Special Article

Caring Science Education: Measuring Nurses' Caring Behaviors

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Abstract

This article focuses on reviewing research and evidence-based practices related to Caring Science educational programs, utilizing Caring Science theory as an intervention to inform and impact the nurses caring behaviors while caring for patients within a heathcare environment. While there are multiple survey tools directed at patient's assessing the caring behaviors based on the patient's perception, there are limited surveys that examine the nurse's perception of their caring behaviors and their personal, professional practice relating to Caring Science or relationship-based care and, the impact on their clinical practice post education intervention.

The purpose of this article is to better understand the impact and measurement of nurses' self-perception of caring behaviors following the co-creation of the Caring Science/Heart Science standardized educational series in a large multi-site organization and, patient's perception of being "treated with loving kindness." Advancing the art and science of the nursing staff through deepening their understanding of the theory of human caring, engaging their hearts and minds, deepening their understanding of the theory as the foundation for all professional nursing practices within the organization.

Keywords: *nurse*, *caring theory, education, caring attributes, patient, perception.*

Introduction

The healthcare landscape has changed. Social, political, and economic forces of healthcare reform are challenging organizational viability. As hospital systems merge, creating mega systems, caring and administrative practices are often in conflict. To compete for viability in this new landscape, hospitals have moved from caring healing-environments to business or economic models of caring institutions that focus on census instead of patients and, technology instead of touch or human connection (Watson, 2006). The largest workforce within the healthcare system, nurses are torn between the economic direction of the organization and the needs of the patient and their family. Caring is central to the nursing profession; it is through the act of caring and engaging in authentic caring, humanistic encounters that nurses find their professional identity. Nurses' find purpose and satisfaction in their work when they have the opportunity to engage with patients and families and practice caring behaviors. When nurses are challenged to engage in authentic caring behaviors with their patients and families due to increased technology and complexity of patient care, their professional identity diminishes leading to decreased job satisfaction (Amendolair, 2012).

Dr. Jean Watson, nurse theorist, originator of the Theory of Human Caring, calls on nurses and nurse leaders to transform hospitals and healthcare systems from the dominant medical techno-cure system of today often viewed as biocidic (life depleting or toxic) to a biogenic (life-giving, and life receiving for patient and practitioners alike) healthcare environment (Watson, 2010). Shifting our caring to authentic intention, a nursing practice that is based in ethics and values, thus restoring the human spirit for the patient and the practitioner (Schlagel & Jenko, 2015). Caring science connects the nurse, patient, family, and members of the healthcare team by engaging in authentic human caring relationships and honoring the very humanity of the patient and their family (Watson, 2008). In 2010 a multi-site organization located in Northern California adopted Dr. Jean Watson's Theory of Human Caring (Caring Science) as the foundation for the nurses' professional practice.

Literature Review:

Reviewing literature focusing on research and evidence-based practices, it was found that limited research specifically focusing on caring science educational programs utilized as an intentional intervention to inform and influence and measuring the caring behaviors of the nursing staff while caring for patients within a healthcare environment is available. Although multiple survey tools exist that assess the caring behaviors based on the patient's perception, there are limited tools that examine the nurses' perception of their caring behaviors and their personal, professional practice as it relates to caring science or relationship-based care and the change in clinical practice postintervention. This gap is being addressed as the organization continues to advance the art and science of the nursing staff through deepening their understanding of the theory of human caring, engaging their hearts and minds, and deepening their understanding of the theory as the foundation for all professional nursing practices. A desire to understand the impact of this work on a large multi-site organization and the currently limited literature examining nurses' perceived caring behaviors following an intentional caring science education program led to the co-creation and delivery of a standardized Caring Science/Heart Science education program.

The PICO question used to guide the literature search was: For nurses in a medical center (P), how does the Caring Science/Heart Science education series serve as the foundation for nursing practice (I), compared to no intervention (C), affect the following?

- Registered nurses' intentional caring behaviors in clinical practice with their patients (O), assessed within six months after completion of Caring Science/Heart Science nursing education program (T).
- Patients' perception and reporting of being treated with loving kindness (O), assessed within six months after completion of Caring

Science/Heart Science nursing education program (T).

The PICOT question guided a systematic search (November, 2018) using the keywords nurse, caring theory, education, and job satisfaction. The Cumulative Index of Nursing and Allied Health Literature (CINAHL), PubMed, and Joanna Briggs Institute Library were searched, yielding 76 articles. Two studies were reviewed based on impact of caring cultures within the organization and the job satisfaction of the nursing staff and, two studies examined the nurses' perception of their work environment and the patients' perceptions of the nurses caring behaviors prior to the launch of relationship-based care within the organization as a foundation for future learnings. As noted above, there are limited research study articles available specifically focusing on educational interventions to assist staff in examining their personal, professional practice as it relates to Caring Science or relationship-based care and the change in clinical practice postintervention.

Persky, Nelson, Watson, and Bent (2008) conducted a psychometric study examining the profile of nurses' caring effectiveness. Patients and nurses who were selected to participate in the study were from eight pre-identified medicalsurgical units and one mental health unit preparing to implement relationship-based care. The purpose of the study was to establish baseline data for the nurses caring effectiveness prior to education and implementation of a new practice care model. Health Environment Survey (HES) and the patients completed a Caring Factors Survey (CFS). The dyad review was conducted to assess the relationship of nurses' report of care environment to the patients' perception of caring received from the nurse. The results of the study revealed nurses of all ages who scored highest in caring behaviors by their patients experienced the highest levels of frustration on the HES due to the incongruency of the environment and the nurses' values and goals of caring. Both the HES and the CFS provided good reliability indicated by a Cronbach alpha of .95 and .97, respectively.

Asselin and Fain (2013) conducted a mixed methods study to examining the impact of nurse's participation in a reflective practice continuing

education program and if the deducation made a difference in the self-reflection, insight, and reflective thinking about their care in specific clinical situations. The study was a mixed method pre and post-test design using a quantitative review using the Self-Reflection and Insight Scale (SRIS) a 20 item self-report questionnaire measuring for self-reflection and a qualitative approached using a reflective practice journaling exercise based on patient scenarios. The written narratives were developed from the participant's own personal reflections of specific situations. Using the Bonferroni procedure, it was revealed that nurses did have significantly higher engagement in selfreflection immediately post-program (Time 2; M =30.84; SD = 3.99), as compared to pre-program (Time 1; M = 27.32; SD = 6.01).

Amendoilair (2012) conducted a descriptive correlational study examining the relationship between nurses' perception of their caring behaviors with their patients using the Caring Efficacy Scale (CES) and their job satisfaction using the Index of Work Satisfaction (IWS). The study consisted of a random sample of medicalsurgical nurses (N = 1,091) who completed the two questionnaires. The CES tool reported consistent reliability in a variety of settings with a Cronbach's of .85 and .88. The IWS tool reported consistency and validity for the nursing population with a Cronbach's of .82 to .91. The data were analyzed using SPSS. The surveys were tallied, and parametric statistics were used with all of the summed data (Amendolair, 2012). There was an established correlation between the CES and the IWS with the nurses' ability to spend time with their patients and job satisfaction. The authors reported that nurses should reflect on the value of expressing caring behaviors to strengthen their professional identity and improve their job satisfaction. When nurses practice caring behaviors with their patients, it creates a positive work environment, thus increasing job and patient satisfaction.

Pavlish and Hunt (2012) conducted a narrative design interview study to understand the nurses' perceptions of meaningful work and the contextual factors that impact the nurses' perceptions of meaning at work. The study consisted of acute care hospital nurses (N=13) at two magnet hospitals located in the southwestern United States.

A qualitative method of narrative inquiry was used to better understand the nurses' contextual realities. The interviews were audio recorded, then transcribed into written text. Utilizing a categorical-content method of narrative analysis the interviews yielded 159 detail codes that were placed into five structural categories: (a) descriptors, (b) conditions, (c) consequences of meaningful work, (d) meaningful nursing roles, and (e) stories of meaningful moments. The stories revealed that nurses found purpose and meaning through the relational activities of being and connecting with patients.

Based on the limited literature available, examining the impact of providing nursing staff education focusing on developing caring behaviors and reflective practices and the impact on their work satisfaction and the perceived caring behaviors from the patient's perspective, it was identified that further exploration and research would be appropriate. The evidence indicated by the work of Persky et al., (2008), Amendolair, (2012) and, Pavlish & Hunt, (2012) that nurses have a higher job satisfaction when they engage in caring healing-encounters with patients and families.

Aim

As part of the organization's Northern California patient care services leadership strategic plan, the goal is to align the multiple initiatives within the organization establishing Caring Science as the foundation of all the various initiatives, essentially linking the *why* we do, to *what* we do.

The aim of this work is to co-create and develop a Caring Science/Heart Science education module series and assessing the impacting on the nurses caring behaviors using the Caring Factor Survey-Care Provider Version (CFS-CPV) moving the nurses' from "*being to becoming*" and assessing, the effect on the patient's perception of being "treated with loving kindness".

Caring Science/Heart Science Education

Nurse leaders must develop creative programs and strategies that support and value a caring environment for patients and staff so that nurses will be fulfilled in their work, ensure retention, and improve organizational outcomes (Amendolair, 2012). A Caring Science/Heart Science experiential education program was co-created and developed by the caritas coaches within the organization with the intent to reconnect and engage the nursing staff to the essence of the professional nursing practices. A standardized Caring Science education program utilizing Dr. Jean Watson's Theory of Human Caring as the foundation of professional practice provides the nursing staff the ability to examine, reflect, and discuss theory guided practices leading to a deeper appreciation of connecting the "why" to the what".

To align the Caring Science/Heart Science innovative practice, this organization has partnered the caritas coaches with the 38 HeartMath® trainers who have been trained by the HeartMath® institute in the Resilience AdvantageTM workshop. The evidence-based practices learned in the workshop offers self-regulation skills focusing on the heart connection in identifying and, sustaining positive emotions such as love, gratitude and, appreciation and its healing capabilities for self and others (McCraty & Childre, 2004). These HeartMath® practices provide the caring healingmodalities for staff to obtain self-care and contribute to the development of caring healingenvironments, engaging the hearts and minds of the clinical staff to move beyond task to purpose.

The organization in collaboration with Dr. Watson and HeartMath® brought the caritas coaches and HeartMath® trainers together to enhance the Caring Science education incorporating specific HeartMath® evidence-based practices into the caring science education program. The HeartMath® practices provide the staff the tools to understand the heart connection in identifying and sustaining positive emotions such as love. gratitude, and appreciation of the healing capabilities for self and others (McCraty & Childre, 2004). The HeartMath[®] practices that were integrated into the caring science education were the Quick Coherence® (McCraty & Childre, 2004), Energetics of Communication® (McCraty, 2004) and, Freeze Frame® (Childre & Rozman, 2005) tools. HeartMath® practices focus on generation of positive emotions that create an emotional shift to one of calm, ease and presence which allows the nurses to engage in more authentic caring relationships with self, patients and their care team (McCraty & Chilre, 2004). The HeartMath® practices that were integrated into the caring science education were the Quick CoherenceTM, Energetics of CommunicationTM and Freeze FrameTM tools. HeartMath® practices focus on generation of positive emotions that create an emotional shift to one of calm, ease and presence which allows the nurses to engage in a more authentic caring relationships with self, patients and their care team. Integration and co-creating of a consistent and unified message, "one unified voice," for clinical nursing practice throughout the organization's Northern California medical centers is a key strategy to transform and empower the professional nurse to own their practice.

This education series enables professional nurses to reflect on the value of expressing caring behaviors as they care for their patients and strengthen their own purpose and resolve. The Watson Caring Institute's Caritas Coach Education Program® (CCEP) was used as an experiential guideline, in the design plan for the educational series to allow staff to deepen their understanding and enculturating caring science into their professional practice framework. Educating the nursing staff in the theoretical practices based on human-caring values while delivering care within the professional practice framework for the organization by focusing on the following:

- Care focusing on professional practice based on morality-ethics-values.
- Shifting from a mechanical cure approach to spiritualizing of heath and healing processes.
- Moving from rote, atheoretical professional routines to a nursing practice based on intentional caring-theory -guided professional actions.
- Moving from "institutional" environments to healing environments. Understanding that the nurse is part of that healing environment.
- Focusing on the covenant of caring for a human soul.
- Moving beyond industrialized "managed care" to the relationship-centered caring healingpartnership with the patient and families. Recognizing the whole patient and their

support system as part of the caring healing process (Watson, 2008).

With an understanding the importance and impact of the integration and application of caring science as the foundation for professional practice, the organization has supported and funded 46 clinical staff and leaders combined to become certified caritas coaches by attending the Watson Caring Science Institute's (WCSI), Caritas Coach Education Program (CCEP)®. The CCEP® program is a 6-month educational program which provides the nurses and other caregivers the foundation of the moral, ethical, philosophical principles of Caring Science as a framework for teaching, learning and modeling the theory in their practices (Horton-Deutsch & Anderson, 2018).

To align the Caring Science/Heart Science innovative practice, this organization has partnered the caritas coaches with the 38 HeartMath® trainers who have been trained by the HeartMath® institute in the Resilience AdvantageTM workshop. The evidence-based practices learned in the workshop offers self-regulation skills focusing on the heart connection in identifying and, sustaining positive emotions such as love, gratitude and, appreciation and its healing capabilities for self and others (McCraty & Childre, 2004). These HeartMath® practices provide the caring healingmodalities for staff to obtain self-care and contribute to the development of caring healing environments, engaging the hearts and minds of the clinical staff to move beyond task to purpose.

The quality improvement program that the Caritas Coaches and HeartMath® trainers team agreed to engage in was the consistent use of the standardized Caring Science/Heart Science education modules as the foundation for professional practice education for the organization. The Caring Science/Heart Science experiential education program was developed with the intent to reconnect the nursing staff to the essence of the professional nursing practices. Caring Science honors the whole being mind, body and, spirit providing the nurses with a deeper understanding of honoring the sacredness of caring for patients.

The Caring Science/Heart Science experiential education program for the registered nurse was developed with the intent to reconnecting the nursing staff to the essence of the professional nurse to enhance their caring behaviors from being to becoming, creating caring healing- practices with their patients. Providing the nurses with a deeper understanding of caring science and HeartMath® practices will assist in engaging patients, families, and co-workers in creating authentic, caring healing-practices and environments. Integration and co-creating of a consistent and unified message, "one unified voice" for nursing clinical practice is a key strategy to transform and empower the professional nurse to own their practice. The Caring Science/Heart Science education program incorporates the organizations national professional practice model (Kaiser, 2015); the evidence-based fundamental of care experience and, the evidence-based practices of HeartMath®, to align and "connect the dots" of multiple programs' content to the primary focus, the theory of Caring Science for the nursing staff. This provides the nursing staff an opportunity to enhance and reinforce their perception of meaningful work.

The Watson Caring Institute's® Caritas Coach Education Program ®(CCEP) was used as an experiential guideline in the design plan for the educational series to allow staff to deepen their understanding and enculturate caring science into their professional practice framework. This experiential learning series was developed to provide the nursing staff a theoretical guide, establishing a common language allowing them to see, act on and, reinforce authentic practices that enable the nursing staff to develop their caring attributes moving them from "being to becoming." The 4 modules and their foci are:

• Module 1: The caring connection – Foundation of Caritas Process

• Module 2: Being and Becoming – Taking care of self and others

• Module 3: The healing environment – Providing care to our patients and members

• Module 4: Caritas Consciousness – Evolving our care environments (Appendix A)

Research has shown that when nurses are able to engage in meaningful relationships with their patients and their families, they have purpose and satisfaction in their jobs (Pavlish & Hunt, 2012). The sponsoring organization supports and endorses this work to honor, frame, discuss, develop and advance the art and science of the professional nurses within the organization (Watson, 2008).

Instruments

Reviewing Caring Science literature, it was identified that there are multiple tools measuring the impact of caring and caring behaviors or attributes of the nurse from the patient's perception. The number of tools focused specifically on the nurse's personal perception of his/her own caring behaviors is limited.

Assessing and evaluating the impact of the caring science/heart science education program on the nurses' perception of their caring behaviors both pre and post-intervention utilizing the Caring Factor Survey–Care Provider Version (CFS-CPV) developed by Karen Drenkard, John Nelson, Gene Rigotti, and Jean Watson in 2006 (Johnson, 2012) (Attachment A). Patients' perception of being care for will be assessed pre and post-intervention reviewing the organizations customized Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) question: "Nurses treated me with loving kindness."

Caring Factor Survey-Care Provider Version

The caring factor survey-care provider version (CFS-CPV), originally a 20-item tool designed to measure caring using the 10 Caritas Processes® as constructs by CFS instrument (DiNapoli & Nelson, 2010). The CFS-CPV was modified to a 10-item tool which was developed to measure the essential elements of the 10 Caritas Processes® as the perception of caring concepts by employees who interact with patients within health care (DiNapoli, et al., 2010). The CFS reduced item was explored using exploratory and principal component factor analysis in 2010 by nurse researchers, P. DiNapoli, J. Nelson, M. Turkel, and, J. Watson (DiNapoli, et The result of the tool testing al., 2010). demonstrated that the revised 10-item CFS tool had one item from each of the 10 carative factors with a minimum Cronbach's alpha of .70 as acceptable for this new 10-item tool (DiNapoli, et al., 2010). The outcome from the scholarly work led by the nurse researchers resulted in the final factor loadings for the 10 paired items for the caritas processes ranged from .833 to .891

(DiNapoli, et al., 2010). The researchers reported the reliability for the modified 10-item tool using Cronbach's alpha used for a study of 450 nurses in three healthcare facilities was .89 (DiNapoli, et al., 2010). The project tool utilizes the CFS-CPV with permission from Dr. John Nelson which invites the RN to personally reflect and assess their caring attributes in relationship to Dr. Jean Watson's 10 Caritas Processes[®]. The modified caring factor survey-care providers version consists of a 10-item survey using a 7-point Likert scale.

Results

The intent of this project is to validate the impact of theory-guided experiential learning to inform the professional practice of the nursing staff within the organization. Using the CFS-CPV and the HCAHPS "Nurses treated me with loving kindness" data to measure the effectiveness of the Caring Science/Heart Science education. The focus of this work is on the nurses' perception of their caring behaviors pre and post educational intervention. This work is intended to add to the body of knowledge needed to validate the impact of human caring education for both the nursing staff and patients.

Conclusion

Through the completion of the Caring Science/Heart Science experiential learning series, the nursing staff have an opportunity to examine, reflect, and discuss theory guided caring practices leading to a deeper appreciation of "what" they do and "why" it makes a difference in the lives of the people they care for daily. The ability to measure the impact of this allows nurses to practice at their highest potential as they connect their clinical practices with the purpose of the organizations professional and nursing vision.

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Appendix B Caring Factor Survey- Care Provider Tool

Caring Science Survey Pre-Education

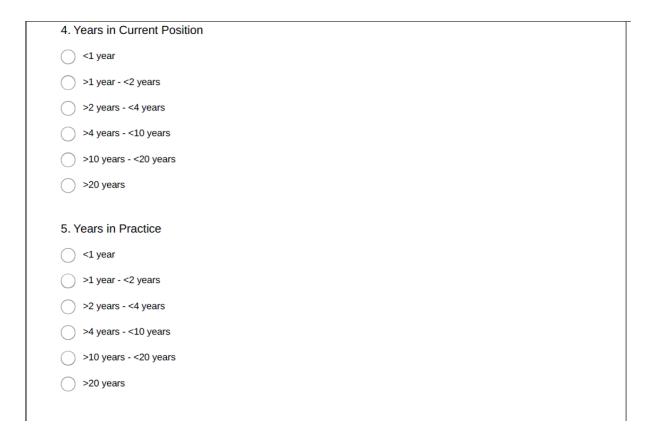
Dear class participant:

We are interested in learning about your Caring attributes prior to and following the completion of this Caring Science & Heart Science education series. A reputable Caring self-assessment survey has been selected and it will take you 5 to 10 minutes to complete the survey. The purpose of this note is to ask you to participate in an evidence-based quality improvement project that will compare participant's perceptions of their Caring attributes pre and post the courses to potentially identify changes in practice. Some demographic information has also been included to support the evaluation phase of the project.

All your answers will be kept completely confidential. The survey results will have no identifying information on it and no individual identities will be used in any reports or publications that may result from this work. If you agree to voluntarily participate, please complete the surveys below.

Thank you in advance for assisting with and taking the time to participate in this study.

1. At	which Kaiser facility do you practice? (Select from the drop-down box below)
2. Cu	rrent role:
R	2N
) P	ст
N	ISW
Т	ransporter
R	Respiratory Therapist
N	lurse Leader: CNE
N	lurse Leader: Director
N	lurse Leader: Manager
N	lurse Leader: Assistant Nurse Manager
0	Other (please specify)
	ork setting:
	lospital
_	zehab center
_	linic
) е	D
	Iome Health
<u> </u>	lospice
<u> </u>	Other (please specify)



6. Caring Factor Survey - Care Provider Version: Dr. John Nelson, Dr. Jean Watson, Dr. Karen Drenkard and Gene Rigotti.									
Please select the your answer to each of the following questions or statements:									
	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree		
Overall the care I give is provided with loving kindness.	0	0	\bigcirc	\bigcirc	0	0	0		
As a team, my colleagues and I are good at creative problem solving to meet the individual needs and requests of our patients.	0	\bigcirc	0	0	0	\bigcirc	\bigcirc		
I help support the hope and faith of the patients I care for.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
I am responsive to my patients' readiness to learn when I teach them something new.	0	\bigcirc	0	\bigcirc	\bigcirc	0	\bigcirc		
I am very respectful of my patients' individual spiritual beliefs and practices.	0	0	0	\bigcirc	0	0	0		
I create an environment for the patients I care for that helps them heal physically and spiritually.	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
I am able to establish a helping- trusting relationship with the patients I care for during their stay here.	0	0	0	\bigcirc	0	0	0		
I respond to each patient as a whole person, helping to take care of all of their needs and concerns.	0	\bigcirc	0	\bigcirc	0	0	\bigcirc		
I encourage patients to speak honestly about their feelings, no matter what those feelings are.	0	0	0	0	0	0	0		
I am accepting and supportive of patients' beliefs regarding a higher power if they believe it allows for healing.	0	0	0	0	0	0	0		