Empirical Evidence for the Nature of Holistic Comfort

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The nursing outcome of holistic comfort encompasses physical, psychospiritual, social, and environmental aspects of human nature. The primary purpose of this study was to test four propositions about the nature of comfort: (a) Comfort has equal proportions of state and trait characteristics; (b) comfort is sensitive to changes over time; (c) when subjects are exposed to an effective intervention, they demonstrate differences in comfort that increase in a linear way compared to a control group; and (d) the whole (total comfort) is greater than the sum of its parts (relief plus ease plus transcendence). A secondary purpose of this study was to present preliminary concurrent validity between two types of comfort instruments, a traditional questionnaire with a Likert-type format and visual analog scales. Findings were positive for all theoretical propositions and moderate concurrent validity between the Radiation Therapy Comfort Questionnaire and the visual analog scale for total comfort was demonstrated.

Valid measures of the effectiveness of holistic interventions are needed to improve nursing practice. With the increased interest in holistic interventions that target responses in the context of human experience (i.e., physical, psychospiritual, social, and environmental), holistic measures that are multidimensional and entail many interrelated parts are essential for understanding effects on an indivisible whole (Johnson, 1990; K. Kolcaba, 1992). For example, the goal

AUTHORS' NOTE: This research was supported in part by funding from the Alumni Association of the Frances Payne Bolton School of Nursing, the American Nurses Association Nurses' Education Fund, and Sigma Theta Tau (Alpha Mu and Delta Omega Chapters).

JOURNAL OF HOLISTIC NURSING, Vol. 18 No. 1, March 2000 46-62

of holistic interventions (e.g., guided imagery, massage therapy, and therapeutic touch) is that many desirable changes will be experienced simultaneously by recipients. These changes might include increased relaxation, positive thinking, well-being, and contentment. Such integrated changes may be temporary but are consistent with the complexity of human experience. To measure such complex outcomes with separate instruments is time and energy consuming and creates artificial partitioning of whole person responses.

Comfort is a holistic state that captures many of the simultaneous and interrelated aspects of positive human experience (K. Kolcaba, 1992). In numerous clinical research settings, enhanced comfort is a desirable and meaningful outcome. In the examples of infertility, immobilization after cardiac catheterization, chronic obstructive pulmonary disease, and radiation therapy for early-stage breast cancer, multiple mental and physical discomforts are experienced although physical pain is minimal. Patients in these situations hope to have complex comfort needs addressed by nurses. Nurses respond by providing holistic interventions that complement the medical regimen. Assessments of comfort before and after these interventions can demonstrate whether the interventions are effective. Instruments to assess comfort can also provide empirical information about the nature of holistic comfort. The primary purpose of this research is to present evidence supporting several theoretical propositions about the outcome of comfort. The secondary purpose is to begin establishing concurrent validity for measures of comfort using data from an earlier experimental study where two types of comfort instruments were used.

Theoretical Propositions

Comfort was defined previously for nursing research as an immediate state of being strengthened by having the needs for three types of comfort (relief, ease, and transcendence) met in four contexts of experience (physical, psychospiritual, social, and environmental) (K. Kolcaba & Fisher, 1996). According to K. Kolcaba's (1994) comfort theory, nurses identify total comfort needs of their patients in stressful health care situations. Nurses then design interventions to meet needs currently not being met. In the study from which these data were derived, comfort needs associated with radiation therapy (RT) were

addressed through audiotaped guided imagery (GI) designed specifically for this population.

Four theoretical propositions were developed from lay and disciplinary literature about comfort (K. Kolcaba & R. Kolcaba, 1991), from the authors' own experience with comfort, and from observations in clinical practice:

Proposition 1: Comfort is generally state specific, changing quickly based on happy or tragic news, positive or negative interactions, good or bad timing, and so on (K. Kolcaba, 1994).
Proposition 2: The outcome of comfort is sensitive to changes over time.
Proposition 3: Any consistently applied holistic nursing intervention with an established history for effectiveness enhances comfort over time.
Proposition 4: Because the outcome of comfort is holistic, total comfort is greater than the sum of its parts.

These propositions were tested with data obtained from four visual analog scales that measured aspects of comfort (total comfort, relief, ease, and transcendence) and a 26-item comfort questionnaire called the Radiation Therapy Comfort Questionnaire (RTCQ). Both of these instruments were developed by the primary author using the taxonomic structure of comfort as a guide specifically for women undergoing radiation therapy for early-stage breast cancer (K. Kolcaba, 1992). The research questions relating to the theoretical propositions were:

1. Does the outcome of comfort have more state characteristics than trait stability?
2. Over three measurement points, will the outcome of comfort be sensitive to change over time?
3. Over three measurement points, will differences in comfort between the treatment and control groups gradually increase with the treatment group having higher comfort?
4. Is the whole (total comfort) greater than the sum of its parts (relief, ease, and transcendence added together)?

The research question testing the secondary purpose of the research, establishment of concurrent validity for measures of comfort, was: What are the correlations between the two types of comfort instruments?

BACKGROUND

The acute and complex comfort needs of women going through radiation therapy for early-stage breast cancer have been documented extensively (K. Kolcaba & Fox, 1999; Love, 1990; Samarel & Fawcett, 1992). Those needs were explicated and organized according to the taxonomic structure of comfort that represented the content domain of comfort for this population on a 12-cell grid (K. Kolcaba, 1992). In two previous studies with a similar population, GI demonstrated positive outcomes on mood and fatigue (Bridge, Benson, Pietroni, & Priest, 1988) and psychological stress, mood, appraisal of RT, cognitive coping with RT, and muscular tension (Larsson & Starrin, 1992). The script for the GI intervention was audiotaped with standard relaxation induction and soft jazz background on a 20-minute cassette. Phrases in the GI script were targeted to the comfort needs as previously mapped on the comfort grid. Thus, the intervention (GI) was congruent with the instruments used.

METHODS

Sample and Setting

Sample size determination was computed using a significance level of .10, power of .80, and a moderate effect size for comfort. An alpha of .10 was chosen because it guards against false nonsignificant findings and is especially appropriate for interventions that have no known side effects (Lipsey, 1990; Nieswiadomy, 1998). The effect size was evident in a previous pilot study of the General Comfort Questionnaire (GCQ) tested with a sample of 253 hospitalized and community-dwelling participants (Cronbach's alpha = .88) (K. Kolcaba, 1992). Power analysis indicated that a total of 53 evaluative subjects would be sufficient to detect significance.

A convenience sample of 53 women was recruited from two radiation oncology sites in Northeast Ohio. Inclusion criteria were (a) ability to read, write, and hear English; (b) females 18 years of age or older; and (c) had Stage 0 (in situ), I, or II breast cancer. Those with previous malignancies, prior experience with GI, or psychological disorders (as determined by chart review) were excluded. Participants

were randomly assigned to a treatment (n = 26) or control (n = 27) group. Three additional women were dropped from the study—1 woman in the control group started listening to commercial GI tapes, 1 woman preferred to listen to religious tapes, and 1 woman did not have time to listen to the intervention. Ages ranged from 37 to 81 years with a mean of 55 years; 42 women were of European descent, 1 was Asian, 1 was Hispanic, 5 were African American, and 4 marked "other." Random assignment succeeded in achieving similar distributions in the two groups for all demographic variables and for cancer treatment protocols. There were no differences on comfort at Time 1 (K. Kolcaba & Fox, 1999).

Instruments

Radiation Therapy Comfort Questionnaire. The RTCQ derived preliminary content validity from the GCQ, from which the RTCQ was adapted. The RTCQ was designed to be relevant for women about to be treated with RT for early-stage breast cancer. Items that were applicable to the new study were retained and new items specific for early-stage breast cancer and RT were added. The 26 items in the final RTCQ were distributed across the content domain of comfort for the study population. Face validity was achieved when the instrument was revised using the suggestions of five women going through RT as well as RT technicians, nurses, and physicians. Nearly equal numbers of positive and negative items reduced response bias. The response set was changed from four responses in the GCQ to six responses in the RTCQ to increase sensitivity (Jenkins & Taber, 1977; Oaster, 1989; Rasmussen, 1989); anchors ranged from *strongly agree* to *strongly disagree* as on the GCQ. The RTCQ was scored by first reverse coding negatively worded items. Then, the responses for all items answered by each participant were summed and this sum divided by the number of items answered, producing a mean comfort score for each participant. These participant mean scores could potentially range from 1 to 6, the same range as the individual items; higher scores indicated higher comfort. The RTCQ is included as the Appendix. Data from the RTCQ were normally distributed and met assumptions for parametric testing. Scores on the 26 items of the RTCQ yielded a Cronbach's alpha of .76.

Comfort visual analog scales. Comfort means different things to different people (Arruda, Larson, & Meleis, 1992; Hamilton, 1989); thus capturing all aspects of the concept in any given instrument is difficult. Therefore, visual analog scales (VASs) might better represent the personal uniqueness and richness of the concept for study participants compared to a traditional questionnaire because the meaning of *comfort* is not constrained to specific items (Youngblut & Casper, 1993). Three VASs were labeled Relief, Ease, and Transcendence to signify factors derived from the previous factor analysis of the GCQ (K. Kolcaba, 1992). When scores from these three scales were added together (total centimeters), an indicator for total comfort labeled *Summed Comfort scales* was achieved. In subsequent analyses, the scores for Summed Comfort scales were compared to scores for total comfort (TC). An additional VAS was created for total comfort. Stems for VASs were: total comfort: "I feel as comfortable as possible right now."; relief: "I have many discomforts right now."; ease: "I am feeling at ease right now."; transcendence: "I am feeling motivated, determined, and strengthened right now."

Responding to the scales required each participant to place a dot on each 10-cm line that had anchors matching those on the RTCQ, *strongly agree* to *strongly disagree.* Vertical lines were chosen because earlier research about VASs revealed that subjects relate to vertical lines more easily than horizontal lines and verticality eliminated difficulty with left-right discrimination (Waltz, Strickland, & Lenz, 1991). To score ease, transcendence, and total comfort, the length from the low end of the lines to the dot was measured in centimeters to the nearest 10th. Relief was reverse coded because it was worded negatively. To obtain scores for the sum of the parts, the numbers of centimeters for relief, ease, and transcendence were added together.

Data from all VASs were skewed to the left, indicating that participants were responding consistently with higher comfort scores. Means and standard deviations for each VAS were computed at Times 1, 2, and 3. The standard deviation for total comfort over three time points averaged 1.58, whereas the *SD* for the Summed Comfort subscales over three time points averaged 5.19.

Procedures

The study was approved by institutional review boards at two participating hospitals in Northeast Ohio. Women with Stage I breast

cancer were recruited by nurses who introduced the study during their initial appointment in the RT department. Those who were interested in participating gave permission to be contacted by a data collector before beginning RT. Randomization to treatment or control group was done before the first research appointment. The first visit was done prior to RT simulation in participants' homes or a private room in the RT department. Participants signed informed consent, understanding that they could discontinue their participation at any time, that staff members were not informed of who was in the study, and that data were coded for confidentiality. Women in both groups then completed a demographic sheet, the comfort scales, and the RTCQ. Women in the treatment group listened to the audiotape every day through the course of RT and for 3 weeks afterward.

To examine changes in comfort over time, longitudinal data were collected: Time 1, baseline; Time 2, midway in the RT protocol (3 to 4 weeks after baseline); and Time 3, 3 weeks after RT ended (K. Kolcaba & Fox, 1999). The women in the control group received a different audiotape for general wellness at the end of the study. The interval for Time 3 was selected because the literature indicated that the 3-week posttherapy period was often one in which patients felt alone, depressed, and frightened about relapse (Love, 1990).

RESULTS

Research Question 1: Does the Outcome of Comfort Have More State Characteristics Than Trait Stability?

The theoretical proposition was that comfort had more state than trait characteristics. To determine the extent of state versus trait characteristic in this population, Heise's method (as cited in Knapp, Kimble, & Dunbar, 1998) was used with data from the RTCQ. Only data from the control group were included to remove the effects of the intervention. Trait stability of comfort was thus calculated by comparing test-retest correlations at three time points according to specific formulas for each interval in the longitudinal data (Knapp et al., 1998). Reliability coefficients with numbers closer to 1.00 demonstrated higher trait stability. Reliability coefficients were: between Time 1 and Time 2, .63; between Time 1 and Time 3, .40; and between Time 2 and

Time 3, .53. Thus, trait stability was variable between time points and not particularly dominant.

Data from the VASs were analyzed to obtain intraclass correlation coefficients that measure within-subject time differences (Shrout & Fleiss, 1979). Only data from the control group were included to remove the effects of the intervention. Intraclass correlations for control group data were obtained over the three time points. Results were: total comfort, .38; relief, .45; ease, .44; and transcendence, .59. Thus, results across measurement points were interpreted as having a relatively low degree of repeatability. In other words, time had a moderate effect on comfort scores using the VASs. These findings supported the earlier results with the RTCQ, that comfort had more state characteristics.

Research Question 2: Over Three Measurement Points, Will the Outcome of Comfort Be Sensitive to Changes Over Time?

The theoretical proposition was that given an effective and repetitive intervention (audiotaped guided imagery), the treatment group should demonstrate gradual increases in comfort over time. Previous observations also indicated that control subjects would become accustomed to the RT sessions over time and would demonstrate gradual increases in comfort over the 6 weeks, although the increases would not occur as rapidly as in the treatment group. Three statistical hypotheses were used to answer this research question:

Hypothesis 2a: Between three successive measurement points, women receiving guided imagery will demonstrate significantly higher comfort scores on the RTCQ compared to the control group.

Hypothesis 2b: Between three successive measurement points, women in the control group will have significantly higher comfort scores on the RTCQ at Times 2 and 3 compared to Time 1, although not as high as those in the treatment group.

Hypothesis 2c: Between three successive measurement points, women receiving guided imagery will demonstrate significantly higher comfort scores on the VASs for Total Comfort and Summed Comfort subscales compared to the control group.

Hypothesis 2d: Between three successive measurement points, women in the control group will have significantly higher comfort scores on the VASs for Total Comfort and Summed Comfort subscales at Times 2 and 3 compared to Time 1, although not as high as those in the treatment group.

TABLE 1
t Tests Between Treatment (T) and Control (C) Group on Radiation Therapy Comfort Questionnaire (RTCQ) and Visual Analog Scales (VASs) for Summed Comfort Subscales and Total Comfort

Instrument	*Time*	*T (mean)*	*C (mean)*	*t Value for Comparing Groups*	*Paired t Values Comparing Other Times With Time 1*	
					T	*C*
RTCQ	1	4.69	4.46	1.42	—	—
	2	4.89	4.59	2.14*	1.76*	1.23
	3	4.83	4.60	1.53	1.43	1.16
Summed VASs	1	22.20	21.60	0.21	—	—
	2	24.30	24.10	0.18	–0.41	–0.18
	3	21.42	21.18	0.16	–0.44	0.12
VAS total comfort	1	6.25	6.27	—[a]	—	—
	2	6.71	6.58	—[a]	—[b]	—[b]
	3	6.74	6.68	—[a]	—[b]	—[b]

a. No significant difference based on the Wilcoxon rank sum test.
b. No significant difference based on the sign test.
*$p < .10$.

The RTCQ and VAS Summed Comfort subscales were normally distributed, but the VAS Total Comfort Scale had a skewed distribution. Therefore, *t* tests were used for the RTCQ and VAS Summed Comfort subscales, and nonparametric tests (sign test and Wilcoxon rank sum test) were used for the VAS Total Comfort Scale. Paired *t* tests were computed for each group between each time point. Results are in Table 1. Effect sizes for the RTCQ at Time 2 (after the intervention was introduced) was .55 and at Time 4 was .41, averaging an effect size of .48 (high-moderate according to Lipsey, 1990). These results supported Hypothesis 2a and Hypothesis 2b and the sensitivity of the RTCQ was demonstrated ($p = .04$). Results of the Wilcoxon rank sum test between groups on the VAS for total comfort was not significant ($p = .80$); neither were the *t* tests between groups significant on the VASs for Summed Comfort subscales ($p = .14$). Results for the Summed Comfort subscales approached significance (Table 1). Hypothesis 2a and Hypothesis 2b were supported.

Research Question 3: Over Three Measurement Points, Will Differences in Comfort Between the Treatment and Control Groups Gradually Increase, With the Treatment Group Having Higher Comfort?

Three statistical hypotheses were used to answer this research question. They were:

Hypothesis 3a: Over three measurement points, women receiving guided imagery will have significantly higher comfort scores on the RTCQ than women not receiving guided imagery.
Hypothesis 3b: Over three measurement points, women receiving guided imagery will have significantly higher comfort scores on Summed Comfort subscales than women not receiving guided imagery.
Hypothesis 3c: Over three measurement points, women receiving guided imagery will have significantly higher comfort on the analog scale for total comfort than women not receiving guided imagery.

Repeated measures multivariate analysis of variance (RM MANOVA) was used (Stevens, 1992). A significant difference in scores between the treatment and control groups was found, $F(1, 51) = 4.33$, $p = .04$. A priori (predetermined) tests between group means revealed that the treatment group had higher comfort scores at Times 2 and 3 than the control group. Hypothesis 3a was supported. A priori trend analysis was significant for a linear model in the differences over time ($p = .08$). These findings supported the sensitivity of the RTCQ to changes in comfort over time.

Nonparametric analyses were used for this part of the data analysis. None of the VASs revealed significant differences between treatment and control groups, although results were in the expected directions for the Summed Comfort subscales. Results on median tests for Summed Comfort subscales were: between Time 1 and Time 2, $\chi^2 = 0.00$, $p = 1.0$; and between Time 2 and Time 3, $\chi^2 = 2.25$, $p = .13$. Median tests for total comfort were: between Time 1 and Time 2, $\chi^2 = 1.48$, $p = .22$; and between Time 2 and Time 3, $\chi^2 = 1.49$, $p = .22$. These nonsignificant findings for the VASs failed to support Hypothesis 3b and Hypothesis 3c, indicating that they were not as sensitive to group differences as the traditionally formatted questionnaires.

Research Question 4: Is the Whole (total comfort) Greater Than the Sum of Its Parts (relief, ease, and transcendence added together)?

The statistical hypothesis used to answer this research question was:

Hypothesis 4: The VAS scores for total comfort in the treatment and control group will demonstrate significantly greater comfort than Summed Comfort subscales at each time point.

The theoretical proposition that the whole is greater than the sum of its parts was tested by comparing differences between the VASs for total comfort and Summed Comfort subscales. To do this, the mean for total comfort (in centimeters) was compared to the means for relief (after reverse coding) plus ease plus transcendence. The following proportion was created:

$$\frac{\text{Relief plus Ease plus Transcendence} = X}{30 \qquad\qquad 10}$$

The expected score if the whole was the same as the sum of its parts was called X or expected. Then, X was compared to what the women marked on the total comfort line. If X was significantly greater than TC, the holistic tenet that total comfort is greater than the sum of its parts (relief, ease, and transcendence) could be accepted. (Mathematically, the proportion described earlier is the same as dividing relief plus ease plus transcendence by 3 and comparing this with TC.)

Data from the VASs for relief, ease, and transcendence (Summed Comfort subscales) were compared to data from the VAS for total comfort using the Wilcoxon signed rank test. Differences between the paired samples of the Summed Comfort subscales and Total Comfort Scale were highly significant (prob. $> t < .0001$, $p = .00$) at all three time points. Hypothesis 4 was supported. Thus, the whole (total comfort) was significantly greater than the sum of its theoretic (K. Kolcaba, 1992) parts (relief plus ease plus transcendence).

The last research question was related to concurrent validity for the two comfort instruments. It was: What is the correlation between the two types of comfort instrument?

Concurrent validity is the extent to which a measure correlates with another simultaneously obtained measure of the same trait or state (Goodwin & Goodwin, 1991). Because there was no gold standard for measuring comfort in this population, correlations between the VAS for total comfort and the RTCQ were computed for preliminary assessment of concurrent validity. The authors believed that the RTCQ would demonstrate a medium to strong positive correlation with the VAS for total comfort because both instruments were designed to measure holistic comfort and both were administered at the same three time points to the same research participants. Nonparametric measures of association were performed due to the skewness of the VAS data. Pairwise correlations between the RTCQ and the VAS for total comfort revealed moderate correlations at each of the three time points: Time 1 = .31, p = .02; Time 2 = .31, p = .02; and Time 3 = .38, p = .00, consistent with Youngblut and Casper's (1993) findings for evidence of moderate validity. Pairwise correlations between the RTCQ and Summed Comfort subscales were slightly higher at each time point: Time 1 = .38, p = .02; Time 2 = .40, p = .02; and Time 3 = .44, p = .00. Findings supported preliminary concurrent validity between the RTCQ and VASs.

Discussion

The challenge inherent in this study was to test some of the theoretical properties of the outcome of holistic comfort. The test of the first proposition about state specificity of comfort indicated that the outcome had variable trait characteristics over time that hovered in the 50% range. Therefore, trait characteristics, although not predominant, accounted for about half of the influence on comfort scores. Data from both the RTCQ and VASs supported this conclusion.

The test of the second proposition about sensitivity of the instruments indicated that the RTCQ was sensitive to differences between treatment and control groups over time. The higher effect size at Time 2 compared to Time 3 was consistent with anecdotal data about persons going through RT. That is, discomforts regarding RT and the diagnosis of breast cancer were very high during the first 3 weeks of therapy before patients became accustomed to the routine. Women also had to become accustomed to new personnel in the department and to meeting other cancer patients in the waiting room. Midpoint in their therapy, patients began to feel more comfortable with

treatments, the environment, and their diagnosis (Love, 1990). These phenomena were reflected in the data.

The test of the third proposition about sensitivity to differences between groups over time indicated that trends between groups could be demonstrated with the traditionally formatted RTCQ. Moreover, these trends followed a linear model. However, the VASs did not demonstrate statistically significant differences in comfort between groups over time. From the observations during data collection, the authors were not surprised that the VAS for total comfort produced no significant findings because most women scored their total comfort quite high. With an average standard deviation of 1.58, it appeared that the stem for total comfort ("I feel as comfortable as possible right now.") was too broad to detect differences in comfort between participants.

The fourth proposition about the holistic nature of comfort was supported by highly significant findings at all three time points. That is, the whole (total comfort) was greater than the sum of its parts (Summed Comfort subscales). This test supports the theoretic synergy of the parts of comfort in relation to the complex whole of comfort. An alternative explanation is that the stems for relief, ease, and transcendence taken together did not fully capture the meaning of *total comfort* for these women.

However, the broad nature of the stem for total comfort posed a problem for significance testing on group differences. The narrow standard deviation demonstrated that most women answered the VAS for total comfort within a very narrow range on the 10-cm scale. This narrow range indicates a problematical lack of sensitivity of the TC scale.

The test of the fifth proposition about concurrent validity had preliminary support. The VAS for total comfort demonstrated adequate nonparametric correlations with the RTCQ at each time point, providing some concurrent validity for the measurement of comfort (Willis & Moore, 1994). Further tests of standard formatted comfort questionnaires and corresponding VASs for total comfort need to be explored. Particularly, the semantics of the stem for total comfort may be too broad or general. Further tests are warranted before the properties of these questionnaires, their relationships to each other, and their implications for research in specific settings are understood.

For this population, the VASs were faster and easier to use than the RTCQ. During data collection, the analog scale for total comfort was

helpful for beginning conversations about detractors from patient comfort. A comfort line for total comfort could be used for practice with a verbal approach, "On a scale of 1 to 10, how would you rate your comfort right now?" If the patient rated his or her comfort on the low end, the nurse could attempt to determine the nature of the detractors.

Limitations

Convenience sampling and a narrow geographic location limits generalizability of findings to a wide population of women with breast cancer. Moreover, findings are restricted to women with early-stage breast cancer because the instruments and intervention were designed specifically for this population. These findings support earlier studies that showed GI was an effective intervention for women with breast cancer (Bridge et al., 1988; Larsson & Starrin, 1992).

Because the theoretical propositions about comfort as an outcome of holistic nursing practice have not been previously tested, findings from this research serve as preliminary support for the propositions. Repeated testing of the propositions are indicated in other populations of patients with acute comfort needs.

These results advance the science of holistic nursing because they explored the properties and validity of a holistic outcome that is congruent with use of holistic nursing interventions. Comfort is an outcome that demonstrated empirically a holistic response to guided imagery. Analyses of these data revealed interrelated and interinfluential effects on holistic comfort and quantified a whole person response.

Data from the RTCQ generally supported the first three propositions about comfort: It consists of about 50% state characteristics, it is sensitive to changes over time, and it can be enhanced with effective interventions. The fourth proposition, the whole is greater than the sum of its parts, was supported with data from comfort visual analog scales. The study also demonstrated evidence of moderate concurrent validity between the two measures of comfort. Findings add to nurses' evidence-based practice about a response to a holistic intervention. Finally, this article described the process through which nurses can design comfort studies to measure the effects of holistic interventions on the outcome of comfort.

Appendix
Radiation Therapy Comfort Questionnaire

Thank you VERY MUCH for helping me in my study of the concept COMFORT. Below are statements that may describe your comfort now. Six numbers are provided for each question; please circle the number you think most closely matches your feeling. Relate these questions to your comfort at the moment you are answering the questions.

	Strongly Agree					Strongly Disagree
1. I feel lousy right now.	6	5	4	3	2	1
2. I feel good about myself.	6	5	4	3	2	1
3. It helps to talk to people about my cancer.	6	5	4	3	2	1
4. I am just as attractive physically as I always was.	6	5	4	3	2	1
5. I feel fatigued.	6	5	4	3	2	1
6. I like the way the radiation department feels.	6	5	4	3	2	1
7. I don't have enough information about my cancer.	6	5	4	3	2	1
8. My breast is sensitive to touch.	6	5	4	3	2	1
9. I wonder if I made the right medical decision.	6	5	4	3	2	1
10. I have lost my appetite.	6	5	4	3	2	1
11. I do not worry about the equipment in the radiation department.	6	5	4	3	2	1
12. I don't like to be alone in the treatment room.	6	5	4	3	2	1
13. I am able to sleep well.	6	5	4	3	2	1
14. Life is worthwhile right now.	6	5	4	3	2	1
15. I am uneasy about the sounds that the radiation machines make.	6	5	4	3	2	1
16. There are those that I can depend on when I need help.	6	5	4	3	2	1
17. I have pain in my breast.	6	5	4	3	2	1
18. It is difficult to accept the idea that I had cancer.	6	5	4	3	2	1
19. I feel out of place in the radiation department.	6	5	4	3	2	1
20. No one understands me.	6	5	4	3	2	1
21. My skin around my breast and arm feels strong and healthy.	6	5	4	3	2	1
22. I feel out of control.	6	5	4	3	2	1

	Strongly Agree					Strongly Disagree
23. My friends remember me with their cards, phone calls, or letters.	6	5	4	3	2	1
24. I am afraid of what is next.	6	5	4	3	2	1
25. I think of the table I lie on for treatments as being hard and unfriendly.	6	5	4	3	2	1
26. I feel supported in my decision to have radiation therapy.	6	5	4	3	2	1

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