Caring Behaviors: Perceptions of Acute-Care Nurses and Hospitalized Patients With Diabetes

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Abstract

The purpose of this study was to examine perceptions of nurse caring behaviors by patients with diabetes and nurses caring for them, and to determine differences between the two groups. Data collection occurred in a 1,200-bed nonprofit hospital; 64 nurses and 54 patients with diabetes indicated their perceptions of nurse caring behaviors. There were significant differences in caring behaviors identified by nurses and patients. This study has implications for understanding the patient experience in the hospital setting, particularly as related to nursing care provided. Understanding patients’ perceptions of caring behaviors is essential in tailoring nursing interventions to meet patient needs.

Keywords: patients with diabetes, nurse caring behaviors, Caring Behaviors Inventory

Background

Caring is perceived as fundamental to the nursing profession. When patients are hospitalized they have expectations about the care they will receive. Understanding what patients perceive as caring behaviors is essential in tailoring nursing interventions that meet the individual needs of patients.

Nurses enter the profession of nursing with a desire to attenuate suffering and improve the quality of life for patients and populations (Zimmerman & Ng, 2008). However, demands on bedside nurses have never been greater as they struggle with competing time demands and priorities to meet the needs of their patients (Amendolair, 2012; Modic et al., 2009). The hectic pace of a bedside nurse may be perceived by a patient as lack of caring or may result in the nurse’s inability to demonstrate behaviors discernible by the patient as caring. Without conscious attention to the development of the caring relationship, patient satisfaction and optimal healing for patients can be adversely affected (Persky, Nelson, Watson, & Bent, 2008).

There is little research on the caring behaviors that patients with diabetes value and expect while hospitalized. There is only one prior study of care received at primary health-care centers in Sweden (Hornsten, Lundman, Selstram, & Sandstrom, 2005). Patients identified nurse competence, compassion, and confidence as integral to caring. Identifying what behaviors patients perceive as caring can help nurses design interventions that are patient centered and predicated on evidence, and contribute to quality outcomes. The purpose of this study was to compare nurse caring behaviors perceived by bedside nurses and hospitalized patients with diabetes. The research questions were the following:

1. What nurse caring behaviors do hospitalized patients with diabetes identify as the most frequently displayed caring behaviors?
2. What nurse caring behaviors do bedside nurses rate as the most frequently displayed caring behaviors?
3. What are the differences in perceptions of caring behaviors identified by hospitalized patients with diabetes and bedside nurses?

Patient Perceptions of Nurse Caring Behaviors

Previous research on patient perceptions of caring behaviors using the Caring Behavior Inventory (CBI-24) have indicated nurses’ knowledge and skills as the caring behavior of nurses that patients rated the most frequent behavior that they observed (Aziz-Fini, Mousavi, Mazouzi-Sabdan, & Adib-Hajbagherly, 2012; Rafii, Hajjinezhad, & Haghani, 2008). In a grounded theory approach to understanding patient perceptions of nurse caring behaviors, Finch (2008) identified four themes: responding when needed and without being prompted, doing extra “little things,” following through, and taking care of patient needs.

Nurse Perceptions of Nurse Caring Behaviors

Burton and Stichter (2010) examined perceptions of the nursing work environment, compassion fatigue, and caring among 126 nurses from a variety of clinical specialties. They found that nurses’ knowledge and skill in caring was negatively related to compassion fatigue (r = −.22, p < .01). Similarly, Wilkin and Slevin (2004) conducted semi-structured interviews with 12 nurses working in an intensive-care unit in Ireland and found that nurses identified knowledge and skills as important to caring. Participants also indicated that it was important to minimize the negative effects of the care environment while providing holistic and humane care to patients and their loved ones. More recent studies of critical-care nurses’ perceptions of their own caring support these results on the importance of nurses’ knowledge and skill competence in implementing caring behaviors (King & Thomas, 2013; McCallum & McConigley, 2013). In a recent study of caring behaviors of nurses in the United States and Ireland, Weathers and colleagues (2015) found similarities between the two groups of nurses. The highest ranking item on the CBI-24 for both groups was treating patient information confidentially. While there were significant differences in total caring scores between the Irish and U.S. nurses, when controlling for differences in age and years of experience between the two groups there were no significant differences. Both groups demonstrated high caring behavior scores.

Patient and Nurse Perceptions of Nurse Caring Behaviors

Wiman and Wikblad (2004) observed interactions between trauma patients and nurses working in an emergency department in Sweden and observed 61 aspects of uncaring behavior and 36 aspects of caring behavior. The researchers determined that instrumental caring behaviors were missing. They observed that nurses often adopted a wait-and-see attitude and concluded that this might reflect not caring on the part of the nurses.

Using the Caring Behaviors Assessment instrument (Cronin & Harrison, 1988), O’Connell and Landers (2008) studied perceptions of nurses (n = 33) and family members (n = 19) of patients in three intensive-care units in Ireland. There were five caring behaviors identified by family members: “treat the patient as an individual,” “know what you are doing,” “know how to give injections, IVs, etc,” “know how to handle equipment,” and “give the patient medications and treatments on time.” The most important caring behaviors identified by nurses were “know what you are doing,” “treat the patient with respect,” “treat the patient as an individual,” and “[be] kind and considerate.”

A sample of 1,665 patients was surveyed in six European countries to determine whether caring behaviors affect satisfaction (Palese et al., 2011). Study results on the CBI-24 revealed that knowledge and skills showed the highest mean score, and positive connectedness the lowest. Since this point in this article the reader does not really know all about the tool used, talking about individual items may be confusing.

Papastavrou et al. (2012) used the CBI-24 to investigate the perception of respect and human presence between patients and nurses in six
European countries. A sample of 1,537 patients and 1,148 nurses from 34 hospitals was surveyed. Results revealed that there is a lack of congruence between patients’ and nurses’ perceptions of the frequency of respectful behaviors and behaviors that convey assurance of human presence. Moreover, nurses reported performing certain nursing behaviors more frequently than patients perceived receiving them. The patients reported a lack of communication with nurses and expressed more negative feelings than nurses. The item “talking to the patient” was negatively rated by 23.3% of patients, as compared with 12.6% of nurses (p < .001). There also was a significant difference between nurses and patients on the item “showing concern for the patient” (p < .001).

In a Swedish study, von Essen and Sjöden (2003) studied the perceptions of 81 patients and 105 nurses and found significant differences between patients and nurses for 29 of 50 caring behaviors. Highest rated behaviors among the patients were those that reflected competence: knowing when to call the physician, knowing how to give injections, being honest with the patient, putting the patient first no matter what else happens, and speaking to the patient in understandable terms. Nurses rated affective behaviors highest: listening to the patient, putting the patient first no matter what else happens, touches the patient when comfort is needed, talking to the patient, and speaking to the patient in understandable terms.

Zamanzadeh, Azimzadeh, Rahmani, and Valizadeh (2010) examined the congruence of oncology patients’ (n = 200) and professional nurses’ (n = 40) perceptions of important nurse caring behaviors in an Iranian oncology center. A convenience sample of 200 patients and 40 nurses was surveyed using the CARE-Q instrument developed by Larson (1984). Both patients and nurses concurred that the top two caring behaviors were “gives the patient treatments and medications on time” and “knows how to give shots.” These findings differ from previous studies that showed a significant difference between nurse and patient perceptions of caring behaviors.

Summary
The prior research on patient and nurse perceptions of caring behaviors of nurses, except for the study by Zamanzadeh et al. (2010), has revealed a lack of congruence between what nurses and patients believe constitutes caring behaviors. Patients have consistently rated the nurse’s competence as the most important caring behavior.

No prior research was located on the congruence of perceptions of caring behaviors on the part of hospitalized patients with diabetes and their nurses. The present study was designed to address that gap. We were specifically interested in patients with diabetes because they represent a significant inpatient group with complex healthcare needs.

Method
Research Design and Setting
A two-group descriptive comparative design was used to examine perceptions of caring behaviors among bedside nurses and hospitalized patients with diabetes. The setting for the study was a nonprofit, 1,220-bed teaching hospital in the Midwest of the United States. Four medical units were used; the number of beds per unit range from 34 to 36. The patients admitted to these units have myriad chronic conditions, including acute kidney injury, chronic obstructive pulmonary disease, abdominal pain, diabetes mellitus, dehydration, sickle-cell anemia, and failure to thrive. The average length of stay on these units is 4.7 days.

Sample
A convenience sample of hospitalized patients with diabetes admitted to a hospital medical unit and a sample of bedside registered nurses (RNs) caring for patients on a medicine unit were invited to participate in the study. Approximately 30% of patients admitted to the hospital have diabetes, which translates into a census of 300 patients per day with diabetes and 10 patients per day per medical unit. Each of the medical units has an RN staff of approximately 45 individuals, which represents a pool of approximately 180 nurses.

Patient inclusion criteria consisted of English-speaking adults who had a diagnosis of diabetes type 1 or type 2, aged 18 years and older, who were alert and oriented and were able to respond verbally to questions, who agreed to participate in the study, and who were admitted to one of the four medical units. The nurse inclusion criteria consisted of any bedside registered nurse who was assigned to one of the four medical units and had completed new-nurse hospital orientation. Nurses who were in a managerial or advanced practice role, or were in new-nurse hospital orientation, were excluded from participating in the study.

Instruments
The Caring Behaviors Inventory (CBI)—developed by Wolf, Giardino, Osborne, and Ambrose (1994) and modified by Wu, Larabee, and Pulman (2006)—was used to measure caring behaviors of nurses and patients. The CBI-24 is a 24-item instrument; each item is scored on a 6-point Likert-type scale for response: 1 (never), 2 (almost never), 3 (occasionally), 4 (usually), 5 (almost always), and 6 (always). Total scores range from a low of 24 to a high of 144. There are four subscales: Assurance of Human Presence (eight items), which deals with patients’ needs and security; Knowledge and Skill (five items), which is related to nurses’ intellect and ability to confront difficult situations; Respectful Deference to Others (six items), which indicates a nurse’s ability to display interest with patients; and Positive Connectedness (five items), which demonstrates that the nurse is ready to help patients (Wolf et al., 1994). In prior research (Wu et al., 2006), internal consistency reliability revealed an α of .96; reliability coefficients of the four subscales were .92 (Assurance of Human Presence), .82 (Knowledge and Skill), .89 (Respectful Deference to Others), and .85 (Positive Connectedness). For the present study, Cronbach’s α values were .92 for the total score, .93 for patients, and .87 for nurses. Cronbach’s α values for the four subscales for the total sample were .85 for Assurance of Human Presence, .67 for Knowledge and Skills, .78 for Respectful Deference to Others, and .71 for Positive Connectedness. Cronbach’s α values for patients for the four subscales were .88 for Assurance of Human Presence, .64 for Knowledge and Skills, .82 for Respectful Deference to Others, and .76 for Positive Connectedness. The Cronbach’s α values for nurses for the four subscales were .80 for Assurance of Human Presence, .73 for Knowledge and Skills, .64 for Respectful Deference to Others, and .60 for Positive Connectedness.

Demographic information was collected from patients, including age, gender, race, marital status, education, employment status, reason for hospital admission, type of diabetes, and length of time since diagnosis of diabetes. Length of current hospitalization was abstracted from participants’ medical records. Nurses were asked to identify their age, gender, race, education, work status, and years of experience as a registered nurse.

Statistical Analysis
Data analysis was completed with SPSS, version 19.0. Measures of central tendency, frequency, and percentages, as well as chi-square statistics, were used to describe the sample and to determine the five caring behaviors that were most important to patients. To assess differences between groups for overall caring and the four subscales, a two-tailed t-test statistic was used.

Protocol for Conducting the Research
After obtaining approval from the institutional review board, the researcher requested the names of the bedside RNs from the nurse managers for each of the study units. These names were entered into SurveyMonkey. The nurses received an e-mail inviting them to participate in the study. An explanation of the
Table 1
Top 5 Caring Behaviors of Nurses as Perceived by Patients (N = 54) and Nurses (N = 64)

| Patient Rank | CBI-24 Item                        | Nurse Rank | CBI-24 Item                        |
|--------------|------------------------------------|------------|------------------------------------|
| 1            | Being confident with the patient   | 1          | Encouraging patient to call if there is a problem |
| 2            | Treating information confidentially | 2          | Treating information confidentially |
| 3            | Demonstrating knowledge and skill  | 3          | Knowing how to give shots, IVs, etc. |
| 4            | Knowing how to give shots, IVs, etc.| 4          | Treating patient as an individual |
| 5            | Managing equipment successfully    | 5          | Demonstrating professional knowledge and skills |

Note: CBI-24 = Caring Behaviors Inventory

Results

Patient Sample

A convenience sample of 56 patients with diabetes admitted to one of the four medical nursing units was surveyed during a 3-week period using the CBI-24. A total of 68 patients were approached to complete the survey; five refused and seven were deemed too ill to participate. The patient sample comprised 33 men (62.5%) and 21 women (37.5%), who ranged in age from 23 to 86 years (M = 57.9, SD = 14.7). All patients had a diagnosis of diabetes mellitus. The duration of diabetes diagnosis ranged from less than 1 year to more than 50 years. Patients’ length of stay ranged from a minimum of 3 days to a high of 25 days.

Nurse Sample

One hundred seventy-five bedside nurses (RNs) were invited to participate in the survey via e-mail; 66 (36% response rate) completed the survey. Two surveys were discarded because they were not complete. Of the total sample, 56 (89%) were women, with an age range of 22 to 74 years (M = 36, SD = 13.9); most (n = 53, 83.4%) worked full-time. By nursing degree, two (3%) had diplomas, 19 (30%) had associates’ degrees, 40 (62%) had bachelor’s degrees, and two (3%) had master’s degrees. On average, these nurses had worked 8.4 years as RNs and 5.7 years on their respective nursing unit.

Results for Question 1: What nurse caring behaviors do hospitalized patients with diabetes identify as the most frequently displayed caring behaviors? The behaviors with the highest scores were used to determine the caring behaviors most frequently reported by patients. The top five nurse caring behaviors identified by patients were being confident with the patient (M = 5.82, SD = 0.43), treating patient information confidentially (M = 5.71, SD = 0.59), demonstrating knowledge and skill (M = 5.64, SD = 0.72), knowing how to give shots, IVs, etc. (M = 5.50, SD = 0.89), and managing equipment skillfully (M = 5.45, SD = 0.74).

Results for Question 2: What nurse caring behaviors do bedside nurses rate as the most frequently displayed caring behaviors? The top five caring behaviors perceived by nurses as most frequently provided were encouraging a patient to call if there is a problem (M = 5.83, SD = 0.38), treating patient information confidentially (M = 5.80, SD = 0.50), knowing how to give shots, IVs, etc. (M = 5.80, SD = 0.44), treating a patient as an individual (M = 5.67, SD = 0.51), and demonstrating knowledge and skills (M = 5.63, SD = 0.51).

Results for Question 3: What are the differences in perceptions of caring behaviors identified by hospitalized patients with diabetes and bedside nurses? Items rated as most frequently displayed by both patients and nurses were treating patient information confidentially, knowing how to give shots, IVs, etc., and demonstrating knowledge and skills. The patients’ most frequently encountered caring behaviors were all from the Knowledge and Skills subscale. No behavior from the Positive Connectedness subscale was identified by either patients or nurses. These results are included in Table 1.

A t test was used to assess the difference between the patient and nurse groups in perceptions of the frequency of caring behaviors. There was a significant difference (with significance level set at .01 for multiple comparisons), t(56) = 2.66, p = .01, between nurses and patients on the CBI-24, with nurses scoring higher (M = 129, SD = 8.9) than patients (M = 122, SD = 16.4). Analysis of the difference between nurses and patients on the four subscales revealed a statistically significant difference on the subscales of Respectful Deference to Others, t(82) = 2.94, p = .004, and Positive Connectedness, t(74) = 3.21, p = .002. Nurses scored higher than patients on each of these subscales. These results are included in Table 2.

Discussion

Results of this study demonstrated a significant difference between nurses and patients on the CBI-24, with nurses scoring higher than patients. Analysis of the difference between patients and nurses on the four subscales revealed a statistically significant difference in the subscales of Respectful Deference to Others and Positive Connectedness, with nurses scoring higher than patients. There was agreement of perceptions between nurses and patients in three of the top five most frequently observed caring behaviors: calculating information confidentially, demonstrating knowledge and skills, and knowing how to give shots, IVs, etc. In responding to open-ended questions, patients and nurses described the following behaviors as caring: providing information, monitoring glucose values, listening, teaching, and supporting.

Results in Relation to Previous Studies

Of the studies that have compared nurse and patient perceptions of caring (O’Connell & Landers, 2008; Papastavrou et al., 2012; von Essen & Sjoden, 2003; Zamanzadeh et al., 2010), the present study is the only study that specifically targeted patients with diabetes. Unlike other studies (Aziz-Fini et al., 2012; Baldursdottir & Jonsdottir, 2002; Clukey, Hayes, Merrill, & Curtis, 2009; O’Connell & Landers, 2008; Palese et al., 2011; Raffi et al., 2008; von Essen & Sjoden, 2003; Wilkin & Slevin, 2004; Zamanzadeh et al., 2010), the present study examined the frequency of caring behaviors rather than their importance.
understanding what patients with diabetes nurse caring behaviors. Knowing and difference in patient and nurse perceptions of caring. Also, research into what nurses do from what nurses say they do. Educational programs may be developed that meet the individual needs of patients.

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| Subscale Group | Patient M (SD) | Nurse M (SD) | t | p |
|----------------|----------------|--------------|---|---|
| Assurance of Human Presence | 40 (7.7) | 43 (3.4) | 2.24 | NS |
| Knowledge and Skills | 28 (2.3) | 28 (1.9) | 0.633 | NS |
| Respectful Deference to Others | 31 (4.6) | 33 (2.5) | 2.94 | .004 |
| Positive Connectedness | 23 (4.7) | 25 (2.8) | 3.21 | .002 |
| Total score | 122 (16.4) | 129 (9.0) | 2.66 | .01 |

Note: NS = not significant

**Limitations**

Data were collected from a convenience sample of patients with diabetes and nurses from one hospital in the United States, limiting generalizability. The sample included nurses caring for medical patients with diabetes; thus, these results cannot be used to draw conclusions about nurses caring for patients with other chronic diseases.

**Nursing Implications**

The results of this study provide implications for the care of patients hospitalized with diabetes, such as specific behaviors that patients think are caring and behaviors nurses believe are caring. These results can be shared with nurses in order to refine the way they provide care to patients, thus rendering more patient-centered care. Educational programs may be developed that highlight the caring expectations of patients.

**Recommendations for Future Research**

Additional studies are needed to further explore patient and nurse perceptions of caring behaviors. Observational studies that examine caring behaviors used by nurses and deemed caring by patients during patient-nurse interactions are necessary to distinguish what nurses do from what nurses say they do. Research investigating competence and caring would be helpful in discerning the influence competence has on caring. Also, research into the consequences of caring are lacking and are urgently needed to link caring-based interventions to patient outcomes.

**Conclusion**

The results of the study suggest that there is a difference in patient and nurse perceptions of nurse caring behaviors. Knowing and understanding what patients with diabetes perceive as caring behaviors is an important first step in tailoring nursing interventions that will meet the individual needs of patients.
Wolf, Z. R., Giardino, E. R., Osborne, O. R., & Ambrose, M. S. (1994). Dimensions of nurse caring. *Image: Journal of Nurse Scholarship, 26*, 107–111.

Wu, Y., Larrabee, J. H., & Pulman, H. (2006). Caring behaviors inventory: A reduction of the 42 instrument. *Nursing Research, 55*, 18–25.

Zamanzadeh, V., Azimzadeh, R., Rahmani, A., & Valizadeh, L. (2010). Oncology patients’ and professional nurses’ perceptions of important nurse caring behaviors. *BMC Nursing, 9*, 1–10.

Zimmerman, B., & Ng, S. (2008). Beyond the bedside: Nursing as a policymaking. In C. Lindberg, S. Nash, & C. Lindberg (Eds.), *On the edge of complexity* (pp. 125–158). Bordentown, NJ: Plexus.

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