Breast Cancer Navigation and Patient Satisfaction: Exploring a Community-Based Patient Navigation Model in a Rural Setting

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The concept of patient navigation is defined by its founder, Harold Freeman, MD, as interventions initiated in cancer care for the purpose of reducing barriers to timely screening, diagnosis, treatment, and supportive care (Harold P. Freeman Patient Navigation Institute, 2011). Since the inception of the concept in 2005, patient navigation interventions have escalated in an attempt to reduce disparities (Freeman & Chu, 2005; Pedersen & Hack, 2010) and improve overall patient satisfaction with cancer treatment (Campbell, Craig, Eggert, & Bailey-Dorton, 2010; Freund et al., 2008). Although the implementation of navigation and qualifications for a navigator remain controversial (Institute for Alternative Futures, 2007), the use of nurses in the navigation role is increasing (Campbell et al., 2010; Koh, Nelson, & Cook, 2011; Korber, Padula, Gray, & Powell, 2011). Concurrently, evaluation of patient navigation's effectiveness and clinical implications are lacking (Wells et al., 2008). Evaluation of navigation programs, including patient satisfaction, provides objective insight into patient benefits (Campbell et al., 2010; Wilcox & Bruce, 2010). The purpose of this study was to explore satisfaction levels with a nurse navigation model in a sample of patients with breast cancer.

Since 2001, deficiencies surrounding the delivery of health care have gained national attention and precipitated reform to address the system inadequacies facing patients with cancer. The National Cancer Institute's President's Cancer Panel (2001) report *Voices of a Broken System: Real People, Real Problems* cited system failures, including lack of care coordination and fragmentation of care, as contributing factors to compromised patient education and support. Quillin et al. (2009) believed decentralization of care was a catalyst to communication gaps among providers and patients. The American Cancer Society (2012) estimated 230,480 new diagnoses of invasive breast cancer in the United States in 2011.

Purpose/Objectives: To explore patient satisfaction among newly diagnosed patients with breast cancer in a rural community setting using a nurse navigation model.

Design: Nonexperimental, descriptive study.

Setting: Large, multispecialty physician outpatient clinic serving about 150 newly diagnosed patients with breast cancer annually at the time of the study.

Sample: 103 patients using nurse navigation services during a two-year period.

Methods: A researcher-developed 14-item survey tool using a Likert-type scale was mailed to about 300 navigated patients.

Main Research Variables: Nurse navigation and patient satisfaction.

Findings: The majority of participants (n = 73, 72%) selected "strongly agree" in each survey statement when questioned about the benefits of nurse navigation.

Conclusions: Patients receiving nurse navigation for breast cancer are highly satisfied with the services offered in this setting.

Implications for Nursing: Findings from this study offer insight regarding the effectiveness of an individualized supportive care approach to nurses and providers of oncology care. That information can be used to guide the implementation of future nurse navigation programs, determine effective methods of guiding patients through the cancer experience, and aid in promoting the highest standard of oncology care.

The time required to offer patients with cancer the service they require and deserve is simply not available in the current healthcare system (Hermann, 2008).

The Institute of Medicine report (2001) *Crossing the Quality Chasm: A New Health System for the 21st Century* cited "patient-centered care" as a primary initiative aimed at improving the patient experience (p. 40). As a result, patient navigation has emerged in the oncology field as an individualized supportive care approach.

The report also claimed patient-centered care has the potential to decrease barriers to care and increase overall patient satisfaction. A recommendation to address the deficiencies within the healthcare system included the development of patient navigation programs. The National Cancer Institute's President's Cancer Panel (2004) report *Living Beyond Cancer: Finding a New Balance*) echoed the need for improved patient and family education offered by healthcare providers to those newly diagnosed with cancer.

Patient navigation is an attempt to answer that national call for action. Research findings supporting the potential for patient navigation to enhance patient satisfaction, reduce barriers to care, and improve patient outcomes are gaining momentum (Campbell et al., 2010; Chen et al., 2010; Koh et al., 2011; Korber et al., 2011).

The purpose of this study was to explore patient satisfaction levels using a nurse navigation model offered to women newly diagnosed with breast cancer in a rural community-based setting. The research question asked was: What is the patient satisfaction of women newly diagnosed with breast cancer in a rural setting using a community-based nurse navigation model?

Conceptual Framework

The Synergy Model, developed by the American Association of Critical-Care Nurses (Curley, 1998) was the basis for the conceptual framework of this study. According to Curley (1998), synergy is achieved and patient healthcare outcomes are maximized—including patient satisfaction—when patient characteristics are congruent with nurse competencies. Using caring practices, clinical expertise, and management of complex systems, nurses create safe passage for patients and their families through the illness trajectory and while moving toward self-awareness and restoration of balance (Curley, 1998). Case (2011) correlated the use of the Synergy Model with nurse navigation.

For the purpose of this study, concepts of the Synergy Model are expanded in the nurse navigation process. Nurse-patient relationships exist within the oncology healthcare team. The nurse navigator works to establish synergy not only with the patient but also with the entire oncology healthcare team, including those existing nurse-patient relationships and educational or supportive resources working with the patient and family. That expanded synergistic effort is accomplished through the creation of the additional role of the nurse navigator.

The nurse navigator acts as the connecting thread, advocating for the patient and family through the illness and health restoration trajectory. By integrating the medical model of care, existing educational and supportive resources, and the essence of nursing, nurse navigation embeds the patient in a system of care and true patient-centered care is achieved.

Review of Literature

Literature searches of the CINAHL® and ProQuest databases conducted from 2006–2010 with the terms *patient navigator* or *patient navigation* produced limited results. Searches in 2011 using *patient navigation* produced a dramatic increase in studies, indicating an escalating interest in the field. The addition of the terms *oncology* and *case management* produced more results. Fourteen relevant studies were selected for inclusion in this review. Variances in navigation design, purpose, setting, and sample size were noted.

Early Patient Navigation Program Outcomes

Research on early patient navigation program outcomes is minimal and presents a narrow focus on its potential to reduce disparities in health care. In those studies, navigation was viewed primarily as an intervention focused on barrier reduction using laypersons instead of nurses (Dohan & Schrag, 2005; Freeman & Chu, 2005; Wells et al., 2008). Primary objectives for more currently assessed patient navigation programs continue to include improving patient outcomes through the identification and elimination of barriers to care (Chen et al., 2010; Freeman & Chu, 2005; Wells et al., 2008). Barriers most commonly addressed are those interfering with timeliness of treatment, access to financial and supportive resources, and cultural or institutional inadequacies (Fisher, Sauaia, & Kutner, 2007; Vargas, Ryan, Jackson, Rodriquez, & Freeman, 2008). As navigation's potential impact gains national attention, additional outcome variables such as patient satisfaction and distress management are being investigated (Campbell et al., 2010; Swanson & Koch, 2010). Since the introduction of patient navigation into oncology care in 2006 (Freeman, 2006), cancer centers and hospitals throughout the United States have implemented programs to improve oncology services offered to all socioeconomic groups of patients (Wilcox & Bruce, 2010). Navigation programs have varied on multiple levels, including the qualification of the navigator, scope of practice, healthcare setting, and disease or area of navigation focus. The lack of consensus in those areas contributes to the diverse use of this concept in patient care (Darnell, 2007; Fisher et al., 2007). The absence of standardization challenges efforts to quantify patient outcomes.

The Nurse as the Patient Navigator

The term *nurse navigator* was introduced to the oncology healthcare setting in recent years but seems to continue to fall under the broad heading of patient navigation (Curran, 2003). The National Comprehensive

Cancer Network (2011) stated that the patient navigator is most often a nurse and used the term *patient navigator* interchangeably with *case manager*. The role of a patient navigator includes "some degree of case management, patient education, social work, and advocacy" (Fisher et al., 2007, p. 1,023). For the purpose of the current study, nurse navigation is defined as patient navigation services implemented by a bachelor's-prepared RN, often with oncology experience, who offers cancer education, supportive care, and appropriate referrals after diagnosis and throughout treatment for breast cancer.

The barrier-focused approach using lay workers in early navigation programs gained patient and provider support but also raised concerns about the necessary level of expertise required for this role (Dohan & Schrag, 2005). The high level of oncology care knowledge and availability throughout the disease management process suggest RNs as ideal candidates for the role of patient navigator (Case, 2011; Korber et al., 2011; Seek & Hogle, 2007). Nurse navigators are essential to care coordination and must be able to collaborate with multiple physicians and supportive resources. As advancing treatments and healthcare system changes contribute to increasing complexity for patients with cancer, nurses have a significant role in multidisciplinary care coordination and care planning. The resulting enhanced communication, educational reinforcement, and patient advocacy throughout the trajectory of care attributed to these nursing actions contributes to quality outcomes, including patient satisfaction with the cancer experience (Mick, 2008; Pedersen & Hack, 2010).

Studies are only beginning to surface evaluating patient outcomes when using nurses as patient navigators in the oncology setting. Patient navigation using nurses is viewed as an effective strategy to improve the standard of oncology care delivered, including patient satisfaction (Campbell et al., 2010; Korber et al., 2011; Seek & Hogle, 2007). Use of nurses in supportive oncology care continues to be validated and explored, but the implications of using RN in the role of patient navigator challenges a new dimension of research.

Patient Satisfaction and Patient Navigation

Current studies examining the effectiveness of nurse navigation in the oncology setting offer insight into the benefits of using nurses in the role of navigator. Obtaining data concerning patients' perception of patient navigation programs using nurses offers valuable guidance to future implementation strategies and role delineation. Most recent studies have addressed navigation's effectiveness by assessing patients' perception using satisfaction surveys (Campbell et al., 2010; Koh et al., 2011) or interviews (Korber et al., 2011). Swanson and Koch (2010) explored patients' perception of nurse navigation by evaluating distress scores of inpatients

using oncology nurse navigators. Campbell et al. (2010) also explored how patient navigation impacts staff perceptions of a patient's readiness for treatment, access to care, and overall satisfaction with care. Study weaknesses identified in recent studies include the lack of a reliable and validated patient satisfaction survey specific to nurse navigation (Campbell et al., 2010; Koh et al., 2011), limited demographic diversity, and limiting use of nurse navigation among females diagnosed with breast cancer (Campbell et al., 2010; Koh et al., 2011; Korber et al., 2011). Research data currently support the nurse navigator's ability to remove barriers to care (Wells et al., 2008), enhance patient knowledge and understanding (Korber et al., 2011), encourage treatment adherence (Chen et al., 2010), and positively impact overall satisfaction following the use of nurse navigation (Bowman & Grim, 2008; Campbell et al., 2010; Koh et al., 2011; Korber et al., 2011).

Improving patient experiences and outcomes in oncology care has emerged as an area of interest, as evidenced by rapidly expanding research in patient navigation. Within the past decade, researchers have increasingly investigated the impact of patient navigation interventions. The interventions aimed at reducing barriers to care, decreasing the fragmentation within the healthcare system, and increasing the satisfaction and outcomes for care recipients have generated the most interest.

Methods

Setting

Participants were recruited from a community-based nonprofit organization providing nurse navigation services for a large for-profit, multispecialty physician clinic serving a rural population and surrounding counties. Navigation services were offered to all patients newly diagnosed with breast cancer who were treated at the physician clinic, which served as the only provider of care for this population of patients in the rural Southeast community and its surrounding counties. The navigation program was initiated in March 2005, using an RN as the navigator. After two years of operation, the established navigation program was transitioned into a nonprofit community-based setting. A second RN was hired to provide navigation services to women with breast cancer in 2009.

The purpose of nurse navigation in this setting was to provide patients and families with additional education and support and offer barrier-to-care resolution. Following the initial consult with the navigator, a second referral was made for specified patients to a "service navigator," or social worker, to assist with additional resource identification. Using designated protocol,

the nurse navigator maintained contact with the client throughout treatment planning, initiation, and to completion through phone calls, office consultations, and hospital visits. After three years of operation, an average of 150 patients per year participated in navigation services.

Study Design

The study used a nonexperimental, descriptive design with a researcher-developed survey tool aimed to obtain information regarding patient satisfaction with navigation services (see Figure 1). According to Ware,

Snyder, Wright, and Davies (1983), patient satisfaction is defined as "personal preferences as well as expectations" (p. 247) and is measured in this study by the researcher-developed **Nurse Navigation Patient Satisfaction Survey.** Institutional review board approval from the university funding this study and letters of approval from the administration of the physician clinic and nonprofit organization providing patient services were obtained prior to participant selection for inclusion in the study.

A panel of expert cancer specialists established content validity for the 14-item researcher-developed survey

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Please take a few minutes to share your comments with us. Your feedback will help to improve our services.

The following information is optional and will be used for statistical use only:

Age: _____

Race/Ethnicity:
❏ African American   ❏ Asian   ❏ Caucasian   ❏ Hispanic   ❏ Other: _____

Stage of cancer:
❏ 0   ❏ I   ❏ II   ❏ III   ❏ IV   ❏ Other: _____

Insurance:
❏ Private   ❏ Military Program   ❏ Medicare   ❏ Medicare + Private   ❏ Medicaid   ❏ Uninsured   ❏ Declined

Highest level of education achieved:
❏ Less than high school   ❏ High school/GED   ❏ College   ❏ Masters   ❏ Doctoral   ❏ Other: _____

Which best describes you:
❏ Single   ❏ Married   ❏ Partner   ❏ Divorced   ❏ Widow

Children:
❏ No   ❏ Yes   If "yes":   ❏ Have at least one child under 18   ❏ Child/children over age 18

Rank each statement by circling the number that best describes your personal experiences.

5 (Strongly agree)	4 (Mildly agree)	3 (Neutral)	2 (Mildly disagree)	1 (Strongly disagree)	0 (Does not apply)

Statement					
1. I learned new information regarding my cancer experience from my nurse navigator.	5	4	3	2	1	0
2. I feel my nurse navigator was knowledgeable about my diagnosis and treatment.	5	4	3	2	1	0
3. I feel my concerns were taken seriously and addressed by my nurse navigator.	5	4	3	2	1	0
4. The nurse navigator offered additional emotional support that helped me manage my diagnosis and treatment.	5	4	3	2	1	0
5. The personal meetings with the nurse navigator were valuable to me.	5	4	3	2	1	0
6. The follow-up calls from the nurse navigator were valuable to me.	5	4	3	2	1	0
7. My calls to the nurse navigator were returned in a timely manner.	5	4	3	2	1	0
8. I found the education binder/folder given by my nurse navigator helpful.	5	4	3	2	1	0
12. I feel navigation service is necessary for the care of patients with cancer.	5	4	3	2	1	0
13. My overall experience with navigation services improved my cancer experience.	5	4	3	2	1	0
14. I would recommend navigation services to others.	5	4	3	2	1	0

Note. Survey tool reflects omission of original survey statements 9, 10, and 11, which were eliminated from the analysis.

Figure 1. Nurse Navigation Patient Satisfaction Survey
Note. Please contact the author for approval to use survey tool.

tool. Participants were asked to rate survey statements with a Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Participants also could select "does not apply." Survey questions were subcategorized into five areas: three statements (#1, #2, #8) addressed educational needs, two (#3, #4) addressed emotional needs, three (#5, #6, #7) addressed the user-friendliness of the navigation program, three (#9, #10, #11) addressed satisfaction with the service navigator, and three (#12, #13, #14) addressed overall satisfaction with the program. Three survey statements (#9, #10, #11) exploring satisfaction with service navigation were eliminated from this analysis. Patients who met criteria for referral to service navigation did not address the service navigation statements and were unable to differentiate between the terms *nurse navigator* and *service navigator*. Reliability analysis on the remaining survey items indicated a high level of internal reliability ($\alpha = 0.84$).

Sample, Data Collection, and Analysis

Participants were obtained from a database of patients using nurse navigation services from 2005–2009. Inclusion criteria included a diagnosis of breast cancer and participation in navigation services from April 1, 2007, to April 1, 2009. Exclusion criteria included patients known to be deceased and patients who did not personally meet with the nurse navigator prior to treatment initiation. A survey and cover letter were mailed to about 300 patients who met the criteria for the study. A reminder postcard was mailed three weeks after the initial mailing.

Mailed surveys were deidentified using a code and participants were instructed to omit their return address or any identifying information. Participants also were informed that a returned survey was considered consent to participate in the study. A response rate of about 33% (n = 103) was obtained and data from returned surveys were entered in SPSS®, version 19.0, for analysis. Hard copies of surveys were stored in a locked cabinet.

Findings

Demographic information was collected (see Table 1). The majority of participants were Caucasian, had stage 0–II cancer, had health insurance, and had children. Although no significant variation was observed in the demographics, the most diverse demographic variable assessed in this population related to cancer stage; notably, 24% of participants did not know their stage of cancer.

The majority of participants (97%) agreed they had learned new information through their interaction with the navigator (see Table 2). Notably, 20% of participants selected "does not apply" for the statement about follow-

Table 1. Demographic Characteristics

Characteristic	$\overline{X}$	SD	Range
Age (years)	62.57	12.41	33–92

Characteristic	n
Ethnicity	
Caucasian	85
Non-Caucasian	18
Cancer stage	
0–II	68
III–IV	9
Does not know	25
Did not answer	1
Insurance	
Private or Medicare	90
Other (e.g., Medicaid, uninsured)	12
Did not answer	1
Education	
High school or less	48
College and above	49
Did not answer	6
Marital status	
Married	67
Other	36
Has children	
Yes	89
No	12
Did not answer	2

N = 103

up calls; perhaps those participants did not initiate phone calls to the navigator.

Discussion

The results of this study suggest that participants were highly satisfied with this nurse navigation model. Ongoing support and education offered through nurse navigation services improved patients' perception of their cancer experience. Efforts to enhance patient satisfaction, such as nurse navigation, potentiate synergistic relationships between the patient unit and the entire oncology team and may maximize patient-centered care. Adapting this model of patient navigation to other major cancers is a relevant practice consideration for community oncology healthcare settings.

The findings from this study mirror previous research assessing patient satisfaction with nurse navigation (Campbell et al., 2010; Koh et al., 2011). Although the relationship of age and patient satisfaction with navigation was not assessed in this study, the impact of this demographic variable on the outcome of patient navigation has been debated (Pieters, Heilemann, Grant, & Maly, 2011). A qualitative study conducted by Pieters et al. (2011) identified oncology nurse navigator benefits as positively affecting the breast cancer journey for the

Table 2. Participant Responses to Navigation Satisfaction Survey

Statement	Strongly Agree		Mildly Agree		Neutral		Does Not Apply	
	n	%	n	%	n	%	n	%
Educational needs								
1. Learned new information	86	84	13	13	2	2	2	2
2. Nurse navigator knowledgeable	95	92	6	6	–	–	2	2
8. Educational binder helpful	93	90	4	4	3	3	2	2
Emotional needs								
3. Concerns taken seriously	97	94	3	3	1	1	2	2
4. Offered additional emotional support	85	83	11	11	1	1	5	4
User-friendliness								
5. Personal meetings valuable	85	83	11	11	1	1	6	6
6. Follow-up calls valuable	89	87	7	7	2	2	5	5
7. Calls returned in timely manner	73	71	8	8	1	1	21	20
Overall satisfaction								
12. Navigation services necessary	86	84	7	7	5	5	4	4
13. Improved my cancer experience	82	80	9	9	6	6	6	6
14. Would recommend navigation service	93	90	2	2	3	3	5	5

N = 103

Note. Because of rounding, not all percentages total 100.

Note. One participant "strongly disagreed" with the usefulness of the educational binder, one participant "mildly disagreed" that navigation offered additional emotional support, and one participant "mildly disagreed" that navigation services were necessary.

majority of women interviewed aged 70 and older. Conversely, Swanson and Koch (2010) concluded younger patients benefitted more from nurse navigation than older populations. Additional studies exploring the impact of specific demographic variables on satisfaction with nurse navigation are necessary.

Evaluation of patient satisfaction with nurse navigation based on stage of cancer is limited. Stage-related benefits might offer additional insight into the benefits of navigation. In addition, helping patients identify their cancer stage may be part of the role of the navigator. A significant number of participants (24%) in this study did not know their cancer stage at the conclusion of treatment.

Identified limitations for this study include the limited generalizability of the results because of the lack of geographic, ethnic, racial, and socioeconomic diversity, lack of established reliability for the researcher-developed instrument, and potential for researcher bias, as the researcher developed and implemented the nurse navigation program.

Implications for Research and Nursing Practice

Since its inception by Freeman (2006), the evolution of patient navigation has been evident in the literature. Using nurses in this role has the potential to offer addi-tional promising resolution to patient care inadequacies but lacks sufficient evidence. Although evidence has positively supported patient navigation as an effective means of reducing barriers in oncology care and increasing patient satisfaction, exploration of patient outcomes in this emerging field is in its infancy. Lack of standardization in navigation programs, variance in research methodologic design, and absence of validated tools specific to patient navigation challenge these efforts (Campbell et al., 2010; Koh et al., 2011). Additional studies evaluating patient and provider satisfaction using nurse navigation in other cancer disease processes and various populations of patients are warranted.

Variance in navigation programs and lack of standardized procedures continues to challenge researchers in this field of study (Moore, 2010). Identifying key components relevant to effective navigation programs is essential. Future exploration comparing patients who use navigation services to those who do not, as well as comparing specific patient outcomes, will offer prospective evidence versus retrospective evaluation. In addition, investigating the relationship between demographic variables and satisfaction with patient navigation will add depth to this field of research. Finally, survey tools tested for validity and reliability, specific to patient navigation, are needed.

As decentralization of care for patients with cancer continues, nurses are ethically obligated to explore innovative approaches to healthcare system deficiencies. Replication of studies exploring patient satisfaction and nurse navigation using similar practice models will offer the necessary evidence base to this trend in oncology nursing.

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