not know if the standards were met.

The history of comfort as a nursing diagnosis reveals the definitional difficulties associated with this complex construct. In the classification schema developed by the North American Nursing Diagnosis Association (NANDA), the diagnoses are based on patients' needs or deficits. Presumably, a diagnosis of "altered comfort" indicates the need for nursing actions that will fill the need for comfort, producing the desirable outcome of comfort. However, in 1978, NANDA limited the attributes defining its diagnosis of "altered comfort" to pain. The term was later expanded to include chronic or acute pain. Other aspects of altered comfort were not included and in 1990 the diagnosis "altered comfort" was dropped altogether in favor of the diagnosis "pain" (with descriptions of acute or chronic).[11]

As a wellness diagnosis, comfort had a slightly broader definition: "The state in which the body is relieved of unpleasant sensory or environmental stimuli."[12(p109)] Here, there was no patient deficit and, instead of being a need to fill, comfort was a desirable and stable condition. However, mental comfort was not included in the latter definition, even though nurse theorists had discussed the importance of both mental and physical comfort for years.[6,13-15]

Some of the first nursing theorists discussed comfort as an important patient outcome. Orlando focused on how the nurse deciphers what the patient's comfort needs are and how to judge whether a nursing intervention is successful.[13] Henderson further specified that patients' needs must be met in order for them to resume normal activities (or proceed to a peaceful death).[14] Paterson stated, "Comfort is the state in which the patient is free to be and become, controlling and planning his own destiny, in accordance with his potential at a particular time in a particular situation."[15(p112)] For a more complete historical account of the use of comfort in nursing theory, see Kolcaba and Kolcaba.[16]

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Disciplines outside of nursing were also interested in comfort. The discipline of ergonomics was interested in enhancing job performance through environmental manipulation; workers demonstrated higher productivity if they were in a state of comfort. Researchers in ergonomics conceptualized comfort as a state of ease or contentment that

1. facilitated routine performance,
2. was enduring,
3. was positive and more than the absence of discomforts,
4. did not imply a previous discomfort from which relief is obtained,
5. was important as a means to the end of routine task performance,
6. was a reflection of person–environment fit and could be correlated with features of the environment,
7. was experienced physically and mentally, and
8. was positively related to task performance.[17-19]

In a theoretical discussion regarding the evaluation of success in psychotherapy, comfort and effectiveness were selected as the major criteria of improvement.[20] In this work, comfort was operationalized as discomfort and measured with a checklist of symptoms of distress. No positive aspects of comfort, and thus of the evaluation process, were noted.

However, in a descriptive psychologic study by Pinneau, an open-ended question on the meaning of comfort elicited four broad positive themes: personalization, freedom of choice, space, and warmth.[21] Personalization referred to making living quarters one's own. Freedom of choice related to the availability of calm silence and a noise-free atmosphere. Space meant adequate distance, while warmth represented a source of well-being and pleasure. Moreover, Pinneau stated that comfort related to the lived experience of the individual, indicating the necessity for a holistic conceptualization of this complex concept.

One of the earliest nursing attempts to use comfort as an outcome variable occurred in a study entitled "Relaxation Technique to Increase Comfort Level of Postoperative Patients: A Preliminary Study."[22] In this work, the authors equated comfort with incisional pain relief, and an intervention (relaxation by jaw-drop) was designed to lower scores on a pain distress scale. No other instruments were used that might capture a more holistic view of comfort. Thus, the outcome was consistent with the nursing diagnosis operative at the time, but inconsistent with the following definition of comfort included in the study: "Comfort level: Contented enjoyment in physical or mental well-being brought about by lessening perception of discomfort or pain."[22(p353)] (Here, pain is a unidimensional discomfort.) It is interesting to note that in their later study with post–open heart surgical patients the authors renamed the same outcome pain relief.[23] In the extensive nursing literature review conducted for the present study, no other nursing studies using comfort as an outcome variable were done (to the best of this author's knowledge) until 1990.

In an ethnoscientific analysis of comfort, Morse explored comfort, the verb, from the point of view of two nurses and two mothers.[24] From her qualitative data, Morse explicated two "major segregates" of comforting (touching and talking), and one "minor segregate" (listening). This work pointed to the complexity of the concept, and was the first nursing study to focus on the meaning of holistic comfort. Morse conceptualized comfort as an action, or a process, rather than an outcome. A definition of comfort was not provided but it was clear that comfort was positive and purposive.

In 1985, Hamilton conducted a pilot study with 14 terminally ill cancer patients.[25] The purpose of the study was to examine what patients meant by "comfort," what they considered to be attributes of personal comfort, and those factors contributing to and detracting from personal comfort. Subjective ratings of patients' comfort were also obtained using visual analogue scales. The broad comfort themes that emerged across the survey of patients were (1) relationships with others, (2) illness and associated symptoms, (3) feelings, and (4) immediate surroundings.

In a subsequent study, Hamilton again explored comfort from the patient's perspective.[26] In a semistructured interview, pa-

tients in long-term care were asked what comfort meant to them, what things made them comfortable, and what would make them more comfortable. Five major comfort themes resulted:

1. disease process,
2. self-esteem,
3. positioning,
4. approach and attitudes of staff, and
5. hospital life.

Disease process dealt with comfort in terms of pain, bowel function, and disabilities. Self-esteem related to how the patients were feeling psychologically, their adjustment, and if they felt they were independent and worthwhile. Positioning related to the physical placement of their bodies in chairs or beds, if the position was occupied too long, and if desired activities could be carried out. Approach and attitudes of staff referred to friendly, reliable, and accessible nursing care. Hospital life referred to the surroundings being homelike, the maintenance of social contacts, diversional activities, and enjoyable meals. These themes, in condensed form, are consistent with the four themes found in Hamilton's earlier work. The Hamilton studies were important qualitative steps in conceptualizing holistic comfort; however, she made no attempt to operationalize comfort for future quantitative studies. Hamilton concluded with the statement, "Comfort is multi-dimensional, meaning different things to different people."[26(p32)]

In 1990, a study entitled "Maternal Position, Labor, and Comfort" used comfort as an outcome variable. An objective maternal comfort instrument consisted of seven physical activities that the nurse could assess in the laboring patient.[27] Some activities were positive indicators of comfort (ability to concentrate) and some were negative indicators of comfort (grimacing). Total comfort scores were obtained by adding numbers assigned to gradations of activities, thus placing comfort on a continuum. While the wide range of activities reflected a more holistic view of the patient, the instrument was not designed to assess the holistic experience in which the patient was immersed. A brief reference to apparent psychologic comfort appeared in the results section; this was observed by the nurses but not accounted for on the comfort instrument. Unfortunately, no theoretical definition of comfort, as the outcome variable, was given. It is important to note, however, that in the last three nursing studies, comfort was a positive condition and not merely a neutral one, as in the absence of discomfort.

An important contribution to the comfort literature in nursing was the 1989 publication of *Key Aspects of Comfort: Management of Pain, Fatigue, and Nausea.*[28] Semantically, this title is correct because pain, fatigue, and nausea are known to be significant aspects of discomfort that must be managed if patients are to be in the condition of comfort. The above list of discomforts is partial, as the title indicates; other aspects of discomfort such as anxiety, loneliness, or spiritual distress would also prevent a patient from achieving holistic comfort but were not discussed in this book. The book, which arose from a conference with the same title, is useful because several chapters touch on theoretical problems that must be considered in the study of comfort. Other chapters are limited to studies about specific aspects of discomfort named in the title. However, environmental or social

comforts are not discussed, and psychologic comfort is mentioned only negatively and briefly as in "mental fatigue."[29(p229)]

In a recent conceptualization of comfort, Kolcaba extends the thinking that was demonstrated in the above studies.[30] In her work, comfort is positive, holistic, bidimensional, theoretically definable, and operationalizable. Comfort is a construct consisting of four concepts or subscales (physical, psychospiritual, environmental, and social). All aspects of comfort are interrelated and are diagrammed in a two-dimensional grid.

The first dimension of the grid is the intensity of unmet/met comfort needs (relief, ease, and transcendence) revealed in a prior analysis of archaic, contemporary, and historic nursing literature.[16] The intensity of comfort needs range from relief at the low end of the continuum, signifying an urgent comfort need that has just, in the immediate present, been relieved. Ease signifies the middle of the continuum, indicating a state of contentment and well-being. Transcendence is at the high end of the continuum and represents a comfort need that has been met in such a way that the patient is energized or inspired to perform optimally.

The second dimension (the subscales) is viewed as degrees of internal or external comfort needs that were gleaned from the nursing literature about holism.[30] The two dimensions are based on patients' needs; when the needs are met, comfort is increased.[30] The grid arises when the two dimensions are juxtaposed producing 12 cells. The cells represent the total gestalt of holistic comfort. Each attribute of comfort (as outcome) identified in the literature review can be placed in one of the 12 cells of this taxonomic structure. The four contexts of experience are consistent with Hamilton's four comfort themes. Comfort (in the holistic sense) is defined theoretically as the immediate experience of having met basic human needs for relief, ease, and transcendence (see Fig 1).[30]

FUNCTIONS OF THE TAXONOMIC STRUCTURE OF COMFORT

A taxonomic structure provides a conceptual roadmap for the domain of complex, high order concepts. Because it is two-dimensional, each cell reflects the synthesis of two dimensions of meaning where they intersect. Thus, each cell in the taxonomic structure represents a different aspect of a two-dimensional concept. All aspects are interdependent; a change in one produces a change in others. The cells are labeled with numbers for referencing specific antecedents, consequents, and empirical indicators. According to Lynn, creating a map of conceptual domains is the first step in instrument development because items (positive and negative) flow easily from each cell after the above process is completed.[31]

Patients who are depressed but not in pain need comfort in the transcendental sense and in the psychospiritual context.

For example, patients who are depressed but not in pain need comfort in the transcendental sense and in the psychospiritual context. An empirical indicator for this comfort need (antecedent) is the questionnaire item "I am depressed" when answered "strongly agree." After an effective intervention, an

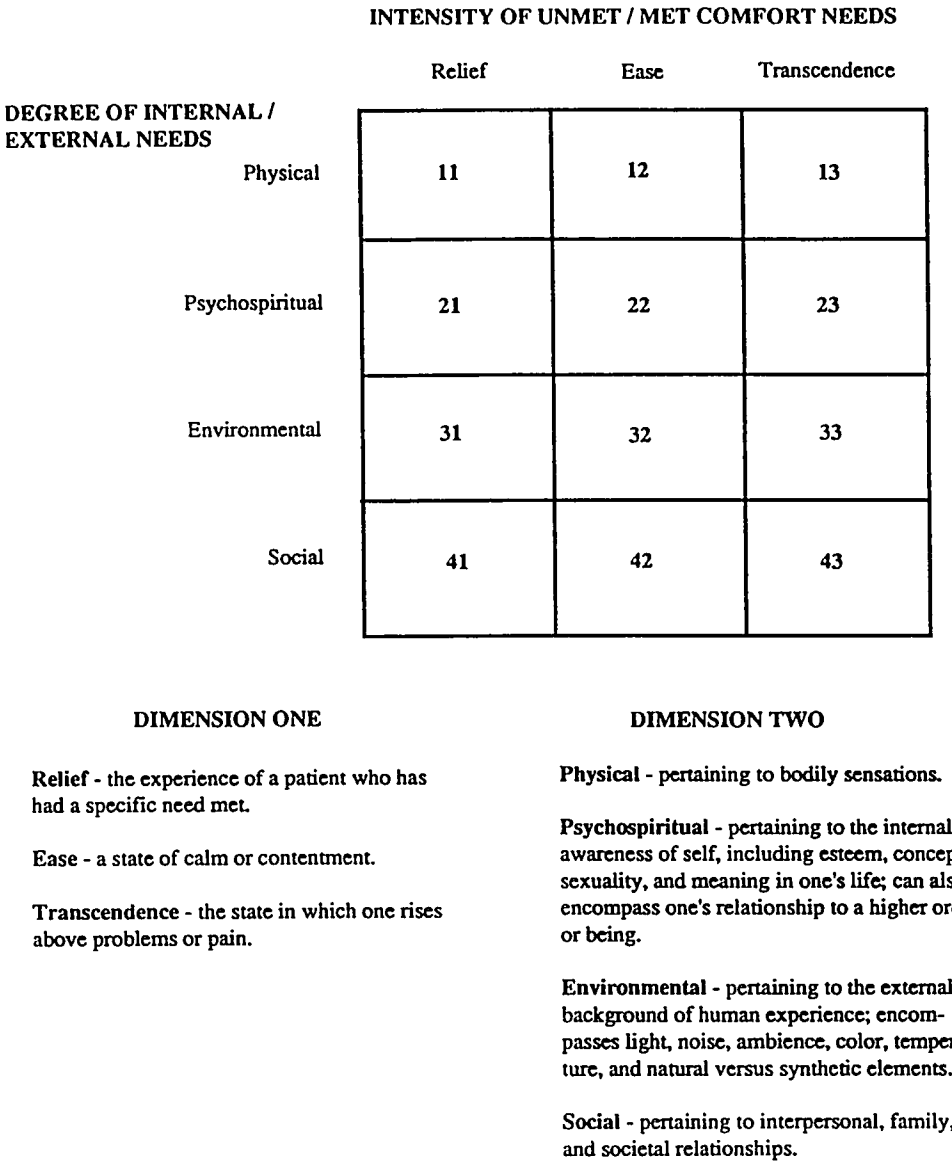

Fig 1. Taxonomic structure of comfort. Reprinted with permission from Kolcaba, K. A taxonomic structure for the concept of comfort. *Image*. 1991;23:235–238. © 1991.

empirical indicator for a positive comfort outcome (consequent) is the same item, when answered "strongly disagree." The intensity of comfort in each subscale can be measured by adding scores on a Likert or visual analogue scale using appropriate an-

chors. At this time, a method for assigning weights to the subscales has not been developed; therefore, subscale scores may be more informative than a total comfort score.

OPERATIONALIZING COMFORT

The operational definition of comfort is the total and subscale scores on an instrument that measures the two dimensions of comfort. Many types of instruments can be developed using the taxonomic structure (Fig 1). One method is to develop an instrument for a specific nursing practice with self-report and observational items generated by specialists in the research area. An example of this method is an instrument developed for an intervention study in a cardio-angiogram setting.[32] Here, three types of immobilization after angiography were tested for the outcomes of comfort and bleeding. Because the comfort needs were viewed as short-term ones, the sense of transcendence was eliminated from the instrument development. This was consistent with the theory of comfort needs from which the original grid was derived; if the need for transcendence does not exist, the comfort continuum can be reduced to the needs for relief and ease. Thus, the content domain in this instrument was reduced to a 2 × 4 grid from which positive and negative items were generated. A five-response Likert scale was used for scoring ("strongly disagree" to "strongly agree").

A second instrument currently being tested is the General Comfort Questionnaire (GCQ), a generic instrument applicable for descriptive and intervention studies. It consists of 48 self-report items generated from the full 3 × 4 grid (K.K., unpublished data, 1992). Responses are circled on a four-response Likert scale ranging from "strongly disagree" to "strongly agree." After reverse coding for negative items, subscale scores are obtained. Higher scores mean a greater degree of met comfort needs.

In the GCQ instrumentation study, subjects were selected from the following hospital groups: medical-surgical, psychiatric, acute care, and oncology. A community sample was also selected. Criteria for selection were the subject's ability to read and write English, being age 21 or older, and having no disability that would preclude completion of the questionnaire. Questionnaires were completed by 256 subjects.

Preliminary results from the Principal Components Analysis (PCA), varimax rotation, indicated that all items measured a single construct (Cronbach's alpha = .88). The initial PCA extracted 13 factors with eigenvalues above 1.0. This was consistent with the 12-cell grid; factors loaded on intensity of unmet/met comfort needs. This solution accounted for 63.4% of the variance in the 48 items. The scree plot indicated three main factors, consistent with the second dimension of the construct. After item analysis of the original item pool (48 items), 13 items were deleted after which subsequent factor analyses were run.

The reliabilities of the revised subscale were (a) physical (8 items) .70, (b) spiritual (11 items) .78, (c) environment (10 items) .80, and (d) social (6 items) .66. Correlations between the subscales ranged from .51 to .62, with the strongest relationships occurring with the psychospiritual subscale. Cronbach's alpha for 35 items increased to .90 after the items were deleted. Principal axis factoring and varimax rotation pro-

duced factor loadings that were most consistent with the theoretical development of each subscale. As before, items loaded on intensity of unmet/met comfort needs. Moreover, the instrument showed statistically significant sensitivity in the expected directions between several groups (K.K., unpublished data, 1992).

IMPLICATIONS OF USING COMFORT AS A NURSE SENSITIVE OUTCOME

As a desirable outcome, comfort is traditionally linked to nursing. Practicing nurses intuitively assess their patients' physical and mental comfort; the taxonomic approach provides a structure in which to place the formal or informal assessment. Because the structure is based on patients' needs, nurses can intervene in specific ways, once a need is identified. Nurses can also assess the effectiveness of their interventions by gauging the degree of comfort attained when comfort needs are targeted specifically.

In nursing research, holistic comfort has not been used previously as an outcome variable because of difficulties associated with measuring this higher order construct. Using the taxonomic structure as a guide, it is possible to create holistic instruments for research where comfort is measured. Holistic instruments have several advantages over reductionistic instruments:

- they can account for the interaction between physical and mental experiences,
- they can account for different ways in which human subjects react to holistic interventions,
- they fill the need for measurement devices that are appropriate for testing holistic interventions,
- they expand nursing's ability to do patient outcomes research, which has been identified as an imperative for the discipline,[33] and
- one holistic instrument can take the place of several more narrow instruments.

The question remains as to how sensitive such holistic measurements will be. Researchers who want to intervene for specific comfort needs can add their own items to the GCQ to increase sensitivity to particular problems. Of course, the trade-off here is that the instrument is no longer standardized.

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This article has presented a review of the current knowledge concerning holistic comfort. A taxonomic structure that organized the many aspects of comfort and discomfort was reviewed and modified. A theoretical definition of comfort was presented in the context of other theoretical and descriptive work on comfort as a positive outcome; the definition flowed from the taxonomic structure. An explanation of how the structure could be used in practice and research was given. The taxonomic structure of comfort is open for modification; it is viewed as a first step in operationalizing this complex concept.

The work presented in this article can help meet the following caveats for outcome research presented by Jennings.[33] Outcome research must be

- patient driven,
- sensitive to the effects of nursing care, and

- relevant to the integrity of the health care system.

Interventions based on the comfort needs of patients as well as instruments to measure the extent of the outcome of comfort are entirely within the realm of nursing care, and both are proposed to be strongly related to quality of care and patient satisfaction.

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