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Editor's Perspective

The Tapestry of the Journal of Nursing Practice Applications & Reviews of Research: Opportunities for Knowledge Development and Dissemination

At the PNAA National Convention in July 2019, the Philippine Nurses Association of America launched the book, *Philippine Nurses Association of America: A Tapestry* with the purpose of preserving the historical events of PNAA. One historical event documented is the evolution of this peer reviewed journal, Journal of Nursing Practice Applications & Reviews of Research (JNPARR). In this book, a study conducted by Dr. Nelson Tuazon and colleagues reported an analysis of the journal's content, from its origin as the Journal of the Philippine Nurses Association of America (JPNAA) to present day as the Journal of Nursing Practice Applications & Reviews of Research (Tuazon, Diongson, & Ayres, 2019). The analysis of the content in JPNAA and JNPARR regarding the concepts, themes, and trends that emerged throughout this journal's evolution provides an understanding of how the journal aligns with the mission, vision, and values of the PNAA and the intended readers of the articles. It also provides a glimpse of the evolution of nursing knowledge disseminated through this journal and a snapshot of the contributors to the development of this knowledge, offering opportunities to improve JNPARR impact on knowledge development and dissemination. Most importantly, it provides a unique opportunity for reflection on where we have been as a journal, where we are now, and where we hope to be as we continue our journey as a vehicle for knowledge dissemination.

Tuazon et al. (2019) examined all the articles from the first issue (Volume 1) to the most recent issue (Volume 9), excluding the editorials, guest editorials, and general reports related to the PNAA. It was noted that there has been an increase in the dissemination of nursing knowledge through research studies in JNPARR, as compared to its seminal journal, JPNAA. Furthermore, studies being generated and disseminated through JNPARR have progressively been producing higher levels of scientific evidence. Findings indicated that majority of articles published were research-based of varying methodological designs; quantitative ($n = 29$), qualitative ($n = 8$), and mixed method ($n = 1$) as compared to the remaining non-research articles ($n = 24$) (Tuazon et al., 2019). It was also reported that a high percentage of articles were based in the clinical setting (32%), as compared to education (19%), community (21%) and general (27%). Furthermore, it was reported that the highest percentage of authors' credentials were PhDs (44%) whereas only 15% were accounted as DNPs. However, the clinical setting is where the highest percentage of articles were based. PhDs are needed to develop the scientific evidence to support nurses in practice. However, DNPs are needed to translate this evidence into practice. DNPs have the unique opportunity to significantly impact the translation of research into clinical practice. DNPs, by virtue of their doctoral education and clinical expertise as advanced practice nurses, can provide valuable information around process improvement and practice change based on the scientific evidence. JNPARR should harness the opportunity to encourage increased collaboration between researchers and clinicians as contributors to knowledge development and in the translation of this knowledge into clinical practice through JNPARR dissemination. Therefore, DNPs should be actively encouraged to disseminate their work and increase their contributions to nursing practice through peer review publications in JNPARR.

Understanding this trajectory based on the work is presented in the book, *Philippine Nurses Association of America: A Tapestry* provides the opportunity to further support PNAA's efforts in knowledge dissemination by identifying potential contributors to the development of scientific knowledge through authorship. Additionally, it provides the opportunity to identify and expand the readership of JNPARR to increase the implementation and translation of this research into clinical practice.

Reference

Tuazon, N., Diongson, & Ayres, C. (2019). Expanding the Boundaries of Knowledge: The Journal of the Philippine Nurses Association of America and the Journal of Nursing Practice Applications & Reviews of Research. In Tuazon (Ed.), *Philippine Nurses Association of America: A Tapestry.* North Brunswick, NJ: Philippine Nurses Association of America.

Nelson Tuazon, DNP, DBA, RN, NEA-BC, CENP, CPHQ, CPPS, FNAP, FACHE (Managing Editor) &
Cynthia Ayres, PhD, RN, FNAP (Editor-in-Chief)

President's Message
Make a Difference, Advocate Part II

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It has been one year since this administration took office to "uphold the positive image and welfare of its constituent members; promote professional excellence and contribute to significant outcomes to healthcare and society" (Philippine Nurses Association of America, Inc. [PNAA] Mission).

PNAA moved to its permanent address in July 2018 through the acquisition of a new building in North Brunswick, New Jersey, in partnership with PNAA Foundation. It will serve as the PNAA Headquarters to house its archive of memorabilia, host conferences and events.

The PNAA Legislative Committee put out a position statement that was released on June 22, 2018 in support of the health of the migrants, refugees, and displaced persons and children. On April 28, 2019, another position statement was issued in reference to the Washington State Senate Bill Substitute House 1155 regarding the provision of meals and rest breaks and prohibiting mandatory overtime for certain healthcare employers. These position statements are available at http://mypnaa. org/Position-Statements.

In keeping with our goal to continue to serve our members, and promote their professional growth, two regional conferences were held: in San Antonio, Texas for the South Central Regional Conference on November 1-4, 2018; and in Columbus, Ohio for the North Central Regional Conference on April 25-28, 2019. At the chapter level, conferences were held in four regions that totaled over 13,000 contact hours. One important goal of the PNAA Education Committee is to obtain provider status for continuing education for nurses through the American Nurses Credentialing Center (ANCC).

In July 2019, PNAA members convened in the beautiful state of Georgia and celebrated its rich legacy of 40 years of advocacy. It was a five-day celebration with professional development and festivities. The convention highlighted inspiring leaders and speakers described their advocacy initiatives in clinical practice, nursing administration, nursing research and how PNAA as an organization consistently champions its goals for its membership. Participants gained strategies on how nurses can advocate for their patients, families, peers and for themselves. Furthermore, participants gained insights in crusading for the marginalized, and the disenfranchised groups and communities like the LGBTQI. One of the highlights of the convention was the launching of the book about the organization entitled - Philippine Nurses Association of America: A Tapestry.

In keeping with the mantra of advocacy, the PNAA Community Outreach Committee raised funds and provided donations to heavily affected regions in the Philippines brought about by Typhoon "Ompong." PNAA collaborated with the local Philippine counterparts, the PNA to assist victims of this disaster.

PNAA takes its fiduciary responsibilities seriously and helps trains members and officers in budgeting and planning. Regional and national conferences planning, monthly reporting are venues where individuals train to keep tract and grow their assets. This year, the Ways and Means Committee launched the PNAA Marketplace, an online business initiative to sell PNAA products and to generate funds for the organization's several initiatives.

This year, the PNAA adapted its official "credo" as an organization. It was chosen from among many entrees by its members across the nation. In July 2019, the PNAA Code of Ethics was adapted by the Executive Board and was presented to the General Membership during the national convention in Atlanta, Georgia.

PNAA believes that its strength comes from its members. Growing the membership is one of the priority goals. Two chapters were opened within the year: PNA Nashville, Tennessee and PNA Maui, Hawaii. PNAA is growing, and prides itself in coalescing with mainstream nursing organizations such as the American Nurses Association (ANA) to further its national agenda. PNAA is also a member of the National Coalition of Ethnic Minority Nursing Organizations (NCEMNA) that includes the National Black Nurses Association, National Association of Hispanic Nurses, Asian Pacific Islander Nursing Association, and the National Alaska and Native American Indian Nursing Association. PNAA has active grassroots community activities and is a member of the National Association of Federation of Filipino American Associations.

We maintain our global outreach, as we are in active planning stages for the Global Summit/International Nursing

Conference scheduled for January 2020 in Boracay, Philippines. This is a collaborative conference with the Philippine Nurses Association, Association of Deans of Philippine Colleges and Universities, and Commission on Filipinos Overseas. During this conference, Filipino nurses all over the world come together to discuss issues affecting Filipino nurses including nurse migration, climate change, sharing nursing curriculum best practices from participating countries and promoting the role of advanced practice nursing. In conjunction with this conference that is held biennially, PNAA conducts the "Balik-turo" program where content experts primarily from the US hold conferences in schools of nursing and health care in general. In addition, the PNAA delegation will visit the PNAA village for the homeless established in 2009 to conduct health fair and health teachings to its residents. In conjunction with the Global Summit International Nursing Conference, many PNAA chapters will also conduct medical missions to underserved communities in the Philippines.

The mantra of advocacy lives on, hopefully, well into the future.

Madelyn D. Yu, MSN, RN
President, 2018-2020
Philippine Nurses Association of America, Inc.

JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Bedside Shift Report Enhances Patient Satisfaction for Hispanic and Public Insurance Patients and Improves Visibility of Leadership in Obstetric and Postpartum Settings

Rita Elue, Shannon D. Simonovich, Joseph D. Tariman, Elizabeth Ann Newkirk, & Mark Neerhof

Correspondence to:
Shannon D. Simonovich, PhD, RN
s.d.simonovich@depaul.edu

Authors'Affiliation
Rita Elue, DNP, MPH, RN
DePaul University School of
Nursing & NorthShore University
HealthSystem

Shannon D. Simonovich, PhD, RN
Assistant Professor,
DePaul University School of
Nursing

Joseph D. Tariman, PhD, RN,
ANP-BC, FAAN
Assistant Professor & Associate
Co-Director for the DNP
Program, DePaul University
School of Nursing
Chicago, IL

Elizabeth Ann Newkirk, MBA,
BSN, RN
Clinical Director of Women's &
Children's Health, Northshore
University HealthSystem

Mark Neerhof, DO
Director of Obstetrics and
Gynecology, NorthShore
University HealthSystem

Conflict of Interest
The authors declare that there is
no conflict of interest.

Abstract

Background: Previous research demonstrates that bedside shift report is beneficial to both patients and providers, however no known study to date has examined the relationship between bedside shift report and patient satisfaction in an obstetric patient population.

Objective: The purpose of this study was to examine the association between bedside shift report and patient satisfaction scores in obstetric and postpartum women as measured by the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) during a unit-wide transition to include bedside shift report.

Methods: One hospital implemented bedside shift reporting in both obstetric and postpartum units in January 2018. Retrospective cross-sectional and longitudinal HCAHPS survey data, including survey respondent characteristics, were collected between October 2017 and April 2018 and were examined for differences pre ($n = 146$) and post ($n = 143$) in bedside shift report implementation.

Results: Implementation of bedside shift report in the hospital's obstetric and postpartum units was associated with improved patient satisfaction scores in Hispanic ($p < .001$), and public insurance patient populations ($p < .001$). Patient satisfaction scores remained consistently high through the transition to bedside shift report. Implementation of bedside shift report was also associated with significantly improved visibility of nurse leaders by patients ($p = .018$).

Conclusions: This study demonstrates that implementation of bedside shift report enhances patient satisfaction experiences, particularly those of minority and public insurance backgrounds, while also enhancing the visibility of nursing leadership on obstetric and postpartum units. These findings have important implications for enhancing patient satisfaction through innovative communication approaches in obstetric populations.

Keywords: bedside shift, obstetrics, postpartum, patient satisfaction, leadership

Background

The experience of patients in hospitals has gained attention following a series of groundbreaking reports by the Institute of Medicine (IOM) on the healthcare industry. The IOM recommended that health care providers and systems focus on six fundamental characteristics to ensure a safer health system: patient safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity (IOM, 2001). The IOM's evaluation triggered fundamental changes in healthcare delivery, including the integration of information technology, the development of medication administration safety nets, and a focus on improved communication strategies such as the implementation of bedside shift report (BSR). Following a series of IOM publications, the Joint Commission established National Patient Safety Goals in 2002. The Joint Commission is the USA's oldest and largest standards-setting and accrediting body in health care. One National Patient Safety Goal is to encourage active patient participation as a strategy to improve patient safety. The Joint Commission specifically endorsed the use of nurse bedside change-of-shift report as a means to promote patient and family participation in healthcare decision-making and improve patient safety (Grimshaw, Hatch, Willard, & Abraham, 2016; Scheidenhelm, & Reitz, 2017; The Joint Commission, 2013).

In 2005, the Centers for Medicare & Medicaid Services (CMS) and Professional Research Consultants partnered to create the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). This survey was designed to produce standardized information about patients' perspectives of care, allowing objective and meaningful comparisons of hospitals on topics important to healthcare consumers (CMS, 2017). Of the 27 items measured on the HCAHPS survey, nursing communication was the single element most highly correlated with patient satisfaction and the overall hospital experience.

BSR is an innovative approach for hospitals and nurses to ensure patient-centered care (The Joint Commission, 2013). Previous research has demonstrated that BSR improves patient safety, nurse accountability, and patients' involvement in their own care (Small & Fitzpatrick, 2017). However, there is limited published literature on the implementation of BSR in obstetric compared to non-obstetric settings.

BSR entails all critical information about the patient's plan of care communicated among nurses, the patients, and their families that takes place at the patient's bedside (Griffin, 2010). The formerly dominant strategy of nurse-to-nurse shift report occurred at the nurse's station away from the patient and their family and focused primarily on nurses' tasks and roles rather than patient-centered care (Evans, Grunawalt, McClish, Wood, & Friese, 2012; Radtke, 2013). Nursing professionals are fundamental to implementing strategies to improve patient safety, involvement, and satisfaction. In a

cross-sectional study of 430 acute care hospitals, researchers evaluated the relationship between the work environment of 20,984 staff nurses and patient satisfaction scores (PSS) as measured by HCAHPS (Kutney-Lee et al., 2009). Results showed that patients reported higher satisfaction in hospitals with lower nurse-patient ratios. This study demonstrated that HCAHPS scores are a reliable method for measuring patient satisfaction with nursing care (Kutney-Lee et al., 2009).

In a 2013 study, Radtke piloted a BSR model in a medical-surgical intermediate care unit focusing on a single item: "nurse communicated well" from the HCAHPS survey. The HCAHPS survey elicited information on ten topics with a 25% response rate over three months. The organizational scores in the categories of nursing communication and patient satisfaction rate rose to 87.6%, an increase from 75% in the previous six months. There was a positive correlation between the increase of satisfaction rates and the implementation process of BSR in that environment. Radtke recommended engaging in BSR to enhance patient satisfaction (2013). This study of medical-surgical patients may not be generalized to postpartum women.

Wollenhaup and colleagues conducted a quality improvement project in a postpartum unit with the aim of implementing a modified bedside handoff structure (2017). They included a convenience sample of 50 postpartum patients and 28 nurses. The researcher used a modified bedside handoff tool to assess patient satisfaction which resulted in a 28.01% increase in the post-implementation PSS and a 40.3% increase in staff satisfaction which far exceeded project goals. The researchers concluded that a modified bedside handoff tool could be used to enhance patient satisfaction. However, the two questionnaires used in this study had not been validated prior to implementation.

Overall, these findings suggested that BSR allows nurses to provide patient-centered care, prioritize tasks, decrease errors, and encourage patient and family participation. Most of the reviewed studies had a small sample size and were conducted in a non-obstetric setting. Some studies had methodologic limitations, for example, the use of a non-validated tool. Therefore, the existing literature suggests investigation of BSR in obstetrics is indicated. The purpose of this study is to examine the relationship between implementation of BSR and patient satisfaction, using HCAHPS rating scales, in an obstetric and postpartum setting.

Methods

Study Design
This retrospective analysis of longitudinal and cross-sectional HCAHPS survey data examined the association between the implementation of BSR and patient satisfaction scores (PSS) in an obstetric and postpartum setting. Study hospitals employ methods to assess their performance in

terms of quality and efficiency using the HCAHPS survey. The assessment of quality patient care includes measures of the patient experience of care as well as measures of patient satisfaction with care. In this study, the respondents were grouped into two groups, pre-BSR (Oct 14, 2017–Jan 14, 2018) and post-BSR implementation (Jan 15, 2018–April 15, 2018). The study protocol was submitted to the university and hospital's Institutional Review Board, which granted Exempt status to the study.

Study population

All postpartum women, ≥ 18 years, who were discharged between October 14, 2017 and April 15, 2018 and completed the HCAHPS survey were included. The study site was a tertiary care facility located in the Chicago metropolitan area with a 26-bed postpartum unit.

HCAHPS Validity and Reliability

Hospitals employ methods to assess their performance in terms of quality and efficiency. The assessment of quality patient care includes measures of the patient experience of care as well as measures of patient satisfaction with care. Patient satisfaction is a measurement of clients' perceptions of their hospital experience (Radtke, 2013; Vines, Dupler, Van Son, & Guido, 2014). The HCAHPS survey captures patient experiences such as whether the nurse listened carefully and whether the patient felt respected. HCAHPS survey is used by this study site in accordance with the CMS to assess inpatient satisfaction. The HCAHPS survey data are analyzed at the aggregate level based upon the hospital unit. The HCAHPS survey collects self-report data including patient information, health status, and variables that reflect patient satisfaction relating to nurse communication.

The HCAHPS survey is a validated instrument jointly designed by CMS and the Agency for Healthcare Research and Quality to accurately assess the patient experience of healthcare quality in hospitals (CMS, 2017). The instrument develop-

ers took into consideration issues such as measurement error or bias that could threaten the validity, reliability, and generalizability of the study (CMS, 2017).

According to Centers for Medicare & Medicaid Services HCAHPS Quality Assurance Guidelines V12.0, the HCAHPS sampling employs the patient's principal diagnosis at discharge to determine eligibility for HCAHPS: Maternity Care, Medical, or Surgical. The V.34 Medicare Severity Diagnosis Related Group code is further applied to eligibility (CMS, 2018). Discharged patients regardless of types of health insurance are included as long as they are 18-years of age at the time of admission, alive at discharge, stayed at least overnight at the hospital, and without a psychiatric diagnosis at discharge. The HCAHPS survey is available in English, Spanish, Russian, Chinese, Vietnamese, and Portuguese languages. Exclusion criteria include: Discharged to hospice (whether at home or another facility), MS-DRGs for

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Table 1. HCAHPS Questions on Nursing Communication and Overall Hospital Rating

HCAHPS survey questions which assess patient perception of nurse communication
Please answer the questions in this survey about your stay at the hospital named on the cover letter. Do not include any other hospital stays in your answers.

YOUR CARE FROM NURSES

1. During this hospital stay, how often did nurses treat you with courtesy and respect?
1o Never
2o Sometimes
3o Usually
4o Always

2. During this hospital stay, how often did nurses listen carefully to you?
1o Never
2o Sometimes
3o Usually
4o Always

3. During this hospital stay, how often did nurses explain things in a way you could understand?
1o Never
2o Sometimes
3o Usually
4o Always

4. During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?
1o Never
2o Sometimes
3o Usually
4o Always
5o I never pressed the call button

HCAHPS survey questions which assess patient perception of overall hospital stay

OVERALL RATING OF HOSPITAL

Please **answer** the following questions about your stay at the hospital named on the cover letter. Do not include any other hospital stays in your answers.

21. Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital during your stay?
0o 0 Worst hospital possible
1o 1
2o 2
3o 3
4o 4
5o 5
6o 6
7o 7
8o 8
9o 9
10o10 Best hospital possible

22. Would you recommend this hospital to your friends and family?
1o Definitely no
2o Probably no
3o Probably yes
4o Definitely yes

Adapted from HCAHPS survey

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newborn, psychiatric, substance abuse, rehabilitation, or deceased, and MS-DRGs with no assigned type. The survey is systematically administered to discharged patients via four mechanisms: mail, phone call, combination of mail survey with phone call, or interactive voice response (IVR). It takes about 8 minutes to complete the survey. Eligible patients are randomly selected and surveyed between 48 hours and six weeks after discharged (CMS, 2017). Prior data at our study site suggest that the HCAHPS survey receives approximately a 35% response rate. The HCAHPS survey utilized by the study site is presented in Table 1.

Statistical Analyses
In this study, the aggregate patient satisfaction scores during a 6-month interval were divided into 3 months prior to implementation and 3 months after implementation of BSR, which started on January 15, 2018. The validated surveys of the pre-implementation respondents who delivered between September 1, 2017 and December 1, 2017 and completed the HCAHPS survey within the 6-week period ending January 12, 2018 were compared to the post-implementation respondents who delivered between January 15, 2018 and April 15, 2018 and completed the HCAHPS survey within the 6-week period ending May 27, 2018. For descriptive purposes, the secured internal NSUHS Data Warehouse was queried for postpartum women who delivered between September 1, 2017 and April 15, 2018. We recorded and analyzed data regarding the Type of delivery (vaginal versus cesarean), Maternal Age, Length of Stay, and Insurance Payor (Table 2).

Additionally, HCAHPS questions measuring nursing communication, global satisfaction with the hospital experience (see Tables 3 and 4) and other HCAHPS variables of interest such as: Age, Delivery Method, Length of Stay, Insurance Payor, and Visited by Hospital Leadership are examined. The allotted six-week grace period is in accordance to CMS' HCAHPS Quality Assurance Guidelines V13.0 that requires the administered survey be closed out no later than 42 calendar days following the date the first survey is mailed, regardless of the mode of survey administration (Austin, 2017).

Descriptive statistics and stratified analyses by characteristics or subsets of postpartum population were performed. Chi-squared and Fisher's exact tests were used on categorical variables and Student's t-test on the continuous variables. Wilcoxon rank sum test (Mann Whitney test) was used to analyze patient satisfaction scores. Statistical significance was evaluated at the 0.05 level. All the study data were analyzed using SAS, version 9.3 (SAS Institute, Cary, NC).

Results
A total of 289 subjects responded to the HCAHPS survey; 146 in the pre-BSR group and 143 in the post-BSR group. Table 2 shows the characteristics of the respondents stratified by BSR. There were no significant differences in baseline characteristic between the pre- and post-BSR groups in respect to mean maternal age, race, ethnicity, mode of delivery, or type of insurance. Characteristics of survey respondents pre BSR vs. post BSR demonstrate that most of the respondents were Caucasian (62.2% vs. 73.4%), while Hispanic women comprised (3.5% vs. 5.0%). The majority were privately insured (97.9% vs. 93.4%), delivered vaginal (78.8% vs. 74.1%), and delivered at $\geq$ age 30 of age (88.2% vs. 85.4%). The mean maternal age was equivalent pre- and post-BSR (33.52 ± 3.91 vs. 33.31 ± 3.78). The sample mirrored the trend toward older age at birth as reported in the US National Vital Statistics Report in 2016 (Martin, Hamilton, & Osterman, 2016).

HCAHPS questions that evaluated patient satisfaction with leadership, pre- and post-implementation of BSR were examined in Table 3. Unit nurse leaders visited patients at their bedsides to assess patient satisfaction with their hospital experience. The HCAHPS survey asked patients "Were you visited by a member of the hospital leadership (supervisor or manager) during your stay?" Participants' report of interaction with nurse leader during their hospital stay were significantly higher in the post-BSR group (30.8% vs. 43.4%, *p* = .018).

Variable	Pre-BSR (n=146)	Post-BSR (n=143)	P-value
Table 2. Study Sample Demographic Characteristics tified by Bedside Shift Report, October 2017 – April 2018 (N=289)			
Patient Race: N (%)			
African American	5 (3.5)	3 (2.1)	0.236
Asian	17 (11.9)	11 (7.7)	
Caucasian	89 (62.2)	105 (73.4)	
Multiracial	32 (22.4)	24 (16.8)	
missing	3 (2.1)	0 (0)	
Patient Ethnicity: N (%)			
Non-Hispanic	137 (96.5)	133 (95.0)	0.538
Hispanic	5 (3.5)	7 (5.0)	
missing	4 (2.7)	3 (2.1)	
Insurance: N (%)			
Private	137 (97.9)	128 (93.4)	0.07
Public	3 (2.1)	9 (6.6)	
missing	6 (4.1)	6 (4.2)	
Age: Mean± SD (year)	33.52 ± 3.91	33.31 ± 3.78	0.638
Age group: N (%)			
18-24	3 (2.1)	1 (0.7)	0.614
25-29	14 (9.6)	20 (14.0)	
30-34	70 (47.9)	70 (49.0)	
35-39	51 (34.9)	44 (30.8)	
≥40	4 (2.7)	5 (3.5)	
missing	4 (2.7)	3 (2.1)	
Mode of Delivery: N (%)			
Cesarean	31 (21.2)	37 (25.9)	0.352
Vaginal	115 (78.8)	106 (74.1)	

Table 3. HCAHPS Questions on Care from Nurses and Overall Rating of Hospital			
Questions	**Pre-BSR (n=146)**	**Post-BSR (n=143)**	**P-value**
Visited by Hospital Leadership n (%)			
Yes	45 (30.8)	62 (43.4)	0.018*
No	99 (67.8)	76 (53.1)	
missing	2 (1.4)	5 (3.5)	
Nurse respect n (%)			
Very Good	123 (84.2)	123 (86.0)	0.405
Good	22 (15.1)	16 (11.2)	
Fair	1 (0.7)	3 (2.1)	
Poor	0 (0.0)	1 (0.7)	
Very Poor	0 (0.0)	0 (0.0)	
Nurses listen carefully n (%)			
Always	116 (79.5)	123 (86.0)	0.216
Usually	28 (19.2)	17 (11.9)	
Sometimes	2 (1.4)	3 (2.1)	
Never	0 (0.0)	0 (0.0)	
Nurses explain things n (%)			
Always	123 (84.2)	125 (87.4)	0.541
Usually	20 (13.7)	17 (11.9)	
Sometimes	3 (2.1)	1 (0.7)	
Never	0 (0.0)	0 (0.0)	
Call button response n (%)			
Always	91 (62.3)	90 (63.8)	0.764
Usually	44 (30.1)	45 (31.9)	
Sometimes	7 (4.8)	4 (2.8)	
Never	1 (0.7)	2 (1.4)	
missing	3 (2.1)	2 (1.4)	
Global hospital ratingn (%)			
10	68 (46.9)	69 (48.9)	0.552
9	35 (24.1)	41 (29.1)	
8	32 (22.1)	24 (17.0)	
7	10 (6.9)	7 (5.0)	
0-6	0 (0.0)	0 (0.0)	
missing	1 (0.7)	2 (1.4)	
Recommend this hospital n (%)			
Definitely Yes	124 (84.9)	128 (89.5)	0.142
Probably Yes	20 (13.7)	11 (7.7)	
Probably No	1 (0.7)	4 (2.8)	
Definitely No	1 (0.7)	0 (0.0)	
Satisfaction Score: Mean ± SD	23.85 ± 2.48	24.09 ± 2.57	0.417

Source: Appendix A HCAHPS Questions
* indicates statistical significance at p-values<.05
**rating grouped using CAHPS consortium guideline

The association of BSR and PSS on nurses' care and two global, i.e. hospital wide, ratings are displayed in Table 3. Individual patients' responses on nursing care and the two global hospital rating were transformed to ordinal values and composite satisfaction scores using Wilcoxon rank sum test was computed. The composite satisfaction scores are displayed in Table 4 in relationship to the patient characteristics of race, ethnicity, insurance type, delivery mode and age group. We observed a significant difference in PSS after BSR based on ethnicity and type of insurance. Significantly greater patient satisfaction post-BSR was reported by Hispanic women ($p < .001$) and women with public insurance ($p < .001$).

Two HCAHPS questions evaluated the overall hospital rating and the likelihood of recommending this hospital. Patient overall rating of the hospital in this study was high. When asked to rate the hospital on an 11-point scale (0 = worst and 10 = best), all 289 respondents rated this hospital between 7 and 10. This upper rating scale is consistent with Consumer Assessments of Healthcare Providers and Systems (CAHPS) findings. The CAHPS consortium established guidelines to modify upper end values reported (14). Based on this guideline, we modified this item rating scale to 4-point scale to read as 0-7 points = 1, 8 points = 2, 9 points = 3, and 10 points = 4. These ordinal values are summed, and Wilcoxon rank sum test was computed to compare the two groups, pre- and post BSR. There was no difference in the overall hospital rating between pre- and post-BSR groups ($p = .552$).

The second HCAHPS scale 4-item question reflecting patient satisfaction with the hospital experience was willingness to recommend the hospital. When asked if they would recommend this hospital to their family and friends, 144 (98.6%) vs. 139 (97.2%) said they would. Transforming the study's HCAHPS survey scores into ordinal values, the overall patient satisfaction mean ± SD score is 23.85 ± 2.48 vs. 24.09 ± 2.57, $p = .417$ (Table 3).

Four HCAHPS questions focused on patient satisfaction with nurses' care. Patients were asked to rate the respect and courtesy shown by their nurses during their hospital stay using a 5-item hierarchal scale (Table 3). No significant difference ($p = .405$) was observed pre- and post-BSR implementation. The next item asked patients how often nurses actively listened to them during their hospital stay. This 4-item frequency scale did not show a significant difference ($p = .216$) between respondent groups. The third item queried how often nurses explained things in a way the patient can understand using a 4-item frequency scale. No significant differences between pre- and post-BSR were detected ($p = .541$). The final nursing care question inquired how long before help was received after pressing the call button. This 4-item frequency scale was similar pre- and post-BSR ($p = .764$).

Table 4. Distributions of Composite Satisfaction Scores and Participants Characteristics Mean ± SD and P-values

Composite Satisfaction Score	Patient Race					Patient Ethnicity			Insurance		
	AA	Asian	Cauc asian	Multi-racial	P-value	H*	NH*	P-value	Private	Public	P-value
Pre-BSR group	23.20 ± 1.64	24.35 ± 2.23	23.65 ± 2.73	24.06 ± 2.02	0.621	25.60 ± 0.89	23.76 ± 2.50	0.104	23.82 ± 2.53	23.97 ± 2.64	0.579
Post-BSR group	23.33 ± 2.31	24.19 ± 1.89	24.28 ± 2.15	23.33 ± 4.11	0.409	25.43 ± 0.53	24.01 ± 2.62	**<.001***	23.00 ± 1.73	25.67 ± 0.50	**<.001***

Composite Satisfaction Score	Delivery Mode			Age Group					
	C/S*	Vaginal	P-value	18-24	25-29	30-34	35-39	>40	P-value
Pre-BSR group	23.97 ± 2.01	23.86 ± 2.63	0.766	25.33 ± 1.15	23.00 ± 3.23	24.00 ± 2.36	23.71 ± 2.56	24.50 ± 1.29	0.500
Post-BSR group	23.82 ± 2.60	24.17 ± 2.55	0.536	25	24.40 ± 2.19	23.73 ± 3.02	24.77 ± 1.60	22.00 ± 2.74	0.081

Note: *statistically significant
Abbreviate Characteristics includes H: Hispanic; NH: Non-Hispanic; C/S: cesarean section
Composites items on nurses' care and overall hospital rating items are on 4 or 5 scale; note that hospital rating endorsed at 7–10 is on a 4-scale.
The 6 HCAHPS survey satisfaction scores were transformed to ordinal values and Wilcoxon rank sum test was used to compare the two groups.

Discussion

This study explored the association between patient satisfaction and bedside shift report among obstetric and postpartum women using the HCAHPS survey. We found that the implementation of BSR was associated with increased leadership visits to patients, and improved patient satisfaction for Hispanic and public insurance patient populations. It is worth noting that there was not a change in nurse leaders' behavior pre and post-BSR implementation as standard policy on this obstetric and postpartum unit is for nurse leaders to make daily rounds to elicit the patient's perception of their care and staff's ability to meet their care expectations. Nonetheless, a greater proportion of patients identified having interactions with nursing leaders post-BSR implementation, evidence of improved perceived visibility of nursing leadership. This result suggests that providing BSR enhanced patients' perception of nurses and nurse leaders' visibility and accessibility during their care visit. This novel finding supports previous studies that leadership rounding improves patient experience and communication and overall patient satisfaction scores (Babaev, 2017). Health care organizations have consistently sought ways to improve patient ex-

perience since the IOM report promoting accountability of health care institutions to patient care. The result recognized nurse leader rounding to improve patient perception of care and nurse communication. Therefore, nurse leaders should incorporate BSR to improve communication and patient satisfaction. Using this patient-centered approach, nurse leaders would gain opportunities to receive real-time feedback from patients and family and make necessary changes.

Hispanic women demonstrated higher composite satisfaction scores compared to non-Hispanic women after the implementation of BSR [25.43 (0.53) vs. 24.01 (2.62), *p* < .001] listed in table 3. Although the number of Hispanic women who responded was small, the Hispanic women whose nurses gave report at the bedside reported significantly higher patient satisfaction experiences. Interpreting the association found between Hispanic ethnicity and patient satisfaction after BSR is complex. The higher score could be related to the exceptional care experienced amongst these survey participants but may be related to survey completion behaviors of Hispanic individuals. Weech-Maldonado and colleagues investigated the cultural response styles among

Hispanic individuals compared to the non-Hispanic individuals using the HCAHPS rating scale (2008). They found that Hispanic individuals exhibited a greater tendency towards reporting extremes numbers on the HCAHPS scales than non-Hispanics and were more likely to select a "10." Nonetheless, in this pre-post study design, PSS significantly increased in the post-implementation group, and this cannot be attributed merely to the demographic characteristics of this subset of the study sample. An alternative explanation could be related to the ceiling effect of extreme rating of 10, observed in more than 30% of the total participants. This effect minimized the accuracy of what the instrument is meant to measure. The ceiling effect can be ameliorated by employing some statistical test such as Probit regression or test a different response scale (DeVellis, 2017; McBee, 2010; Moret, Nguyen, Pillet, & Falissard, 2007; Prentice, 1976). We used the CAHPS consortium established guidelines to minimize the extreme scores in this study.

HCAHPS also categorized participants into two insurance groups, private and public health insurance. This study found individuals with public insurance reported greater composite satisfaction scores than privately insured women following the implementation of BSR [23.00 (1.73) vs. 25.67 (0.50), $p < .001$], despite their small number; 6.6% are publicly insured. The patients with public insurance may have felt more satisfied because they perceived inclusion or patient-centeredness in their hospital experience. A search of the literature did not reveal other studies that addressed patient satisfaction among publicly insured postpartum women. Future research is warranted in this area. One researcher measured patient satisfaction after hysterectomy among low-income women and privately insured women (Unger, Caldito, Sams, Perrone, & Byrd, 2002). Although both groups had excellent symptom relief, the low-income women who received care in a teaching hospital experienced lower satisfaction compared to privately insured women who received care in a private hospital (Unger et. al., 2002). By contrast in our analysis of patient satisfaction and BSR, publicly insured women reported greater satisfaction. In both studies, one possible explanation for the differences seen might be that privately insured patients had different expectations of their hospital experience than publicly insured women. Nonetheless, it is clear that the experience of BSR improved the overall satisfaction of the publicly insured women in our analysis.

No significant differences could be measured PSS related to nurse's care pre- and post-BSR. The lack of an association for the four HCAHPS questions measuring patient satisfaction with nursing care during the study period may be related to the high level of patient's satisfaction before the intervention. Patient baseline satisfaction in this study site was very high, 98.6 %, making it difficult to detect a difference post-intervention, 97.9%. Our results confirm that the intro-duction of BSR maintained the positive care experiences of the general obstetric patient population while also enhancing the experience of Hispanic and public insurance patients and improving the visibility of nursing leadership. This study demonstrates that the transition can be made smoothly without negatively impacting patient satisfaction and care experiences and encourages nurse leaders to integrate BSR into their obstetric and postpartum settings.

Strengths and Limitations
One of the strengths of this study is that the HCAHPS instrument had been tested and validated on large samples for more than 20 years to measure patient satisfaction in health care (CMS, 2017). Moreover, response bias was not introduced since patients were unaware that the HCAHPS questions were being measured in relationship to BSR. Another strength is the inclusion of varied ethnic and racial participants. The study used cross-sectional and longitudinal design. This approach allows the evaluation of temporality between the exposure of interest and the outcome (Golding, Jones, Bruné, & Pronczuk, 2009). As in all survey research, this study is limited by self-reported data. In this secondary analysis of the study site's HCAHPS dataset, it is not possible to describe the difference between responders and non-responders. Lasek, Barkley, Harper, and Rosenthal (1997) found that the impact of nonresponse bias on satisfaction surveys of inpatients was relatively small. Another potential limitation is the duration of the study period, which included a six-month time interval. It is possible that collecting data over a longer period would have revealed additional differences between the groups. We chose to measure patient satisfaction in the first three months following the implementation of BSR. This novel nursing approach to shift report may take time to master. Perhaps measuring patient experience six to twelve months after the implementation of BSR would have revealed other relationships.

Implications for Future Research
The study shows that BSR was effective in increasing patient satisfaction among obstetric and postpartum women and should be promoted. This mode of communication was particularly effective for women with public insurance. Future assessment to identify the needs of privately insured is vital. This study should be replicated in other hospitals with different socioeconomic, racial, and ethnic compositions. Future research should also consider utilizing a more extensive longitudinal study design to assess patient satisfaction further into the future post-implementation to determine if additional significant relationships are noted.

Conclusions
This study explored the relationship between implementation of BSR and its association in PSS in an obstetric and postpartum setting. Study results demonstrate that BSR is associated with increased visibility of nursing leadership,

improved patient satisfaction amongst Hispanic and publicly insured women, and maintained overall patient satisfaction with obstetric and postpartum patient populations. Communication tools such as BSR are essential to aid the nurses in understanding all patients' values and preferences to meet their expectations for excellent obstetric and postpartum care. Nurse leaders and health care management should note that birthing and postpartum care experiences remain with the woman throughout her life. Communicative, interactive, and personalized care is highly valued in the obstetric and postpartum settings.

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JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Patient's Self-Reported Functional Status and Health-Related Quality of Life: Prognostic Association to 30-day Hospital Readmissions Among Heart Failure Patients

Lydia Albuquerque, Daria Napierkowski, Kem Louie, Pallavi Solanki, Emily H. Mahon, & Lois Greene

Correspondence to:
Lydia Albuquerque, DNP, RN, ACNP-BC, CCRN
albuquerquel@wpunj.edu

Authors' Affiliation
Lydia Albuquerque, DNP, RN, ACNP-BC, CCRN
Assistant Professor, Department of Nursing, College of Science & Health, William Paterson University

Daria Napierkowski, DNP, RN, APN, CNE
Associate Professor, Department of Nursing, College of Science & Health, William Paterson University

Kem Louie, PhD, RN, APN, CNE, FAAN
Professor and Graduate Nursing Program Director, Department of Nursing, College of Science & Health, William Paterson University

Pallavi Solanki, MD, FACC
Associate Professor, Director, Advanced Heart Failure and Mechanical Assist Devices, Director, Heart Failure Clinic, Division of Cardiology, Department of Medicine, Rutgers, New Jersey Medical School. Newark, NJ

Emily H. Mahon, PhD, MBA
Adjunct Professor, Department of Sociology, William Paterson University, Wayne, NJ

Lois Greene, DHA, RN, MBA
Administrator, University Hospital, Newark, New Jersey

Conflict of Interest
The authors declare that there is no conflict of interest.

Abstract

Background: Research is limited regarding the association of 30-day hospital readmissions to the use of self-reporting tools among Heart Failure (HF) patients.

Objective: To examine the relationship between self-reported tools and 30-day hospital readmissions among patients diagnosed with HF.

Methods: A quantitative, descriptive correlational research design ($n = 66$) was used to examine the correlation between the variables, functional status, and quality of life to 30-day hospital readmission rates among patients with HF.

Results: The relationship between NYHA functional status classification and 30-day readmission was significant based on chi-square analysis ($p = 0.044$). An independent sample t-test done to test for relationship between health quality of life and readmission was also significant ($p < 0.05$). A one-way ANOVA was calculated comparing the demographic variable to 30-day readmission rates revealed a significant difference between monthly income and readmission ($F = 2.864$, $p < 0.05$) and the number of times patients were admitted in the hospital in the past year to readmissions ($F = 3.333$, $p < 0.01$). These findings support the hypothesis that NYHA functional status classification and health related quality of life is associated with hospital readmissions.

Conclusions: The results of this study provide healthcare providers information about the association of self-reported tools with 30-day readmissions among heart failure patients.

Keywords: heart failure, readmission, quality of life, functional status

Background

Heart Failure (HF) is a clinical syndrome caused by the inability of the heart to pump sufficient blood to meet the needs of the body, which has resulted from the structural or functional impairment of ventricular filling or ejection of blood (Mozzafarian et al., 2016). This clinical syndrome may result from disorders of the myocardium, pericardium, endocardium, heart valves, or great vessels (National Heart and Lung and Blood Institute, 2015). Co-morbid conditions like hypertension, myocardial infarction, diabetes, thyroid disease, and hyperlipidemia are associated with an increased risk for structural heart diseases. There could be other drug related instances such as chemotherapeutic medications, alcohol or substance abuse that could directly induce cardiac toxicity leading to HF (Rohyans, 2015).

HF is the leading cause of hospital readmission among patients, age 65 years and older (Mozzafarian et al., 2016), with the prevalence increasing 46% from 2012 to 2030, resulting in more than 8 million Americans affected (Centers for Disease Control [CDC], 2016). The incidence of HF approaches 10 per 1000 population after 65 years of age and is predicted to increase 25% by 2030 (Mozzafarian et al., 2016). There were one million hospitalizations with the diagnosis of HF in 2010 (CDC, 2015) in most patients aged 65 and over. In 2012, it was estimated that the total costs to treat patients with HF were about $30.7 billion, with a predicted rise in total amount to be about $69.7 billion by 2030 (Mozzafarian et al., 2016). Concerning statistics show an increase in hospitalization rate from 23% in 2000 to 29% in 2010 necessitating the efforts to improve care and reduce cost of hospitalization (CDC, 2014).

To address the high readmission rates among Medicare beneficiaries, the Centers for Medicare and Medicaid Services (CMS) implemented the Hospital Readmission Reduction Program in 2012, which reduces payments to hospitals for HF readmission within 30-days of discharge. The penalties increased each year by 1% in 2013, 2% in 2014, and up to 3% in 2015 on all HF readmissions within 30-days of discharge, which are affecting hospitals, especially academic centers where large number of patients are underinsured (Joynt & Jha, 2013).

The increasing number of patients affected by HF is alarming. Various quality improvement projects identified by The Joint Commission (TJC) including discharge planning instructions, arranging transition of care at discharge, measuring left ventricular function, seven day follow up appointment, and evidence based prescription of medications have been implemented (The Joint Commission [TJC], 2016). Yet, the efforts of this nature have not been associated with lower readmission rates (Bonow et al., 2012; Desai & Stevenson, 2012; Joynt & Jha, 2013). The efforts to reduce the preventable hospital readmission rates among this popula-

tion is a prominent target for change since finding strategies to reduce readmissions would reduce cost and improve patient outcomes.

Purpose of the Study

The purpose of this project was to examine the association between self-reported functional status as measured by the New York Heart Association (NYHA) Functional status and self-reported health-related quality of life (HRQOL) to 30-day hospital re-admission rates among patients with HF. The independent variables in this study were functional status and quality of life; the dependent variable was the 30-day hospital readmission rate.

A PICOT question was developed to study the association of NYHA Functional classification and HRQOL to 30-day hospital readmission. The population (P) consisted of both patients with systolic and diastolic HF. The intervention (I) consisted of directing patients to complete the self-reported tools, which include NYHA Functional Classification and the Minnesota Living with Heart Failure Questionnaire (MLHFQ) (Rector, Kubo, & Cohn, 1987). The outcome (O) examined was the rate of 30-day hospital readmissions. Time (T) was measured during a three-month time frame. Therefore, the research question that guided this study was: What is the association between self-reported functional status and HRQOL to 30-day hospital readmission among patients with diagnosis of heart failure?

Methods

Study Design

A quantitative, descriptive correlational research design (*n* = 66) was used to examine the degree of association between variables, such as functional status and HRQOL, to 30-day hospital readmission rates among patients with HF. Institutional Board Review (IRB) approval was obtained from the participating study site prior to data collection.

Setting and Sample

A purposive sampling method was utilized. Male and female patients with a primary diagnosis of HF, ages 30 to 85 years at a large academic health center in New Jersey were recruited. These patients had a diagnosis of Heart Failure with reduced Ejection Fraction (HFrEF) or Heart Failure with preserved Ejection Fraction (HFpEF). Only patients with a primary diagnosis of heart failure at the time of hospital admission were included in the study.

In addition, patients who were able to read, write, and understand English; the ability to obtain a score of 3/3-word recall on the Mini-Cognitive Scale and ability to draw a clock as per given directions, and who had a contactable phone number were included in the study. Patients who exhibited cognitive impairment, transferred to another acute care facility, hospice or palliative care, and did not have

access to a telephone for a follow-up call were excluded.

Data Collection

Sixty-six heart failure patients with a primary diagnosis of heart failure not preceding by another hospitalization for heart failure in the last 30 days from the date of present admission were identified from the HF list that was generated daily by the advance practice nurse of the Heart Failure Program. The nurse manager and the registered nurses in the telemetry unit were informed about the study. The researcher personally explained the study purpose to the participants and a written consent was obtained. A Mini-Cognitive Examination was performed with the participants by the researcher. Participants with scores of 3/3 and who had completed clock drawing test (CDT) received self-reported questionnaires packet that consisted of a demographic data sheet, the NYHA Self-Report Functional Classification Tool, and the MLHFQ. The self-reported questionnaires were completed by the participants who were requested to share their phone numbers. If the patients were not admitted within 30 days of hospital discharge, the researcher made the call to the patient on completion of 30 days. The researcher also tracked the discharge dates of the patient from the EPIC system in the hospital and checked if the patients were admitted within or less than 30-day of index admission.

Instruments

The NYHA Functional Classification tool was developed by the Criteria Committee in 1928 (Doglin, 1994; Severo et al., 2011) and is a reliable and valid self-report tool that measures the functional status of patients (Bennett, Riegel, Bittner, & Nichols, 2002; Severo et al., 2011). Severo et al. (2011) reported the validity of the tool. The validity of the tool was examined by the Spearman Rho correlation coefficient (Rs = -.0232, p = 0.028).

The tool was designed for clinical assessments according to classes I, II, III, and IV and based on limitations in physical activities caused by cardiac symptoms that are subjective in nature. The four classes are as follows (a) Class I: No limitation of physical activity, patient is able to perform all activities without getting short of breath; (b) Class II: Slight limitation of physical fatigue, palpitations, dyspnea, or angina, however, the person is comfortable at rest; (c) Class III: Marked limitation of physical activity in which less than ordinary activity results in fatigue, palpitation, dyspnea, or angina; however, the person is comfortable at rest; (d) Class IV: Inability to perform any physical activity, fatigued and dyspneic at rest (Doglin, 1994; Severo et al., 2011).

The MLHFQ (Rector et al., 1987) is a 21-item questionnaire that includes items on HF-related physical, psychological, and social impairment. It was developed at the University of Minnesota to assess the perception of the effect of HF and its treatment on the life of patients (Rector et al., 1987). The patient's perception of such impairment is assessed on a Likert-type scale ranging from none "0" to very much "5." Zero means there is no effect on a patient's life; five means the item affected the patient's life very much during the past month. The total MLHFQ score is obtained by adding the scores from all 21 items (range 0-105); the higher the score, the poorer the "health-related quality of life" (HRQOL). Subscales include the summary of the impact of HF on physical dimensions constructed on the basis of eight items and evaluated with items 2, 3, 4, 5, 6, 7, 12, 13. The psychological dimensions constructed on the basis of five items will be evaluated with item 17, 18, 19, 20, 21. The social impairment is based on items 1, 8, 9, 10, 11, 14, 15, 16 which elicit information on swelling in ankle, working and earning, recreation, costing more for medical treatment, stay in hospital and side effects of treatment effects on the health related quality of life (Rector et al., 1987).

Bilbao, Escobar, García-Perez, Navarro, and Quirós (2016) reported the validity and reliability of the MLHFQ. The reliability of the tool was tested for internal consistency by test-retest Spearman's rho = 0.87; Cronbach's alpha coefficient was > .70. The validity of the questionnaire was analyzed using the confirmatory factor analysis (CFA) and Rasch Analysis. The Root Mean Square Error for Approximation (RMSEA) value of < 0.08 and the comparative fit index of > .90 were found to be acceptable. It was concluded that the MLHFQ was a reliable and valid tool (Bilbao et al., 2016). Permission for use of the MLHFQ was granted by the Regents of the University of Minnesota.

Statistical Analysis

The International Business Machine (IBM) Statistical Package for Social Sciences (SPSS) statistical software version 23.0 (IBM Corp., Armonk, NY) was used to analyze the clinical and demographic characteristics. Descriptive statistics such as frequencies, percentage, mean, and median were used to describe the demographic and clinical characteristics of the participants which included age, gender, ethnicity, level of education, income, and comorbid conditions. Chi-square using cross tabs investigated the relationships of the four-level NYHA functional classification to 30 – day hospital readmission rates (0 = no, 1 = yes). Given the non-normal distribution of the quality of life scores, the Mann-Whitney U Test was used instead of the *t* test to examine significant differences in the mean scores for HRQOL at the time of hospital readmission. A one-way ANOVA examined the differences in the mean rates of readmission based on categorical grouping using the socio-demographic variables (e.g. grouping by marital status: 1 = single or non-partnered, 2 = married or partnered, and 3 = divorced, race: 1 = white, 2 = black, 3 = Hispanic, 4 = Asian, 5 = other). The Chi-square test statistics were used to examine relationships between two categorical independent and dependent variables and

its extension, the Chi-square test of independence statistics (X2), was used to examine significant differences in the outcome variable, 30- day hospital readmission, which has two categories (1 = Yes; 2 = No) among several independent comparison groups (Knapp, 2017) derived from the clinical and sociodemographic questionnaire.

Results

Clinical and Demographic Characteristics of the Study Participants

A total of 66 patients who were recruited to this study completed all study-related questionnaires. Majority of the participants (68.2%) had a diagnosis of HFrEF while 31.8% had a diagnosis of HFpEF. The participants were predominantly male (68.18%) and the majority of the participants (59.1%) were African Americans. Hypertension (92.4%), Diabetes (59.1%) and Chronic Kidney Disease (59.1%) were the most common comorbidities. The monthly income of

Table 2

Diagnosis of Heart Failure, New York Heart Association (NYHA) Functional Status Classification, and 30-day Readmissions

Variable	*n*	*%*
Diagnosis of heart failure		
< 6 months	9	13.63
6 months-1 year	5	7.69
≥1 to 2 years	19	28.78
≥2 to 3 years	21	31.8
More than 3 years	12	18.1
Self –reported NYHA functional class		
NYHA class I	4	6.1
NYHA class II	13	19.7
NYHA class III	46	69.7
NYHA class IV	3	4.5
Times admitted in last 1 year		
0	7	10.6
1	8	12.12
2	19	28.78
3	14	21.2
4	18	27.27
Readmission		
Yes	40	60.6
No	26	39.4

Note. NYHA= New York Heart Association

66.6% of the study participants was less than $1,000, which is below poverty based on the 2019 US Department of Health and Human Services (US Department of Health and Human Services [USDHHS], 2019) poverty guidelines for a household with only 1-person member, and 6.1% were homeless and had no family support (see Table 1).

Diagnosis of Heart Failure, New York Heart Association (NYHA) Functional Status Classification, and 30-day Readmissions

The largest group (78.69%; *n* = 52) had been diagnosed with heart failure for more than one to three years, majority of the participants (69.7%; *n* = 46) scored a functional Class III, which corresponds to a feeling of tiredness and shortness of breath with less than ordinary activity while walking on flat surface. Approximately seventy-seven percent (77.2%) of participants who had two or more admissions in the last one year, 60.6% (*n* = 40) of participants were readmitted within 30 days of discharge (see Table 2).

Table 1

Clinical and Demographic Characteristics of the Study Population

Variable	*N*	*%*
Ejection fraction		
HFrEF	45	68.2
HFpEF	21	31.8
Age in years		
20-30	2	3
30- 40	2	3
41-50	7	10.6
51-60	24	36.4
61-70	17	25.8
71-80	8	12.1
81-90	6	9.1
Gender		
Male	45	68.18
Female	21	31.82
Race/ethnicity		
Caucasian	11	16.7
Black/ African American	39	59.1
Hispanic	11	16.7
Asian	1	1.5
Other	4	6.1
Average monthly income		
$0-500	16	24.2
$501-1,000	28	42.4
$1,001-2,000	15	22.7
$2,001-3,000	5	7.6
$3,000 and above	2	3
Comorbidities		
Diabetes Mellitus	27	59.1
Hypertension	61	92.4
Chronic Kidney Disease	27	59.1
Depression	12	18.2
Family support and structure		
Yes	62	93.9
No	4	6.1

Table 3

Health Related Quality of Life Domains and Corresponding Mean Scores

MLHFQ scales items Total		M	SD
Physical factor response score	40	32.43	10.696
Emotional factor, score	25	17.33	7.526
Other	40	28.32	9.928
Overall MLHQ (mean) total score	105	77.87	26.32

Note. MLHFQ = Minnesota Living with Heart Failure questionnaire

Health Related Quality of Life

Table 3 shows the mean scores of the physical, emotional, and social domains of HRQOL as well as the overall mean scores in HRQOL, which was measured with the self-reported MLHFQ. The MLHFQ measured the physical effects of symptoms presented because of the disease conditions on the physical, emotional, and social factors that affect the quality of life among heart failure patients.

Subscales include the summary of the impact of HF on physical dimensions, constructed on the basis of eight items; emotional dimensions constructed on the basis of five items; and social dimensions included items regarding swelling in ankle, working and earning, recreation, costing more for medical treatment, stay in hospital, and side effects of treatment effects on the HRQOL. The overall MLHQ mean score was 77.9 (*SD* = 26.32), which indicates that participants in this study had poor quality of life. The scores on subscales measuring the physical factors, emotional factors, and other factors were high which indicate poor quality of life experienced by the study participants across all areas of the tool.

Association Between NYHA Functional Status Classification and HRQOL to 30-day Readmission

The association between NYHA functional status classification and 30-day readmission was significant based on the Pearson's Chi-square test of independence analysis ($X2 = 8.117$; $df = 3$; $p = 0.044$) (see Table 4). An independent sample *t* test was performed to test for relationship between health-related quality of life and readmission was found to be significant ($p < 0.05$) (see Table 5). Given the non-normal distribution of the quality of life scores, the *t*-test was supplemented with a Mann-Whitney U Test to test the significance of the differences in mean quality of life score by admission status. Results confirmed that there was a statistically significant difference ($U = 319.0$; $p = .008$) (see Table 6). A one-way ANOVA was calculated comparing the demographic variable

Table 4

Relationship Between NYHA Functional Status Classification and 30-day Readmissions

	Value	df	p
Pearson's Chi-square	8.117	3	.044*

*Significant $p < .05$, Asymptomatic significance (2-sided)

Table 5

Relationship Between HRQOL and 30-day Readmission

Variable	T-test for Equality of Means		
	t	p	Mean difference
Physical factor	-2.411	0.021*	-6.96
Emotional factor	-2.545	0.014*	-4.817
Other factor	-3.105	0.004*	-8.013

*Significant $p < .05$, 2-tailed

The participant's self-reported perception of such impairment was assessed on a Likert-type scale ranging from 0-5 with "0" indicating no effect on the patient's quality of life and "5" indicating that the symptoms affected the patient's life very much. The total MLHFQ score was obtained by adding the scores from all 21 items (range 0-105); the higher the score, the poorer the "health-related quality of life" (HRQOL).

Table 6

Relationship Between HRQOL and 30-day Readmissions

Variable	U	p
Physical factor	348	.021*
Emotional factor	312	.005*
Other factors	300	.004*
Overall quality of life	319	.008*

*Significant $p < .05$, 2-tailed

Table 7

Relationship Between Readmission and Demographic Variables

Variable	F statistic	p
Age	0.545	.772
Gender	0.765	.470
Race	1.109	.361
Monthly income	2.864	.031*
Education	2.278	.058
Times admitted in one year	3.333	.010*
Help at home	0.195	.660
Ejection fraction	0.021	.885
Marital status	0.931	.431
Years diagnosed with HF	1.861	.129

*Significant $p < .05$, 2-tailed

the study participants, 28.7% ($n =$19) were readmitted two times in one year, 21.2 % ($n =$14) were readmitted three times, and 27.2% ($n =$18) were readmitted more than four times. Nationwide, 34 people per one thousand are admitted to the hospital for HF. In the city where this study took place, the rate of hospitalization is 39 per one thousand Medicare Beneficiaries, 65+, all races/ethnicities, both gender (CDC, 2016). The findings in this study demonstrate these high hospital 30-day readmission rates.

The readmissions rates among the study participants by NYHA functional status classification and ejection fraction showed that 60.6% ($n = 40$) participants were readmitted within 30 days of discharge from the hospital across all NYHA functional status classification. Participants with an NYHA functional classification of III were most likely to experience readmissions; 71.7%, participants with HFrEF had higher rates of readmission 40.9%, versus 19.7% among participants with HFpEF.

Previous research studies have shown a strong relationship between NYHA functional status classification and hospitalization among patient with HF (Ahmed, Aronow, & Fleg, 2006; Holland, Rechel, Stepien, Harvey, & Brooksby, 2010). Patients with a NYHA functional Class III and IV had a five times higher risk of hospitalization, and that being in this class showed a higher association of all-cause readmission and mortality. NYHA functional status classification is a useful prognostic tool that can be used by health care professionals and patients in identifying progression of symptoms in this disease trajectory (Ahmed et al., 2006).

to 30-day readmission rates revealed a significant difference between monthly income and readmission ($F = 2.864$, $p < 0.05$) and the number of times patients were admitted in the hospital in the past year to readmissions ($F = 3.333$, $p < 0.01$). These findings support the hypothesis that NYHA functional status classification and health related quality of life are associated with 30-day hospital readmissions.

Discussion

This study investigated the relationship between self-reported NYHA functional status as measured by NYHA functional status classification and HRQOL as measured by the MLHFQ to 30-day hospital readmission among patients with HF. There are very few studies that have utilized self-reported tools to assess the association of 30-day hospital readmission with self-reported health-related quality of life among HF patients. In this study majority of the participants (68.2%) had a diagnosis of HFrEF and 31.8% had a diagnosis of HFpEF. The participants were predominantly male (68.18%) and majority of the participants (59.1%) were African Americans. The monthly income of 66.6% of the study participants was less than $1,000. Hypertension (92.4%), Diabetes (59.1%) and Chronic Kidney Disease (59.1%) were the most common comorbidities, (6.1%) were homeless and had no family support. This study is unique as the study participants included were diagnosed with HFrEF and HFpEF.

NYHA Functional Status Classifications and Readmission

In this study, the largest group (78.69%; $n = 52$) had been diagnosed with heart failure for more than one to three years. The majority of the participants 69.7% ($n = 46$), scored as NYHA functional status class III, which corresponds to feeling tiredness and shortness of breath with less than ordinary activity while walking on a flat surface. Of the total number of admissions in the last one year among

A cross-tabulation was conducted to examine the relationship between NYHA functional status classification and 30-day hospital readmission. A positive correlation was found. There was a statistical significance which supports the hypothesis that NYHA functional status classification is associated with 30-day hospital readmission. These findings are supported by previous research conducted by Ahmed et al. (2006). The results concluded that an increase in NYHA functional status classification was associated with a 3.4-fold higher risk of hospital readmissions, 95% [CI 1.4-8.5]. Patients who reported symptoms such as dyspnea, orthopnea, and fatigue before discharge had a fourfold, 9.7 times, 95% CI [1.2-75.1] and 12.8 times higher risk, 95%, CI [1.7-99.7] for hospital readmission.

Additional research by Zaharias, Cataldo, Mackin, and Howie (2014) concluded that the NYHA functional status classification is a predictor of hospital readmission and

mortality and can be utilized as a tool to predict hospital readmissions among patients with HF which is supported by the findings of this study.

Quality of Life and Readmissions

The overall MLHQ mean was 77.9 (SD = 26.32), which indicates that participants in this study had poor quality of life. The scores on the subscales measuring the physical factors, emotional factors, and social factors were high which again indicates poor quality of life experienced by the study participants across all areas of the tool. These findings are supported by Wu, Lennie, Frazier and Moser (2016) who concluded in their study that patients who had higher scores on the MLHQ had a risk of readmission. Similarly, O'Loughlin et al. (2010) examined the impact of HRQOL as a predictor of readmission and mortality among 225 patients in Ireland with HF attending a disease management program on readmission rates and mortality. This retrospective study found that HROQL scores in the physical and emotional domains were predictors of all-cause emergency readmission.

In this study the researcher found a statistical significance in two of the demographic variables. A significant difference was found between monthly income and readmission (F = 2.864, p < .05) and also between times admitted in the hospital in past one year to readmissions (F = 3.333, p < .010). This is a significant finding in this study because it revealed those with reduced income have more HF admissions than patients with a higher income. Almost 2/3 of the participants had an income less than \$1000 a month. This figure represents 44 of the participants. Thirty-four of these participants had more HF admissions than patients with higher income. A future study could examine the income level and HF admission rates to types of insurance and 30-day hospital readmissions among heart failure patient population.

Implications

The study provides insights into two potential variables of 30-day hospital readmissions. Based on the literature and findings of the study, NYHA functional status classification and health related quality of life scores are indicators of 30-day hospital readmission. It is important for health care providers to utilize self-reported tools to evaluate NYHA functional status and health related quality of life while patients are admitted in the hospital and in outpatient setting. The researcher found that low-income is associated to 30-day hospital readmissions. Times patients admitted to the hospital has a direct relationship to readmissions and hence these patients will require additional coaching through education, scheduling of post discharge appointments and frequent phone calls. Additionally, patients will need to be followed up by hospital-based community health workers program or the familiar faces program that has been instituted through the chaplain service in this large academic medical center. To coach patients on monitoring their weights, medication compliance and dietary intake.

Conclusions

Limitations

The limitation of the study was the small sample size (n = 66) and the study participants were from one geographical location, hence, the findings cannot be generalized to all patients with a diagnosis of heart failure. Quality of life was determined using the MLHFQ. This tool has 21 items and is lengthy. One question on sexual activity was a difficult item to elicit response. In future studies this item may need to be excluded, which may impact the validity of the tool.

Future Research

Based on the results of this study, a longitudinal study sample in different geographical areas would help compare the association of NYHA function status classification and health related quality of life to 30-day hospital readmissions. Further research studies can to done to examine the effect of patient education on NYHA functional classification and hospital readmissions.

A comparative study between physician assigned NYHA functional classification and patient self-reported NYHA functional status classification can be explored to examine if there is any subjectivity on assigning the NYHA functional status classification.

In this study, demographic data such as income and times admitted to hospitals in a year were associated to 30-day hospital readmission. The results of this study provide health care providers with information on the importance of evaluating NYHA functional status classification and HRQOL scores in screening health risk for readmission. The times the patient admitted in the last one year and income are important to elicit as risk factors for 30-day hospital readmission.

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JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Educating and Empowering the Primary Care Healthcare Team about Identification, Documentation and Treatment of Obesity: A Practice Improvement Project

Latisha Hayes

Correspondence to:
Latisha Hayes, DNP, RN
latishah@rutgers.edu

Authors' Affiliation
Latisha Hayes, DNP, RN
Adjunct Professor Rutgers, The
State University of New Jersey
School of Nursing-Camden
Camden, NJ

Conflict of Interest
The author declares that there is no conflict of interest.

Abstract

Background: Adult obesity rates have more than tripled in the last three decades. While this burden is widely recognized, primary care providers (PCP's) still fail to address this topic with their patients.

Objective: This project was designed to assess and increase PCPs knowledge and self-efficacy on the identification, diagnosis, treatment, and documentation of patient obesity, as well as reduce patients' weight, BMI, HgA1C, blood pressure, triglycerides, and waist circumference as a result of provider treatment.

Methods: A retrospective records review was conducted to assess provider practices in obesity management. A pre and post educational questionnaire was administered to assess knowledge and self-efficacy related to treatment. Following the intervention, patient records were reviewed to ascertain whether there was a change in the above-mentioned markers as a result of provider interventions.

Results: On average PCP's demonstrated an increase in obesity-related knowledge and self-efficacy. There was a significant increase in identification and diagnosis (92.9%), as well as treatment and documentation (52%), and a 5% increase in patient referrals. Blood pressure in patients decreased.

Conclusions: Despite an increase in obesity-related knowledge and management, health-related outcomes did not substantially improve. Results suggest the need to reduce barriers and implement interventions that can assist PCP's in translating evidence to practice to reduce rates of adult obesity in the primary care setting.

Keywords: *obesity, Primary Care Providers, obesity comorbidities, obesity management*

Background

Worldwide adult obesity has more than tripled from 205 million in 1975 to 641 million in 2016 (World Health Organization [WHO], 2018). Currently, 78.6 million United States adults are classified as obese (Centers for Disease Control and Prevention [CDC], 2016). Despite the increased rate of obesity in the U.S., healthcare providers in primary care fail to properly diagnose, counsel, and refer patients to appropriate specialists. The most widely used method to classify obesity is a measurement known as the Body Mass Index (BMI). The BMI is a person's weight in kilograms divided by the square of height in meters. A high BMI can be an indicator of high-fat content in the body (CDC, 2017).

Obesity is a serious health concern because it is associated with clinical depression, anxiety, reduced quality of life, diabetes, heart disease, stroke, and many cancers (Busetto & Maggi, 2015). There has been a 28.9% increase in death and disability due to obesity between 1990 and 2016 (IHME, 2018). Not only have comorbid conditions increased with this epidemic, but the dollar expenditure has increased as well, costing the nation more than $149 billion in healthcare costs each year (The State of Obesity, 2016).

Problem Statement

Primary care providers fail to properly follow obesity management guidelines, which has resulted in decreased health-related outcomes for patients. A cornerstone of obesity management includes the following (OMA, 2018):

1. Identify patients who need to lose weight by measuring BMI and waist circumference annually or more frequently. A BMI percentile of 30.0 or greater is classified as being obese (CDC, 2017). A problematic waist circumference is defined as greater than 40 inches in men and greater than 35 inches in women (WHO, 2016).
2. Counsel overweight or obese patients about the health benefits of a sustained weight loss of 3%-5% or more.
3. Prescribe a reduced-calorie or carbohydrate diet that will promote weight loss.
4. Prescribe an increased physical activity regimen that will promote weight loss.
5. For patients whose BMI is greater than 40.0 or greater than 35.0 with obesity-related comorbidities, refer to bariatric surgery and/or pharmacotherapy may be an appropriate choice for obesity management.

Bardia, Holtan, Slezak, and Thompson (2007) found that of a sample size of 2,543 obese patients, only 19.9% had a documented obesity diagnosis and management plan in their chart. According to the United States Office of Disease Prevention and Health Promotions' Healthy People 2020, one of our 10 national health goals' objectives is to obtain a 10 percent increase in the proportion of clinicians who regularly assess BMI in their adult patients (Office of Disease Prevention and Health Promotion [ODPHP], 2014). At baseline, 48.7% of PCP's regularly assessed BMI of their adult patients in 2008 (ODPHP, 2014). According to Healthy People 2020 Midcourse Review, 2014, there has been little change in the number of primary care providers who regularly assess BMI (48.9%) (National Center for Health Statistics [NCHS], 2016).

Diminished confidence and comfort levels of practitioners have been identified as a hindrance to proper obesity management (Sebiany, 2013). Clinicians have cited many reasons, primarily related to the knowledge, attitudes, and beliefs about the effectiveness of proper obesity management (Berry, Berry, Myers, Reznicek, & Berry, 2013; Ferrante, Piasecki, Ohman-Strickland, & Crabtree, 2009). Turner et al. (2018) administered a web-based survey to 1,506 clinicians to assess their understanding of the obesity treatment guidelines. Questions focused on the recommended minimum level of physical activity, duration and intensity of weight loss counseling, appropriate eating patterns for weight loss, an appropriate threshold to prescribe weight loss medications, and when to prescribe these medications for long-term use. Of the 1,506 participating healthcare providers, only two responded correctly to each component of the guideline. Approximately 15% of respondents identified the appropriate time and indication to prescribe pharmacological therapy, and 25% indicated the appropriate length of time a patient is permitted to continue with pharmacological therapy (Turner et al., 2018).

Purpose of the Project

The purpose of this project was to determine if a provider-focused educational program would improve knowledge, self-efficacy, and adherence to obesity guidelines. The secondary outcome of this project was to identify if a provider focused educational program aimed at obesity management would result in improved health outcomes in patients, defined as a decrease in patients' weight, blood pressure, triglycerides, hemoglobin A1C (HgA1C), BMI, and waist circumference in a 3-month period.

Methods

Design

Using a pre-test/post-test design, this quality improvement project targeted providers to increase knowledge, self-efficacy, and practices related to the identification, diagnosis, management, and documentation of obesity. Obesity-related health outcomes of patients, including weight, blood pressure, triglycerides, HgA1C, BMI, and waist circumference were also evaluated as a result of provider-focused education. It consisted of a retrospective collection of anthropometric patient data from electronic medical records (EMR), as well as an educational intervention for the health care providers. Data collected from the EMR included age,

gender, weight, BMI, waist circumference, obesity diagnosis, the most current hemoglobin AIC, blood pressure, triglyceride levels, and management related to obesity diagnosis (such as counseling on diet and activity, pharmacologic therapies, referrals to specialists or bariatric surgeon). A cross-sectional sample was used which included adults seen at the facility from the periods of May 1, 2018 to July 31, 2018; October 15, 2018 to November 15, 2018; and January 15, 2019 to February 15, 2019. Inclusions for this study were male and female patients between the ages of 18 and 64 years. Exclusion criteria were patients under 18 years of age, over 64 years of age, patients who were classified as overweight, normal weight, or underweight according to the criteria set forth by the Centers for Disease Control and Prevention.

Obesity was operationalized as a BMI percentile of ≥ 30.0 (CDC, 2014). If the BMI met the criteria for obese, the chart was further examined to assess hemoglobin A1C, blood pressure, triglycerides, if a formal weight-related diagnosis is made, and what type of interventions were ordered and provided to patients. The findings of this study were brought to the attention of the healthcare provider staff, at which point an on-site education session was scheduled and implemented. Two pre-intervention questionnaires were administered to the providers, the Obesity Risk Knowledge (ORK-10) scale and the Weight Management Approaches Survey.

The ORK-10 is an instrument created by Swift and colleagues "to validate a short, reliable psychometric scale measuring knowledge regarding the effects of obesity on health" (Swift, Glazebrook, & MacDonald, 2006, p. 661). The ORK-10 scale was administered to a sample of individuals with no specific obesity-related expertise (*n* = 230) and a sample of experts (*n* = 200). The ORK-10 scale has a Cronbach's alpha coefficient > 0.7 (Swift et al., 2006, p. 661). Those with expertise in the field of obesity achieved significantly higher scores than non-experts (median 9.0 vs. 4.0, Z = -17.364; *p* < 0.001).

The second questionnaire, the Weight Management Approaches Instrument was developed by Crawford and colleagues (2000) to assess General Practitioners' attitudes and practices regarding the management of adult obesity. The survey was developed through a review of the literature and a previous survey that examined dietitians' attitudes and practices in obesity treatment. It was tested on a group of 759 general practitioners. No reliability data were reported (Campbell, Engel, Timperio, Cooper, & Crawford, 2000). With the permission of the the survey author, the principal investigator (PI) of this project adapted this survey to delete questions specifically related to the assessment of overweight patients. The items assessed providers' attitudes, practices and self-efficacy; using a 5-point Likert scale to measure 20 statements about when intervention should be offered, how often obesity is assessed and managed, the role of clinicians in obesity management, and whether they felt prepared enough to treat obese patients.

Provider Education
The education session consisted of a review of the components of the Obesity Medicine Association 2017 - 2018 Obesity Algorithm (2018). The Obesity Medicine Association created and published one of the more recent and comprehensive algorithms. It incorporates individualized strategies that enable clinicians to counsel their patients. These strategies include various concepts for dieting, exercising, counseling, prescribing medication, and when to consult a metabolic or bariatric specialist. The obesity algorithm is PowerPoint based, and was designed to be scientific, evidence-based and provides a practical application to disease management. It was also created to be user friendly (Seger et al., 2013). PowerPoint slides 1 – 42 were reviewed by the PI. The ORK-10 and the Weight Management Approaches Survey were re-administered immediately following the education session to assess for increase in knowledge and self-efficacy. An evaluation and treatment summary of the algorithm served as tangible reminders for the step that needs to be initiated and followed to ensure guideline adherence and visit reimbursement.

Setting and Sample
This quality improvement project took place at a practice in Southern New Jersey which specializes in Primary Care and Internal Medicine to adult patients aged 18 and older. This practice treats approximately 30 to 40 patients per day, nearly all of whom lives in the city where the practice is located.

A convenience sample of five healthcare providers (three Nurse Practitioners and two Physicians) who were currently employed at the practice were the targets of the provider-focused educational program. Pre- and post-intervention data collection were extracted from EMR within this practice. Another convenience sample consisted of 126-212 medical records to assess obesity-related health outcomes in patients. All patient charts from May 1, 2018 and July 31, 2018, October 15, 2018 through November 15, 2018 and January 15, 2019 through February 15, 2019 were reviewed, and those between the age of 18-64, and who have a BMI of 30.0 or greater were included in the data collection process.

Data Collection
This practice improvement project used retrospective data from the EMR. A standardized collection instrument in the form of a spreadsheet allowed for a systematic way to review each chart. The first records review assessed patients seen from May 1, 2018 to July 31, 2018. Each chart was assessed for BMI percentile of ≥ 30.0 and ages 18-64.

Qualified charts were then reviewed and documented (yes or no) for a formal diagnosis of obesity, and any documentation of counseling, pharmacologic therapy and/or bariatric referral if the patient met the criteria. An education session was scheduled for two weeks following the review. The ORK -10 and the Weight Management Approaches Survey were administered immediately before and after the educational intervention. Another retrospective chart review occurred, assessing patients seen from October 15, 2018 to November 15, 2018 to determine if the intervention resulted in an increased documentation of any combination of previous data. A baseline of patient information was also included in this review. Qualified charts were documented for patient gender, height, weight, waist circumference, blood pressure, HgbA1C, and triglycerides. Following this records review, the receptionist was asked to schedule the patients for a follow-up appointment three months after being seen. A third chart review of these patients was conducted from January 15, 2019 to February 15, 2019 to determine if improvement in any obesity-related comorbidity of the patients occurred.

Methods of Evaluation
A spreadsheet was used, and a protocol was implemented to evaluate and quantify data. If the health record revealed a BMI percentile of $\geq$ 30.0, and age 18 to 64 years, then the chart was explored for a formal diagnosis, comorbidities, and intervention(s). Descriptive statistics were used to evaluate PCP identification, diagnosis, counseling, and documentation. A paired sample *t*-test was used to evaluate provider knowledge and self-efficacy. For patients, descriptive statistics and a paired sample *t*-test were used to assess variables of interest, including hemoglobin A1C, blood pressure, triglycerides, weight, BMI, and waist circumference.

Results
Baseline provider information obtained prior to the educational intervention included an assessment of rates of identification, diagnosis, counseling, referral, and documentation of obesity. Two hundred twelve charts were reviewed. Overall, obesity diagnosis were relatively low with (n = 62, 29.2%). Both counseling and documentation were even lower (n = 12, 5.7%). None of the providers referred patients to outside specialists

such as dieticians or bariatric surgeons (see Table 1).

The following results reflect record reviews occurring after the provider educational intervention. One hundred and twenty-six charts were reviewed for both provider adherence and patient results.

Obesity diagnosis was high (n = 117, 92.9%), but counseling and documentation were not as high (n = 66, 52.3%). The frequency of referrals was low (n = 7, 5.6%) (Table 2). A paired samples t-test was estimated on knowledge showing a statistically significant increase post-intervention (90.00%) compared to pre-intervention (60.00%), t(4) = -9.487, p = 0.001 (Table 3). A paired samples t-test was estimated on self-efficacy showing a statistically significant increase post-intervention (73.00%) compared to pre-intervention (65.20%), t(4) = -5.600, p = 0.005 (Table 4).

Table 1

PCP Variables of Interest Before Educational Intervention

Characteristic	Frequency	Percentage
Obesity Diagnoses		
Yes	62	29.2
No	150	70.8
Total	212	100.0
Counseling		
Yes	12	5.7
No	200	94.3
Total	212	100.0
Documentation		
Yes	12	5.7
No	200	94.3
Total	212	100.0

Table 2

PCP Variables of Interest

Characteristic	Frequency	Percentage
Obesity Diagnoses		
Yes	117	92.9
No	9	7.1
Total	126	100.0
Counseling		
Yes	66	52.4
No	60	47.6
Total	126	100.0
Referrals		
Yes	7	5.6
No	119	94.4
Total	126	100.0
Documentation		
Yes	66	52.4
No	60	47.6
Total	126	100.0

Table 3

Paired Samples T-test for Knowledge

	Paired Differences			95% Confidence Interval of the Difference				
	M	SD	SE	Lower	Upper	t	df	p
Knowledge	-30.00	7.071	3.16	-38.77	-21.22	-9.487	4	.001

Table 4

Paired Samples T-test for Self-Efficacy

	Paired Differences			95% Confidence Interval of the Difference				
	M	SD	SE	Lower	Upper	t	df	p
Self-Efficacy	-7.80	3.114	1.39	-11.66	-3.93	-5.600	4	.005

Next, descriptive statistics and five paired samples t-tests were used to determine if a decrease in patients' weight, blood pressure, triglycerides, hemoglobin A1C, and waist circumference occurred. Results revealed a significant decrease in systolic and diastolic blood pressure ($p < 0.05$). However, there were no significant changes in HgA1C, triglycerides, and weight. Unfortunately, waist circumference was not documented in patient charts pre or post educational intervention (Table 5).

Table 5

Descriptive Statistics and t-test Results for HgA1C, Blood Pressure, Cholesterol, Weight

Outcome	Pretest		Posttest			99% CI for Mean Difference	r	t	df	p
	M	SD	M	SD	n					
HgA1C	7.38	1.384	7.40	1.438	97	-.015	.972	-.451	96	.653
Systolic	141.75	15.638	138.20	14.016	126	3.54	.906	6.024	125	.000*
Diastolic	83.42	8.548	81.38	7.238	126	2.03	.874	5.509	125	.000*
Triglycerides	166.53	34.037	166.77	35.595	97	-.237	.985	-.371	96	.712
Weight	251.42	52.949	250.62	52.018	126	.801	.996	1.851	125	.067

*$p < .01$.

Discussion

This practice improvement project aimed to increase provider assessment, management and documentation rates for patients who are identified as being obese. PCP's displayed an increase in obesity-related knowledge and confidence (self-efficacy) when identifying, diagnosing, counseling, referring to appropriate professions, and documenting on their obese patient population.

There was a marked increase in the frequency in which providers identified and diagnosed obesity occurring after the educational intervention (92.9%) when compared to the rates of identification and diagnosis before the educational intervention (29.2%). This marked increase is substantially superior to other studies demonstrating rates ranging from 23.8% to 42% (Farran, Ellis, & Barron, 2013; Fitzpatrick & Stevens, 2017; Petrin, Kahan, Turner, Gallagher, & Dietz, 2016). However, counseling and documentation only occurred 52.4% of the time post-intervention. Referrals to outside specialists such as dieticians and bariatric surgeon occurred infrequently at 5.6% of the time. Despite an increase in provider knowledge and confidence and adherence to guidelines, several factors have been identified as unique challenges to the primary care team.

Barriers to Provider Adherence

Lack of time was overwhelmingly cited as a barrier to guideline adherence. The providers in this study often made comments during the educational session that there was not enough time to discuss obesity or weight with their patients, especially when they were being seen for another reason. The only way insurance reimbursement occurs is if the PCP is the individual that counsels the patient (CMS.gov, 2011). This created an issue for the providers as they had many other patients to see throughout the day and felt they did not have time to spend the required 15 minutes for reimbursement, speaking exclusively about obesity management, especially when these patients were being seen for additional conditions. Blackburn et al. questioned 17 PCP's about barriers to raising the topic of weight in practice. Clinicians perceived they lacked time to initiate a

discussion about weight loss, as they were working within 10 min consultations and most patients were being seen for medical problems unrelated to excess weight (Blackburn, Stathi, Keogh, & Eccleston, 2015).

According to the 2017-2018 Obesity Medicine Association algorithms, a BMI and waist circumference should be measured annually or more frequently (OMA, 2018). While BMI was calculated on all patients, waist circumference was not measured on any patient. Providers and nurses stated they were unable to locate the tape measurer. Second, they did not feel they had enough time to measure waist circumference in every patient. The omission of this measurement is not unique to this practice. A study conducted in 2009 included the responses of 28 general practitioners and patients concerning barriers toward waist circumference measurements. Practical barriers included lack of time, extra workload and perceived lack of financial reimbursement (Dunkley, Stone, Patel, Davies, & Khunti, 2009).

In this study, another aspect of the obesity algorithm that showed poor adherence were appropriate referrals to a bariatric surgeon. With morbid obesity affecting approximately 15 million people in the United States, bariatric surgery has been recognized as the only effective treatment for obesity (DeMaria, Pate, Warthen, & Winegar, 2010). When the PI verbally questioned the low rates of referrals, all providers stated that they did not voluntarily refer patients to bariatric surgeons because they were aware of only one specialist in the area. As of the time of the October/November 2018 records review, this specialist had a waitlist of 4 – 6 months. Only patients who requested a referral were provided information and/or referrals.

Patient Factors
According to the National Heart, Lung, and Blood Institute, a healthy weight loss has been cited as 1-2 pounds per week (NHLBI, n.d.). In this study, the average weigth loss combined on all patients was less than one pound over a 3-month period. Despite such a small decrease in patients' weight over the course of this study, the results served as a clinically significant achievement. The timeframe of this project was performed around the holiday season. Several studies suggest that the holiday season, starting from the first week of November to the first or second week of January, could be critical to gaining weight (Cook, Subar, Troiano, & Schoeller, 2012; García, Berná, Sebastià, & Soriano, 2013; Boyce, 2016; Stevenson, et al.; 2016). On average, Americans gain approximately 2.3 pounds from Thanksgiving to New Year's Day (Helander, Wansink, & Chieh, 2016).

There was no significant change in patients' triglyceride levels, nor hemoglobin A1c during this study (Table 5). As previously stated, the intervention occurred over the holi-

day season, where cholesterol levels typically increase due to the increase in dietary consumption during this time. This finding may be due to the timing of blood lipid tests performed. This is consistent with the findings reported by Vedel-Krogh, Kobylecki, Nordestgaard, and Langsted (2016). These researchers analyzed data from blood lipid tests given to 25,764 participants between April 2014 and November 2017 and found that 89% of their study's participants had high total cholesterol during late December and January compared to 53% of the people tested in April, May, and June combined.

In contrast, there was a statistically significant decrease in systolic and diastolic blood pressure after the intervention. A possible reason for this occurrence may be attributed to the use of a new gym that opened in the area at the end of October 2018. According to an informal discussion with practice providers, several patients reported they were planning to join this fitness center. Along with PCP counseling, this possibly contributed to the overall decrease in systolic and diastolic blood pressure. This is consistent with the findings of Leary et al. (2016) which indicated that higher levels of physical activity were associated with lower blood pressure, and the volume of activity may be more important than the intensity.

Conclusions
This practice improvement project aimed to increase provider assessment, management, and documentation rates for patients who were identified as obese. The measurement of waist circumference produces a low-cost, low resource opportunity for clinicians to gain a better idea of patient progress in obesity management. Future implications would be for the practice to consider purchasing a number of flexible tape measurers, and keep them in an easy-to- locate area in order for non-provider staff to measure waist circumference when other anthropometric measurements are obtained.

Clinicians can play a variety of roles in responding to the obesity epidemic. Options include referring patients to appropriate weight management providers, and/or treating patients directly for weight loss. Further research is needed to identify the most appropriate use of clinicians' time and resources. This includes understanding the importance of weight loss in their patients and treating obesity as the first step in the prevention and management of chronic disease states with the support of current treatment guidelines.

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JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Sociohistorical Perspective on Health Vulnerability of Native Hawaiians

Saba Behjati Kam, Kawailehua K. Paikai, J.T. Kala'iokamanu Carreiro, & Dula F. Pacquiao

Correspondence to:
Dula F. Pacquiao, EdD, RN,
CTN-A, TNS
dulafp@yahoo.com

Authors' Affiliation
Saba Behjati Kam, MSN, NP-C
Faculty, Kapi'olani Community
College

Kawailehua K. Paikai, BSN, RN
DNP Student, University of
Hawaii at Hilo

J.T. Kala'iokamanu Carreiro,
BSN, RN
DNP Student, University of
Hawaii at Hilo

Dula F. Pacquiao, EdD, RN,
CTN-A, TNS
Lecturer, University of Hawaii
at Hilo

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The authors declare that there is
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Abstract

Background: Globally, indigenous populations are considered vulnerable because of socioeconomic and health vulnerabilities linked with their long history of disenfranchisement and subordinate status. Such is the case for Native Hawaiians, the indigenous people of Hawaii.

Objective: This paper describes the social and historical forces that contributed to their long-standing vulnerabilities as evidenced by their poor health, rampant poverty and unemployment, and low educational achievement. Current initiatives and programs to address these problems are presented.

Conclusions: Recommendations focus on advocacy for social justice through culturally competent approaches toward building individual and community empowerment for self-agency and educational strategies to promote compassion and empathy for the people.

Keywords: Native Hawaiians, indigenous population, population health, vulnerable populations, health disparities

Background

Indigenous peoples are found in many countries; they are known as the "Fourth World" or "nations without states." Indigenous communities, peoples, and nations are "those that have a historical continuity with pre-invasion and pre-colonial societies that developed on their territories and consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them" (Anaya, 2004, pp. 2–3). Worldwide, indigenous populations have borne the consequences of the long history of disenfranchisement from their land and culture. They are considered vulnerable populations because they are at a higher risk for poor health as a result of the barriers they experience to social, economic, political, and environmental resources, as well as limitations due to illness or disability (National Collaborating Center for Social Determinants of Health [NCHHD], n.d.).

The health status of indigenous groups is strongly affected by the country where they are located. Few countries have done more for their indigenous populations than others (Pacquiao, 2019). According to Gracey and King (2009), poor health associated with poverty, malnutrition, overcrowding, poor hygiene, environmental contamination, and prevalent infections is widespread among the nearly 400 million indigenous people worldwide. These are compounded by limited access to adequate clinical care, health promotion, and disease prevention services. As some indigenous groups transition from traditional to modern lifestyles, they develop lifestyle diseases, such as obesity, cardiovascular disease, type 2 diabetes, and exposure to toxic pollutants in their environment as well as physical, social, and mental disorders linked to the misuse of alcohol and other drugs (Gracey & King, 2009).

Native Hawaiians are the indigenous people of Hawaii who are considered a vulnerable group in the United States. They have disproportionate rates of diabetes, cardiovascular disease, and cancer compared to the rest of the population (State of Hawaii Department of Health, 2018). Their life expectancy is at least six years lower than the rest of Hawai'i's population. They are affected by severe psychological stressors from poverty, and lack of adequate and safe housing, lack of transportation, and lack of adequate health insurance, healthcare facilities and primary care physicians (State of Hawaii Department of Health, 2018). This paper describes the social and historical events that contributed to the lingering health vulnerability of the indigenous people of Hawai'i.

The current population of the state of Hawai'i is diverse because foreign laborers were brought in to work during the mid-1800s. In 2017, the median age was about 38.5 years, 49.8% females and 50.2% males (U.S. Census, 2018). Of the state's total population of 1,426,393, 20% were born outside of the United States. Asians accounted for 38%, Caucasian 25%, two or more races 23.8%, Native Hawaiians 10.2%, African Americans 1.8%, and other races 1% (World Population Review, 2017).

Colonization of Native Hawaiians

Native Hawaiians are descendants of the aboriginal people who occupied and exercised sovereignty in the area now known as the State of Hawai'i. Their first documented contact with the western world was in 1778 and 100 years later the population decreased by 90% from exposure to diseases brought by foreigners such as measles, smallpox, syphilis, and tuberculosis. Native Hawaiians were subjected to historical trauma following colonization. As more missionaries arrived in the islands, they were forced to abandon their language, culture, beliefs and practices through forced assimilation (Kaholokula, 2007). They had to adapt to Christianity and a more westernized culture. Native Hawaiians experienced many losses – culture, ancestral land, and control of their economy and politics. In the mid-1800s, foreign laborers were brought in to work in the pineapple and sugar industries. By 1893 the Kingdom of Hawai'i was overthrown by a group of businessmen backed by the U.S. military (Mokuau et al., 2016). To this day, institutionalized discrimination against them persists in the educational system, housing arena, employment opportunities, and in health care.

Prior to colonization, Native Hawaiians lived in a subsistence societal structure. Ahupua'a were land divisions that spanned from the top of the mountain down to the ocean forming local communities where fishermen fished in the ocean using sophisticated fish ponds and farmers raised kalo (taro), bananas, sweet potato, and pigs. The people used irrigation systems dug from the mountains. Materials harvested from these mountains were used for housing and supplies. Women wove baskets and nets and prepared meals. All food and resources were shared and equally distributed. Their agricultural and aquacultural systems were able to support a population of one million, including residents who were not involved in food production (Liu & Alameda, 2011).

Most of the foods were consumed raw or steamed. Their diet was high in complex carbohydrates. Kalo (taro), uala (sweet potato) and ulu (breadfruit) were the staples comprising nearly 80% of their diets, with nearly 10% consisting of proteins such as fish, pig, fowl or dog, and 10% fat (Fujita, Braun & Hughes, 2004). The traditional way of healing, lā'au lapa'au, was based in prayer and used locally available medicinal plants. Pre-colonial Hawaiians were in good health and enjoyed a thriving cultural and political-economic structure (Liu & Alameda, 2011). There was an absence or very low prevalence of chronic medical, psychological, and social problems among them prior to colonization (Kaholokula, 2007).

Consequences of Disenfranchisement

The loss of Native Hawaiian lands has led to fewer and fewer producers of native foods. Nearly 90% of Hawai'i's food is imported (Office of Planning, 2012). Once exclusively surviving on the resources provided by the natural environment, the introduction of new crops, such as rice, for export has made Hawai'i reliant on the importation of food products for everyday consumption. The decreased supply of native foods has led to an increase in the cost of these items to the point where Native Hawaiians can no longer afford their traditional foods. Taro, which makes poi, a staple food of the Hawaiian people, is now sold in supermarkets at a premium price and has now become a luxury item for many families, eaten only at parties or during special occasions.

Today, fast food restaurants riddle Native Hawaiian neighborhoods (Mau et al., 2008). Neighborhoods that are built with unhealthy environmental foodscapes promote obesogenic tendencies. Residents have easy access to processed, energy dense, and nutrient-poor food. Native Hawaiians in general tend to eat a high-calorie diet high in fat and meat, which has been linked to health disparities in minority populations (King et al., 2012). Grocery stores and fresh food farmers' markets are scarce in Native Hawaiian dense neighborhoods. At home, foods are based on what they can afford and have the time to prepare.

Effects of Historical Trauma

According to Sotero (2006) people who were subjected to historical trauma using forced rule, colonialism, capture, slavery, and genocide have disproportionately worse health than the dominant population for generations after the initial assault on the people and their culture. Historical trauma involves the cumulative and collective psychological and emotional injury sustained over a lifetime and across generations resulting from massive group trauma experiences (Brave Heart & DeBruyn, 1998; Pacquiao, 2019).

Populations that experienced long-term, mass trauma exhibit a higher prevalence of disease several generations after the original trauma (Pacquiao, 2019; Sotero, 2006). The discovery of the Hawaiian Islands by Captain Cook and the subsequent arrival of the missionaries and other foreigners resulted in the rich cultural diversity of Hawai'i today. However, the indigenous people paid a huge price. Captain Cook and his men described the indigenous people as healthy and beautiful and cultivated many stereotypes of Hawaiian men as savages and half-men and half beast (McCubbin & Marsella, 2009). These stereotypes influenced how the indigenous people were viewed by others and "influenced the psyche of the Native Hawaiian people, particularly as their society and culture began to succumb to western ideology" (pp. 378-379).

What was once thought of as an extension of oneself, their land became a commodity. The Great Māhele of 1848 and Kuleana Act of 1853 changed the land from something to be in harmony with, to something that could be possessed. Hawaiians did not view āina (land) as something that could or should be owned, but rather as a piece of their 'ohana (family). Forced separation from āina is tantamount to loss of family and community resulting in spiritual and cultural disintegration. The Hawaiian belief that the body, mind, and spirit are connected and that an insult to one would have damaging effects on all three, created a consequent vulnerability to physical, psychological, and social diseases (Kaholokula, 2007).

In 1896, the Hawaiian language was banned in public and private schools. Teachers were forbidden to use Hawaiian; failure to abide by this rule would result in termination. Even at the Kamehameha Schools for Hawaiian children, letters from boarding students became subject to censorship if written in their native language (Aha Pūnana, n.d.).

The stress of historical trauma, living in poverty, and being in poor health contribute to high allostatic load, the consequence of wear-and-tear on the body and the brain. This causes ill health because of stressful experiences and the alterations in lifestyle as a result of chronic stress (McEwen & Gianaros, 2010). High allostatic load is directly linked to increased morbidity and mortality since stress has neurobiological effects on the brain and other body systems, and damages the physiological functioning of the body, thus worsening health. Stress causes dendritic remodeling of neurons, leading to increased susceptibility to depression. It also causes chronic glucocorticoid release, damaging organs and changing DNA to adapt to this high-stress environment. This leaves the body exposed to free radicals which are known to trigger cancer cells (McEwen & Gianaros, 2010; Pacquiao, 2019).

Socioeconomic Vulnerability

Health disparities are most often rooted in poverty. The overall unemployment rate in Hawaii is 2.5% compared to 4% among Native Hawaiians (U.S. Department of Labor, 2019). Native Hawaiians have lower per capita income and are more likely to be living below the poverty line than the rest of Hawai'i's population (Office of Hawaiian Affairs, 2013). The overall poverty rate in Hawaii is 9.5%, but among Native Hawaiians it is 13.5% (U.S. Census Bureau, 2017. Low-income jobs are often tedious, boring or require manual labor, leading to depression and hopelessness. The minimum wage in Hawai'i is $10.10 an hour, equivalent to $21,000 annually. In a two-parent household earning minimum wage, annual take-home salary is $35,200. Additionally, the cost of home ownership in Hawaii is among the highest in the nation. Forty-three percent of Native Hawaiians who are not living on Hawaiian Homestead Lands are renting their housing units (Office of Hawaiian Affairs,

2015). Spending over 30% on housing compromises other necessities. In 2013, 39.5% of Native Hawaiian homeowners and 51.2% of renters paid over 30% of their gross income on housing (Office of Hawaiian Affairs, 2015). Those making wages below the poverty line struggle to pay monthly utility and home rental bills and are constantly under the threat of homelessness. In fact, the rate of homelessness among Native Hawaiians is disproportionately higher than other groups in Hawai'i (Yamane, Oeser, & Omori, 2010).

Lack of educational attainment is a key indicator of socioeconomic disadvantage. Among Native Hawaiians, high school dropout rates are high. According to the Office of Hawaiian Affairs (2014), only 47% of Native Hawaiians are proficient in math and 60% are proficient in reading compared to the states' 58% and 69%, respectively. Native Hawaiians with a bachelor's degree earn $47,600 annually as compared to $27,000 among those with a high school diploma. Unfortunately, only 21% of Native Hawaiians have a bachelor's degree (Ka Huaka'i, 2014). The poverty rate for Native Hawaiian households with less than a high school diploma is 41%, double the rate of other groups in the state. One in three Native Hawaiian families with young children, and 93% of families with school aged children are likely to fall below the livable income threshold (Ka Huaka'i, 2014).

Health Vulnerability

Native Hawaiians are less likely to report excellent or very good health (61.4%) compared with the overall U.S. population (67.3%) (Zelaya, Galinsky, Simile, & Barnes, 2014). Thirty percent of Native Hawaiians live in rural underserved communities with limited access to primary and preventive care. Those living in rural areas tend to be socially isolated, uninsured or underinsured, and have disproportionately less access to good health care (Brundisini et al., 2013). In the United States, 24% of Native Hawaiians and Pacific Islanders are uninsured compared to 12% of Caucasians (Kaiser Foundation, 2008). Medicaid/QUEST funds 61% of prenatal care and 57% of deliveries of Native Hawaiian women (Office of Hawaiian Affairs, 2017). Native Hawaiians comprise 26% of community health center visits as compared to 22% among Caucasians (State of Hawaii Department of Health, 2014).

According to the Health Resources & Services Administration (HRSA, 2018), medically underserved areas (MUAs) are designated based on measures of social deprivation, health status, and provider availability (Phillips, Taylor, Goodman, McBride, & Petterson, 2011). There are 24 primary care and 23 mental health MUAs in the state of Hawaii (HRSA, 2018). In addition to the abundance of MUAs in Native Hawaiian neighborhoods, there is evidence of discrimination in health care against them. Research shows that discrimination among Native Hawaiians is related to being overweight and/or obese (McCubbin & Antonio, 2012).

Forty-one percent of the state's population is obese and 34% are overweight (State of Hawaii Department of Health, 2014). Native Hawaiians are 50% more likely to be overweight than white residents. Common obesity-related diseases include hypertension, diabetes, asthma, and cardiovascular disease. Native Hawaiians have a 12.8% higher rate of diabetes compared to other groups in the state (State of Hawaii Department of Health Behavioral Risk Factor Surveillance System, 2016). Native Hawaiians are more likely to have complications such as end-stage renal disease (ESRD), blindness, amputation, infection, and cardiovascular disease than other groups in the state (King et al., 2012). Compared to other groups in the state, Native Hawaiians have shorter life expectancy and higher rates of cancer, heart disease, and stroke (Robinette, Charles, Almeida, & Gruenewald, 2016); they continue to be over-represented in morbidity and mortality statistics associated with chronic health conditions.

State Initiatives to Mitigate Native Hawaiian's Health Vulnerability

The Kamehameha School System

The Kamehameha School system is a private charitable educational trust founded by the will of Princess Bernice Pauahi Bishop, philanthropist and last direct descendant of the Royal House of Kamehameha who gave her lands to be used to educate the Native Hawaiian people. The mission of Kamehameha Schools is to improve the capability and well-being of the people of Hawaiian ancestry (Kamehameha Schools, 2018). Kamehameha Schools comprise the largest private landowner in the state of Hawai'i and has three campuses in O'ahu, Hawai'i (the Big Island), and Maui, as well as 30 preschools throughout the state. Annually, Kamehameha schools serve over 6,900 students of Native Hawaiian ancestry on these three campuses and 40,000 more through community programs and collaborations that include charter school support and other programs for public school children. Princess Bernice's will stipulated that orphaned or indigent Native Hawaiian children have preference for admission. Kamehameha schools subsidize private preschools to 12th grade education and provide support to students post high school to attend schools outside of the Kamehameha school system.

Queen Lili'uokalani, the first queen and last sovereign monarch of the Kingdom of Hawaii established a Trust for Native Hawaiian youth and families. Services provided by the Trust include youth development programs, pua lili'u (case) management, counseling, 'ohana (family) strengthening, grief, loss and trauma support, financial sustainability, and āina (land) education programs. The Office of Hawaiian Affairs has been instrumental in addressing social determinants of health at the state legislature. These statewide initiatives are aimed to promote quality education, a key determinant of health and socioeconomic status since good

education is the pathway to well-paying jobs.

MA'O Farms

MA'O Farms was started by Hawaiians in Waianae, one of the most impoverished and rural Native Hawaiian communities in the state. The founder recognized that Hawaii is one of the most geographically isolated and food dependent populations in the world. Food insecurity in Wainae is 33%, as opposed to 13% for the rest of Hawaii (MA'O Farms, 2017; Meter & Goldberg, 2017). Food insecurity is linked to chronic diseases. Native Hawaiian youth struggle socio-economically as they have high rates of teen pregnancy, school suspension, drug abuse, and high school dropout. The organic farm is on a 19-acre parcel of land and employs Native Hawaiian opio (youth) who seek college tuition in a work-study program. The Youth Leadership Training programs provide tuition scholarships for college and monthly stipends for books, food, and clothing. The programs teach leadership skills and land stewardship as well as provide work experience in organic farming for Native Hawaiian youth (MA'O Farms, 2017).

MA'O farmers integrate Native Hawaiian rituals in their work-study program. They start with an Oli, or Hawaiian chant, to center them before the start of the workday, in keeping with the belief that the "land is chief and man is its servant." The farm was purchased by grants from the Hawaii Community Foundation and the Trust for Public Lands, which are supported by over 36 organizations and charities (MA'O Farms, 2017) as well as by local grocery stores and restaurants. MA'O Farms' seek land and water investments to support agro-ecological projects for sustainable agriculture. The program not only helps to educate Native Hawaiians for a better employment future, but also reconnects them to the land, giving them a sense of empowerment and social standing.

Indigenous Healing System

Indigenous healing systems comprise of beliefs and practices that originate within a culture and are designed specifically for the needs of its members. Kothian and Farrell (2010) emphasize that people of all cultures use symbolism found in their various religions and spiritual practices to cope with health problems. These symbols cue bio-psycho-social-spiritual healing responses by restoring the harmony necessary for health. Incorporating symbolism into their treatment plan creates a powerful healing synergy (Kothian & Farrell, 2010). Native Hawaiians believe that true health requires harmony of the mind, body, and spirit. Much of their healing beliefs are based on healthy eating, emotional and spiritual balance, mana (spiritual power), lomi lomi (massage), and la'au lapa'au (medicinal plant treatment) (Timboy, 2018). Native Hawaiian healers describe healing as 80% pule (prayer) and 20% other healing practices.

In the past, western women preferred to die in childbirth rather than try the "pagan" Hawaiian medicinal herbs to stop postpartum bleeding (Michener, 1959). Although some indigenous treatments have been reputed to be effective, western biomedical practitioners have only recently recognized some of them. Scientific medicine has validated the effectiveness of an anti-inflammatory cocktail of native plants against infections and autoimmune disease (Timboy, 2018) and herbal remedies used by Native Hawaiian healers for asthma (Winters & Swartz, 2019). Many other remedies that are available for cuts, broken bones, inducing pregnancy, pain, and other conditions, are based on ancient knowledge, wisdom, observation, and trials. Native Hawaiians believe that the healing properties of these natural remedies are enhanced by praying to their gods by someone familiar with the spiritual base of the healing ritual.

Conclusions

In order to change the health trajectories of indigenous populations, the social structural inequalities that create cumulative disadvantages and health vulnerability of these groups must be addressed. The public needs to be informed of the social and historical forces that contributed to the plight of indigenous populations. Gaining a socio-historical perspective promotes compassion for the people and better insight on institutional forces that maintain their disadvantaged status in society (Pacquiao, 2019). Krieger (2014) has aptly pointed out the necessity to uncover the social and structural forces that explain differential morbidity and mortality rates across population groups. Self-agency, the capacity of disadvantaged groups to change their life conditions, is fairly limited because of their subordinate status in society, discrimination and lack of resources (Pacquiao & Douglas, 2019). Krieger advocates for a greater role of government and society to act on their behalf.

Advocacy for social justice is a must for vulnerable populations. Social justice entails reallocation of resources to stop the cycle of vulnerability among Native Hawaiians. Social justice principles are grounded in fairness to prevent further disadvantages of vulnerable groups who lack power, influence, and resources to change their lives (Rawls as cited in Freeman, 2007). Social justice also implies reallocation of nonmaterial resources as goodwill to protect the vulnerable from discrimination and oppression (Pacquiao, 2018a; Powers & Faden, 2008).

Building compassionate understanding and empathy can move others towards advocacy for social justice and empowerment of Native Hawaiians (Nussbaum, 2013). To begin with, the history of indigenous populations must become part of the school curricula. Active involvement of the media, educators, and historians is needed for the public to relearn the history of these people. The history of Native Hawaiians as well as other indigenous groups in the United States can nourish compassion and empathy, which foster

advocacy for social justice (Pacquiao, 2018b).

Empowerment of indigenous groups is based on a broad understanding of their plight and externalizing their experiences with those of others in the United States and globally. Externalization is a process of affirming one's experiences with those of others, shedding light on the process of oppression and the ways for individual and community liberation (Pacquiao, 2018b). Freire (1970) has emphasized that individual emancipation is only meaningful when society affirms the liberation of the group.

Education of Native Hawaiians should focus on building their personhood, restoring their communal pride and self-worth. They need to see that education is a pathway to wellness and community strength. Multi-sectoral collaborations should provide local employment opportunities that value educational achievement and involvement of graduates in their local communities. The MA'O Farms work-study program and similar cooperatives are ways to advance the socioeconomic status of Native Hawaiians and incorporate healthy lifestyles into daily life. Educational achievement can pave the way for their broader participation in local governance to improve their lives and their communities. Evidence of this commitment should be transparent to Native Hawaiians in order to bridge their connections with mainstream society that has been fractured by a legacy of mistrust.

Advocacy for Native Hawaiians must be grounded in an understanding of their history, requiring initiatives to be instructed by their valued traditions and deep connection with their ancestral territory. Programs such as the MA'O Farms and integration of traditional healing in their care affirm this cultural tradition and connection with their ancestry. Burgess et al. (2009) have demonstrated positive outcomes of such initiatives in a study of members of aboriginal groups in Australia who found "caring for country" as a healing experience that contributed to their sense of well-being. Caring for country comprised six core activities: Time on country, burning of annual grasses, gathering of food and medicinal resources, participation in ceremonies, protecting sacred areas, and producing artwork. Multivariate regression analysis revealed significant associations between caring for country participation, health behaviors, and clinical outcomes. Caring for country score was significantly associated with frequent physical activity, better diet, lower BMI, less abdominal obesity, lower systolic BP, less diabetes, low HbA1c, and lower CVD risk (Pacquiao, 2019).

Improvement of health outcomes for Native Hawaiians requires a larger role and commitment of local and national governments to mitigate social inequalities that keep them in poverty and victims of prejudice and discrimination. Governmental initiatives should develop co-operative pro-

grams for Native Hawaiians to learn occupational, legal, political and business skills, which can contribute to their self-agency and self-sufficiency. They should be supported and encouraged to enter the political arena so that they have equitable representation. For example, the government can lease agricultural lands for use by Native Hawaiian communities to promote access to their traditional foods and affirm their connections with their ancestral land. Partnerships between the state's Occupational Safety and Health Plans and the Queen Liliuokalani Trust could provide support for similar initiatives.

The Native Hawaiian community needs recognition and feel a sense of place in the land of their ancestors. Indigenous people who are connected and involved in caring for their ancestral land have been shown to have better health (Burgess et al., 2009). Native Hawaiians must be involved with decisions affecting themselves and their land. They should be at the table with policy makers to give them a voice in decisions about their environment and well-being. Social justice becomes a truism when the most vulnerable populations in society are represented and treated with fairness.

Although there have been mainstream studies on Native Hawaiian herbal remedies, the government should provide more support for research on their indigenous healing systems, such as the la'au lapa'au to affirm their tradition and promote their access to affordable and readily available modes of healing. A culturally sensitive perspective on healing and bodily harmony is more likely to promote healthy lifestyle in Native Hawaiians than one that is foreign and imposed. Both the indigenous communities and the wider United States would benefit from such holistic healing knowledge.

Many Native Hawaiian communities have been designated as medically underserved areas (MUAs) by HRSA. It would be beneficial for public health funding to promote programs like Kamehameha Schools to reach Native Hawaiian students and encourage their entry to nursing and medical schools. These students are more likely to stay and work in their communities after graduation and help build their local healthcare infrastructure. Locally staffed healthcare infrastructure is more likely to provide equitable care to Native Hawaiian patients, as opposed to Federally Qualified Health Centers, which have a stigma of providing substandard healthcare in MUAs.

Many of the chronic illnesses experienced by Native Hawaiians are directly related to poor diets and obesity (Novotny et al., 2012). Changes in their diet must be informed by their ethnocultural values of collectivity, intergenerational influences in dietary patterns, and deep connection with the land and its produce. Focus group interviews of

Native Hawaiians in Wai`anae and Waimānalo in the island of Oahu revealed the importance of family roles and responsibilities, community and physical environment, and the spiritual meaning of food (Oneha, Dodgson, DeCambra, Titcomb, & Morimoto-Ching, 2016) in their conceptualization of healthy eating. Public health strategies to address obesity must integrate their valued traditions. Oneha et al. (2016) recommend using community based participatory research process as it embraces and provides the opportunity for the collective of individuals and their communities to identify the problem and come up with the solution to resolving the problem. Strategies to successfully address healthy eating require community ownership and a collective effort to change behavior and the environmental factors that create barriers to healthy eating.

The historical experience of Native Hawaiians requires comprehensive measures to mitigate the stressors associated with poverty, disenfranchisement, discrimination, environmental constraints, and loss. Health promotion and intervention models must be informed by their culture and ethnohistory. Similarly, advocacy and empowerment initiatives must address individual and community concerns and incorporate systemic level changes.

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JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Shifting Paradigms: The Development of Nursing Identity in Foreign-Educated Physicians Retrained as Nurses Practicing in the United States

Liwliwa Reyes Villagomeza

Correspondence to:
Liwliwa Reyes Villagomeza,
PhD, RN, CCRN-K
villagl@phsc.edu

Author's Affiliation
Liwliwa Reyes Villagomeza,
PhD, RN, CCRN-K
Professor of Nursing, Pasco-
Hernando State College, New
Port Richey, Florida

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The author declares that there is
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Abstract

Background: A unique breed of nurses for the US market is emerging —Transprofessional Physician-Registered Nurses (TP-RNs). They are foreign-educated physicians (FEPs) who have retrained as nurses and are now practicing in the United States (US). Shifting from a discipline traditionally viewed as more prestigious than nursing, development of their nursing identity is fundamental in their transition to nursing practice.

Objective: The purpose of this study was to generate a theory that can explain the development of nursing identity in TP-RNs. Specific aims were to discover barriers that participants perceived as problematic in their transition to nursing and catalysts that influenced how they addressed the central problematic issue they articulated.

Methods: This is a qualitative study using grounded theory methodology. IRB approval was obtained from the University of South Florida. Twelve TP-RNs were interviewed. Transcribed interviews were imported to ATLAS.ti. Text data were analyzed by constant comparison. Concept formation, development, modification, and integration were accomplished through different levels of coding and through theorizing. Methods were employed to ensure trustworthiness of findings.

Results: Core categories were discovered and a central social psychological problem *experiencing the burdens of a new beginning* and a basic social psychological process combining the best of two worlds emerged. Further theorizing generated the substantive theory Combining the Best of Two Worlds and the beginnings of a formal theory. The substantive theory explained the three-dimensional central problem and the five-stage basic social psychological process. Dimensions of the central problem were (a) crossing cultures, (b) starting from zero, and (c) crossing professions. Stages of the basic process were (a) letting go of professional identity as physician, (b) experiencing growing pains, (c) seeing nursing as a saving grace, (d) gaining authority to practice as a nurse, and (e) engaging self to nursing and asserting "I am a nurse." The key concept *nursing identity* was operationalized by utilizing three statements published by the American Nurses Association that describe the professional registered nurse, the knowledge base for nursing practice, and the code of ethics for nurses.

Conclusions: The substantive theory is a springboard toward the development of a formal theory which may be able to further explicate the development of nursing identity in TP-RNs. This theory named Theory of Transprofessionalism is conceptualized as having five phases: (a) disengagement, (b) discouragement, (c) enlightenment, (d) encouragement, and (e) engagement. These phases correspond to the five stages of the substantive theory.

Keywords: *nursing identity, foreign educated physicians, grounded theory, TP-RNs, theory of transprofessionalism*

Background

A unique breed of nurses for the US market is emerging – the Transprofessional Physician-Registered Nurses. Previously, these nurses were identified in the literature as Nursing Medics (Galvez Tan, Sanchez, & Balanon, 2004), Medical Doctor-Registered Nurses [MD-RNs] (Villagomeza, 2009), Foreign Educated Physicians-Registered Nurses [FEP-RNs] (FIU, 2007) or Physician-Nurses [PN] (Villagomeza, 2010). In this research report, they are identified as Transprofessional Physician-Registered Nurses (TP-RNs). TP-RNs are foreign-educated physicians (FEPs) who have retrained as nurses and who are now practicing as RNs in the United States (US). This qualitative research study was designed to explore the basic social psychological process that influenced the development of their nursing identity. Shifting from a discipline traditionally viewed by society as more prestigious and powerful than nursing, development of their nursing identity is fundamental in their transition to nursing practice. Being a relatively new phenomenon in nursing, evidence of scientific exploration examining nursing identity development in former physicians who have become nurses does not exist. This research study intends to fill this gap.

The Sensitizing Concepts

The sensitizing concepts which served as background ideas and starting points for this study (Blumer, 1969; Charmaz, 2006) were nursing identity and professional socialization to nursing and included the broader concepts of identity, socialization, and anticipatory socialization.

Nursing identity is defined vaguely in extant nursing literature and is generally associated with concepts such as professionalism, perceptions of the nurse role, and professional self or self-concept of nurses (Fagermoen, 1997). Gregg and Magilvy (2001) define nursing identity as professional identity and describe it as the individual's self-identification with the nursing profession contingent upon the individual's possession of a license obtained by passing the national licensing examination. For the purposes of this study, nursing identity is defined as the persona of a healthcare professional that portrays the expected knowledge, skills, roles, behaviors, attitudes, values, and norms that are appropriate and acceptable in the culture of the nursing profession (Cohen, 1981; du Toit,1995; Fetzer, 2003; MacIntosh, 2003; Mooney, 2007; Shinyashiki, Mendes, Trevizan, & Day, 2006). This persona is the substantive outcome of the process of professional socialization to nursing.

Professional socialization to nursing is a function of adult and professional socialization and is defined as the complex process by which a person acquires the knowledge, skills, roles, behaviors, attitudes, values, and norms that are appropriate and acceptable in the culture of the nursing profession. Professional socialization to nursing plays an impor-

tant role in the development of nursing identity (Mooney, 2007). Professional socialization begins in nursing school where students learn the preparatory knowledge and skills, and acquire the qualities and the ideals of the nursing profession (MacIntosh, 2003).

Du Toit (1995) studied the influence of professional socialization on the development of nursing identity among nursing students in two universities in Brisbane, Australia. She asserted that professional socialization is a process that takes place over time and has three stages, namely: (a) the pre-socialization stage, (b) the formal socialization stage, and (c) the post-socialization stage. In a different perspective, Kramer (1974) identified that the process of professional socialization is circular. The different phases are not distinct but are overlapping. The four phases according to Kramer are (a) skill and routine mastery, (b) social integration, (c) moral outrage, and (d) conflict resolution. Changes in the behaviors of individuals occur gradually through a process of personality drift. These gradual behavior changes become cumulative, making individuals become different from what they were in the beginning.

The Phenomenon-of-Interest: Physician Migration

International physician migration. The migration of physicians from one society to another to practice medicine, particularly from developing to developed countries is an established phenomenon (Aluwihare, 2005; Galvez-Tan, 2009; Guzder, 2007; Salsberg & Grover, 2006; Shuval & Bernstein, 1997; Terhune & Abumrad, 2009). This movement of physicians across geographical boundaries can be explained by the push and pull theory of migration. The push factors of migration include poor economic benefits, limited career opportunities, and substandard working conditions in their home countries. The pull factors include the prospect of greater financial rewards and greater job satisfaction as well as better security and future education of their children in developed countries (Aluwihare, 2005; Guzder, 2007; Hashwani, 2006). With this type of migration, physicians expect to practice medicine in their new society with the cognizance that they have personal and professional adjustments to make that include processes inherent to professional socialization and occupational integration to medical practice and integration to the lifestyle and culture of their new society.

Interprofessional physician migration. In the last 10 to 20 years, a different type of physician migration became evident. Some FEPs are no longer just migrating across geographical boundaries but rather across professional borders: From the profession of medicine to the profession of nursing. This phenomenon is referred to as interprofessional migration. Interprofessional migration may have occurred as a byproduct of geographical migration or as a strategy to facilitate migration to the US or to other

developed countries. This phenomenon can be explained by a new twist in the push and pull theory of migration. Instead of the push and pull factors impacting movement across geographical boundaries, these factors are impacting movement across professions. The push factors exerted by the medical profession in the US include the arduous process and the dense licensure requirements for immigrant physicians (American Medical Association [AMA], 2009; Educational Commission for Foreign Medical Graduates [ECFMG], 2018), the uncertainty of getting a residency assignment despite success in the US licensure examinations (Terhune & Abumrad, 2009), and the stark disparities in the incomes of physicians and nurses between developing and developed countries. The pull factors exerted by the nursing profession include the high demand for nurses in the US and other developed countries secondary to the prevailing global nursing shortage (Ross, Polsky, & Sochalski, 2005), the less arduous licensure process required for nurses in the US (Jerdee, 2004; Pendergast, 2006), the autonomous, respected, and trusted status of nurses in the US (ANA, 2004; Koerner, 2001), and the prospect of better income opportunities (Connolly, 2008; Jones, 2001; Sison, 2003). The prospect of enormously better income opportunities working as nurses in the US and other developed countries than working as physicians in developing countries exerts a very strong interprofessional migratory pull (Guzder, 2007).

The Population-of-Interest: Transprofessional Physician-Registered Nurses

TP-RNs: The current state. Two distinct groups of TP-RNs exist in the US. One group are immigrants already residing in the US who were former physicians in their home countries but who have been unemployed or underemployed prior to becoming nurses. The other group are former physicians from the Philippines who intentionally retrained as nurses to facilitate migration to the US. Although distinct in the context of immigration and resettlement, members of both groups are similar because they are now members of mainstream US healthcare through the nursing profession. Exact statistics are not known as to how many TP-RNs currently work in the US. What is known is that more than 500 TP-RNs have graduated from the New Americans in Nursing Accelerated Program also known as the FEP-to-Bachelor of Science in Nursing (BSN) Program at Florida International University (FIU) in Miami (D. Grossman, personal communication, August 17, 2009). There is a known large population of TP-RNs in the US west coast. A narrative shared by a TP-RN indicates that there are at least a thousand Filipino TP-RNs in Nevada. This is reflective of the high number of Filipino physicians becoming nurses (Galvez-Tan, 2006a, February; Galvez-Tan, 2006b, November; Galvez-Tan et al., 2004; Lorenzo, 2005; Pascual et al., 2003). In addition, the retraining programs administered by the Welcome Back Center in San Diego, California for internationally educated healthcare professionals to be-

come US healthcare workers has assisted more than 1,200 professionals since its inception in the early 2000s (Penner, 2006), with approximately 100 of whom have become TP-RNs (Wirkus, 2008).

TP-RNs: The foreseen future. It is foreseen that the growth of the TP-RN population in the US will be significant and steady. Through flexible and accelerated nursing educational programs, immigrant professionals who belong to cultural minority groups possessing high-level medical knowledge and healthcare skills are drawn to the nursing profession (Grossman & Jorda, 2008). A program in California at the InterAmerican College (IAC) graduated its first cohort of 15 students in 2009 (V. Glaser, personal communication, August 3, 2009). In the Philippines, Galvez-Tan, former Vice-Chancellor for Research at the University of the Philippines and expert in the Nurse-Medic Phenomenon, approximates that TP-RNs were graduating at a rate of 1,200 a year from nursing schools across the country. His estimate indicates that there are about 9,000 Filipino doctors who have become nurses (J. Galvez-Tan, personal communication, July 26, 2009). Due to the absence of a gatekeeper to monitor TP-RN exodus from the Philippines, it is not exactly known how many TP-RNs have immigrated to the US and to other developed countries; however, Galvez-Tan (2009) indicates that 6,000 doctors are now in the US practicing as nurses. Estimates of the number of non-Filipino TP-RNs are not available.

Purpose of the Study

The purpose of this qualitative study using grounded theory methodology and guided by the philosophical foundations of symbolic interactionism was to generate a theory that can explain the basic social psychological process that influenced the development of nursing identity in FEPs who have retrained as nurses and who are now practicing in the US. This study was designed to find the answer to the research question, "What is the basic social psychological process that influences the development of nursing identity in FEPs who have retrained as nurses and who are now practicing in the US?" The specific aims were to discover barriers that participants perceived as problematic in their transition to nursing and catalysts that influenced how they addressed the central problematic issue they articulated.

The significance of this research study was framed within the domains of research, education, and practice; hence, its significance was three-fold: (a) contributed in filling the scientific gap that exists regarding the phenomenon of interprofessional migration of foreign-educated physicians to nursing, (b) dispelled doubts about the ability of physicians to be socialized to nursing, and (c) assessed the needs of FEPs in their new professional identity as nurses.

Methods

Grounded theory methodology guided by the philosophical

foundations of symbolic interactionism was used. Grounded theory explores a process and is a method based on the philosophical foundations of symbolic interactionism (Hutchison & Wilson, 2001; Richards & Morse, 2007). It is best defined in the context of its goal which is to "generate a theory that accounts for a pattern of behavior which is relevant and problematic for those involved" (Glaser, 1978, p. 93). It is a qualitative research approach to the study of social life that uses inductive analysis to generate a substantive or formal theory from the constant comparing of unfolding observations (Babbie, 2004). Inductive analysis means that "patterns, themes, and categories of analysis come from the data; they emerge out of the data rather than being imposed on them prior to data collection and analysis" (Patton, 1980, p. 306).

Symbolic interactionism is a theory about human behavior and it is a practical approach to the study of human conduct and human group life (Blumer, 1969; Chenitz & Swanson, 1986). The major concepts in symbolic interactionism are the mind, the self, and society (Stryker, 1980) and it was conceived by social psychologist George Herbert Mead and has been expounded and interpreted by several sociologists throughout the years (Meltzer, Petras, & Reynolds, 1975). The worldview of symbolic interactionists is that human behavior is a result of a social process. This process entails the study of human behavior on two levels: (a) the behavioral or interactional level, and (b) the symbolic level. On the first level, referred to as the behavioral or interactional level, the meaning of events, experiences, and human conduct are understood from the perspective of the participants in their natural, everyday lives. Meanings of events are derived from the participants' view of self. The concept of self is central to symbolic interactionism (Blumer, 1969). On the second level, referred to as the symbolic level, meanings of events, experiences, and human conduct are derived from social interaction. Social interaction allows individuals to share events and experiences and align their behaviors with others. This process is facilitated by communication through the use of a common language (Chenitz & Swanson, 1986).

Within this theoretical structure, in developing their nursing identity, the TP-RNs are expected to journey through a two-level continuous process in the real world not in the ideal world. The first level of this process involves assigning meanings to events, experiences, and conduct through views of their new and different selves as nurses. The second level involves sharing the meanings of events and experiences with others, as well as aligning their conduct with others in the profession of nursing through social interaction and through the use of a common language distinctive of nursing.

Sampling Method. Purposive, snowball, and theoretical

sampling were utilized in this study to allow the researcher to recruit a representative sample of diverse participants who could offer rich text data about the phenomenon being studied. Although the dictum of grounded theory mandates that the study sample is not set prior to data collection, the researcher defined specific inclusion criteria so as not to lose sight of the focus of the study. Purposive sampling method was used to identify TP-RNs of various ethnicities who met inclusion criteria as follows: registered nurses who (a) were physicians in their native country, (b) had worked as nurses in the US for at least six months, (c) were not actively pursuing continuing medical training in the US, and (d) were able to speak, read, and write in English.

Participant recruitment. Introductory letters and flyers were sent by the researcher to various individuals and entities that included the researcher's personal and professional networks. Twelve TP-RNs from a potential pool of 47 were interviewed using a semi-structured interview guide. During the process of participant recruitment, an FEP who was practicing as a licensed practical nurse who was waiting to take the NCLEX-RN was very interested to be part of the study. The participant's views were collected after the IRB request for modification was approved. Each participant was given a $50.00 cash stipend upon completion of the interview.

Participant demographics. Pseudonyms were assigned to the 12 participants. They ranged in age from 30 to 54 with a mean age of 39.25 years. There were five males and seven females. One participant was divorced, two were single, and nine were married. Five of the participants had no children, and seven had one to three children. Six participants were from the Philippines, two from Russia, two from Colombia, and one each from Nicaragua and China. Five participants completed their nursing education in the Philippines and seven completed their nursing education in the US. Nine participants had Bachelor of Science in Nursing (BSN) degrees, two had Associate of Science in Nursing (ASN) degrees, and one was a Licensed Practical Nurse (LPN) who completed his coursework for ASN degree. Participants worked as nurses in various settings in US Hospitals including cardiology, critical care, emergency care, endoscopy, extended care, labor and delivery, medical-surgical nursing and nursery.

The Research Instruments
The research instruments consisted of the (a) researcher, (b) demographic data collection form, (c) semi-structured interview schedule, (d) participant observation, and (e) field notes.

Data Collection and Data Analysis
Data collection was accomplished through semi-structured face-to-face and telephone interview guided by 10 open-ended guiding questions. See Table 1. Probing questions

were used to elicit richer responses from participants. The interviews averaging 60 minutes were conducted in a private office in the participants' workplaces (*n*=6); researcher's home (*n*=1); participant's home (*n*=1); outdoors (*n*=1); and phone (*n*=3) in accordance with participants' preferences. Privacy was achieved by a balancing act of heeding the participants' preferences and applying the art of one-on-one interviewing. The interviews were audio tape recorded with a separate written consent for audio taping from each participant. The 12 interviews generated 70,934+ words which were reduced to 38 codes; seven core categories; a

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Table 1

Semi-Structured Interview Guiding Questions

Interview Guiding Questions

1. What were the factors and experiences that influenced your decision to pursue nursing?

2. Tell me about how nursing school was for you.

3. Describe how your colleagues, friends, families, and patients reacted when they learned you were in nursing school?

4. Tell me about how NCLEX was for you.

5. Share with me your personal experiences as a new immigrant in the US.

6. Share with me your work experiences as a new nurse in the US.

7. Tell me about your support system during your transition and adaptation period in the US, both within your personal social circle and within your work setting.

8. Describe how you were able to shift from your identity as a medical doctor to being a registered nurse.

9. What professional view do you have of yourself now?

10. What else can you share with me that can help me explain and describe the process that helped you transition from the identity of a medical doctor in your native country to the identity of a registered nurse in the US?

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central problem; a basic social psychological process, and a substantive theory.

Verbatim transcription of interviews was performed by a paid transcriptionist. Transcribed interviews were imported to ATLAS. ti (Archiv fuer Technik, Lebenswelt und Alltagssprache [German] or Archive for technology, the life world and everyday language [English translation]. The extension ti means text interpretation) (Bishop & Corti, 2004). ATLAS.ti is a computer assisted qualitative data analysis software (CAQDAS).

Text data were analyzed by constant comparison. Concept formation, development,

modification and integration were accomplished through different levels of coding and theorizing. Coding is the basic analytical process in grounded theory (Stern, 1980). It is the key strategy used to craft and transform hundreds of text data from mere transcribed words to concepts and constructs and ultimately to theory (Walker & Myrick, 2006). Theorizing involves stopping, pondering, and rethinking in new ways in order to explore studied life from multiple vantage points and to make comparisons, follow leads, and build on ideas (Charmaz, 2006). It is getting down to fundamentals, probing into experience, cutting through the core of studied life, posing new questions about it, and reaching up to abstractions. Theorizing fosters seeing possibilities, establishing connections, and asking questions (Charmaz, 2006). The methods of credibility, dependability, confirmability, and transferability were employed to ensure trustworthiness of findings.

Results

As a grounded theory study, core categories emerged (See Table 2) and a central social psychological problem, *experiencing the burdens of a new beginning and* a basic social psychological process *combining the best of two worlds* were discovered. See Figure 1. The discovery of a central problem and a basic process is congruent with what Glaser (1978) advocated in the conduct of grounded theory study: To search for social psychological problems and processes and to view them as essential to understanding people's patterns of behavior.

The Central Social Psychological Problem

Experiencing the burdens of a new beginning. The central problem *burdens of a new beginning* as experienced by the participants was

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Table 2

The Seven Core Categories

Core Categories

Experiencing burdens of a new beginning

Letting go of professional identity as physician

Experiencing growing pains

Nursing as saving grace

Gaining authority to practice as nurse

Engaging self to nursing and asserting "I am a nurse"
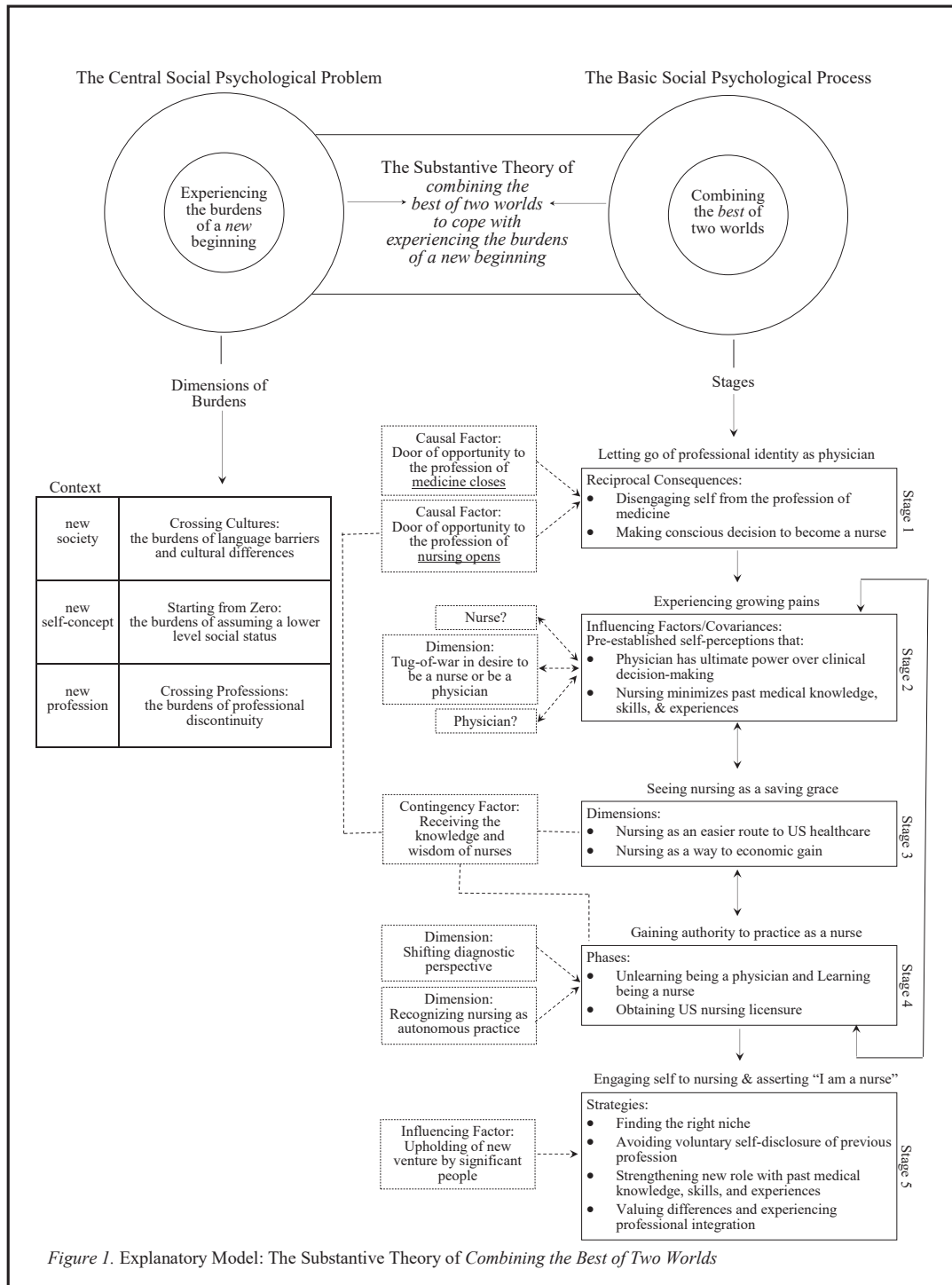
Combining the best of two worlds

Figure 1. Explanatory Model: The Substantive Theory of *Combining the Best of Two Worlds*

within the context of the participants' new society and the accompanying issues of their new socio-cultural environment. The participants expressed concerns with adjustments to new communication styles and new language and their overall cultural integration in the US articulating issues such as perceived prejudice from others.

"They [customers] look at you, like you do not know what you're doing. You're Asian, you're from a poor country. Prejudiced." (Arnel, Philippines).

Burdens of starting from zero. These burdens pertained to the participants' new self-concept as US immigrants and the issues of assuming a lower social status in their new society. The consequences of starting from zero affected their sense of self-identity resulting to the construction

identified as an all-encompassing problematic issue pertaining to various aspects of their resettlement in the US. The aspects in their new world were identified as their (a) new society, (b) new self-concept, and (c) new profession. From these three new aspects, three dimensions of burdens emerged, namely: (a) burdens of crossing cultures; (b) burdens of starting from zero; and (c) burdens of crossing professions.

Burdens of crossing cultures. These burdens were

of their negative new self-concept. Their new self-concept made them believe that they can only function in unskilled occupations. One of the participants said he went to apply as a housekeeper at a hospital because it seemed it was the only way he could set foot at a hospital. "Because you have to start everything over again. You start at zero. *It really start[s] zero— your career, your financial, your everything, your social status. You start it over again." (Zaida, China).*

Burdens of crossing professions. These burdens pertained to the participants' seeking a new profession necessitated by the professional discontinuity that occurred with their immigration and resettlement in the US. These burdens manifested in emotional outbursts such as crying during clinicals; contemplating on quitting especially when seeing hospital doctors in white coats; and realizing nursing school was not as easy as initially perceived.

"It was really surprising how hard it was. Because I thought that since I was a physician, I knew it all, you know…" (Maira, Colombia)

The Basic Social Psychological Process

Combining the best of two worlds. *Combining the best of two worlds* was the name given to the basic process that was discovered. The two worlds implied were the world of nursing and the world of medicine and combining the best of two worlds implied the act of taking the good things about being a physician (the original self) and taking the good things about being a nurse (the new self) and blending them together to practice in the US healthcare system within the scope of the nursing profession.

"I have two views. I take the good things about being a doctor and the good things about being a nurse and for me that's the biggest…the biggest…the best 'recompensar' [reward]. Adela, Nicaragua)

The basic process has five stages which also form the stages of the substantive theory of combining the best of two worlds to cope with the burdens of a new beginning. As evident in the descriptions provided by the participants and as illustrated in Figure 1, the five stages do not occur in a perfect linear and sequential pattern but rather in a recursive and cyclical pattern.
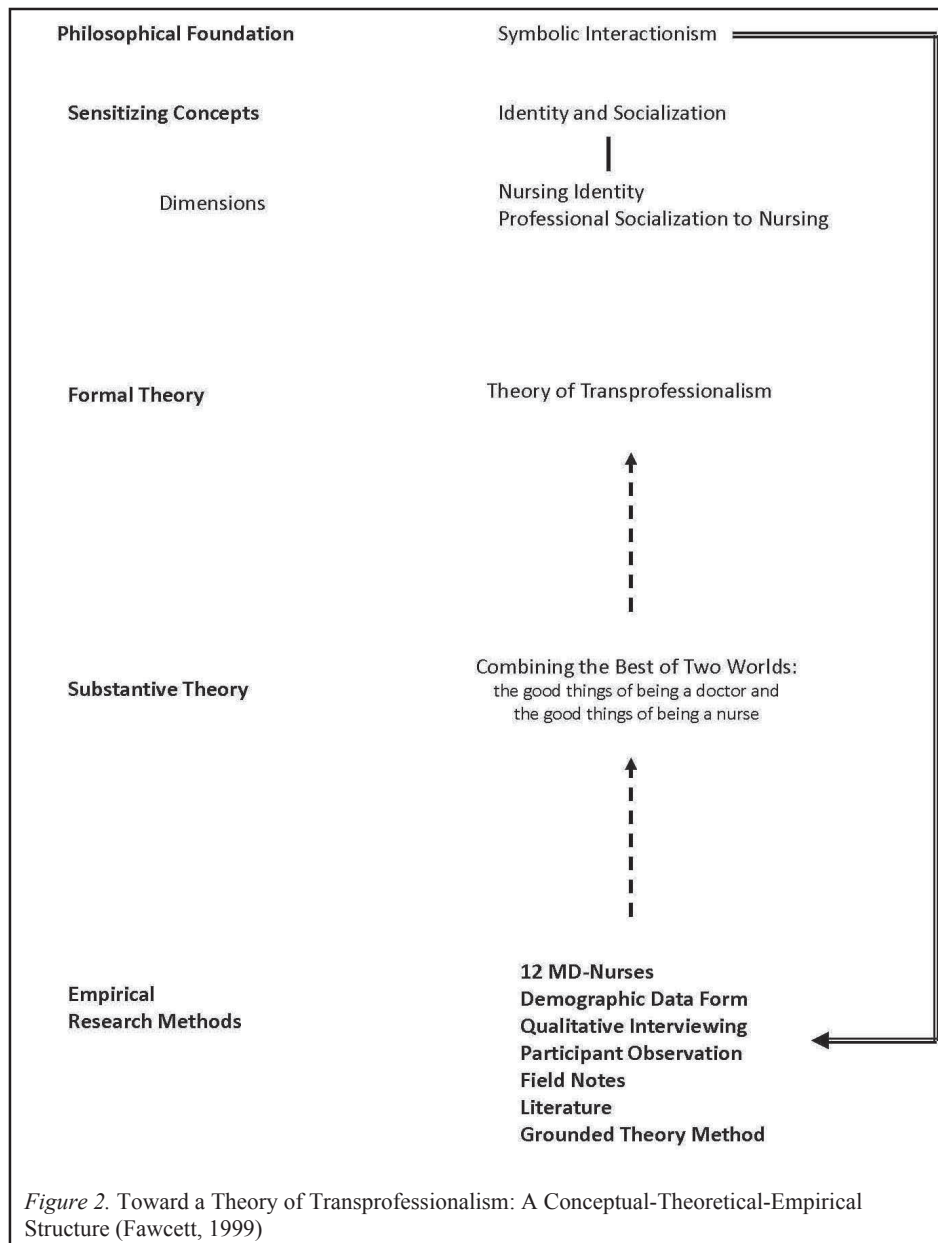
Interpretation and Conclusions

This grounded theory study generated the substantive theory Combining the Best of Two Worlds (Figure 1) and the beginnings of a formal theory, The Theory of Transprofessionalism (Figure 3). Utilizing relevant coding families (Glaser, 1978), causal factors; consequences; dimensions; influencing factors; contexts; and contingencies were identified for the five stages of the substantive theory.

Stage One, *letting go of professional identity as physician,* was a critical juncture having two reciprocal causal factors: (a) door of opportunity to the profession of medicine closes, and (b) door of opportunity to the profession of nursing opens; and two reciprocal consequences (a) disengaging self from the profession of medicine, and (b) making conscious decision to become a nurse. Stage Two, *experiencing growing pains,* described participants' dimension of

Figure 2. Toward a Theory of Transprofessionalism: A Conceptual-Theoretical-Empirical Structure (Fawcett, 1999)

uncertainty labeled as tug-of-war between desire to be a nurse or to be a physician. This stage also had two influencing factors which were identified as the pre-established self-perceptions of the participants that (a) physician has ultimate power over clinical decision making, and (b) nursing minimizes past medical knowledge, skills, and experiences. Stage Three, *seeing nursing as a saving grace*, was identified as having two dimensions: (a) nursing as an easier route to a US healthcare career, and (b) nursing as a way to economic gain. This stage was contingent upon opening of doors of opportunity to the profession of nursing (causal factor for Stage One) and the receiving of knowledge and wisdom of nurses.

Stage Four, *gaining authority to practice as a nurse*, was the second critical juncture in the process of transitioning to nursing. This stage was complex and had two phases – unlearning being a physician with a reciprocal side learning being a nurse; and obtaining US nursing licensure. Stage Four had a recursive character circling back to Stage Three (contingency factor receiving knowledge and wisdom of nurses) and Stage One (causal factor opening of the door of opportunity to nursing.) The second phase of Stage Four, obtaining US nursing licensure was the ultimate turning point in the participants' experience in transitioning to US nursing practice. Obtaining US nursing license heralded the participants' entry to the culminating stage of the substantive theory. Stage Five, *engaging self to nursing and asserting "I am a nurse"*, had one influencing factor and four strategies. The influencing factor was identified as the upholding of new venture by significant people and the four strategies were identified as (a) finding the right niche, (b) avoiding voluntary self-disclosure of previous professional identity, (c) strengthening new role with past medical knowledge, skills, and experiences, and (d) valuing differences and experiencing professional integration. With the influencing factor and the four strategies, Stage Five pulled the substantive theory of *combining the best of two worlds to cope with experiencing the burdens of a new beginning* together in a cohesive whole.

The key concept nursing identity was operationalized by utilizing three statements published by the American Nurses Association that describe the professional registered nurse, the knowledge base for nursing practice, and the code of ethics for nurses. See Table 3 for the voice of the participants asserting "I am a Nurse."

The substantive theory is a springboard toward the development of a formal theory. This theory named Theory of Transprofessionalism (Figure 3) is

Table 3

Participants Asserting "I am a Nurse" when asked "What professional view do you have of yourself now?"

Participant Pseudonym	Professional View of Self	Reflections of the Participants: Beyond Asserting "I am a nurse"
Adela	I am a nurse. (188)	I passed the tests...so I am a nurse, and I'm a doctor! (188) I don't say 'I'm doctor' [to patients]. (190)
Alina	I am a nurse. (148)	I think when I'm here in America I see myself as I am a nurse. Because how can I view myself as a doctor when I am not practicing? (148)
Annabelle	I am a nurse. (110)	I am a doctor and a nurse. It is good to have two professions: a doctor and a nurse. (127)
Arnel	I am an RN. (155)	I think as a nurse. (172) Because you are bound by your practice act. (175)
Dante	I'm a nurse. (110)	I can talk comfortably and say I'm a nurse now because I'm actually not confident being a doctor anymore. It's been a while. (110)
Maira	I'm a nurse. (120)	I don't want to be a physician anymore. I know all the things I know and all I went through but I'm a nurse now.(134)
Nina	Nurse.(93)	It's not about being a doctor because I'm still a doctor. I just don't practice medicine here.(36)
Ollie	I'm an RN. (153)	I always remind myself that I'm a nurse here.(153) Well, I still like being a doctor. (149)
Orlando	A nurse of course.(144)	Honestly, I don't think I'm going to be a nurse for a long time. I'm going to try to become a nurse anesthetist. But yeah, it's a nurse of course. (144). When I am finish, I'm going to go to school to finish my medical studies because…you know, what I'm telling you [it] is hard. Maybe ask me in 20 years of being a nurse. I had been a nurse for 6 months and I have been a doctor longer than that. (146)
Paolo	A nurse. (124)	I'm still a doctor. That can't be taken away from me. Everywhere you go, you're still a doctor. You always carry your title wherever you go. So right now, I have two titles after my name. I am MD. I am also RN. (188)
Rachel	I'm a nurse. (142)	I'm a nurse. I'm a nurse. I graduated as a medical doctor, but I'm a nurse now. (142)
Zaida	Nurse. (505)	In America, I'm very proud to tell people I'm a nurse.(548)

Note. Numbers in parentheses indicate lines in ATLAS.ti files where quotes are found.
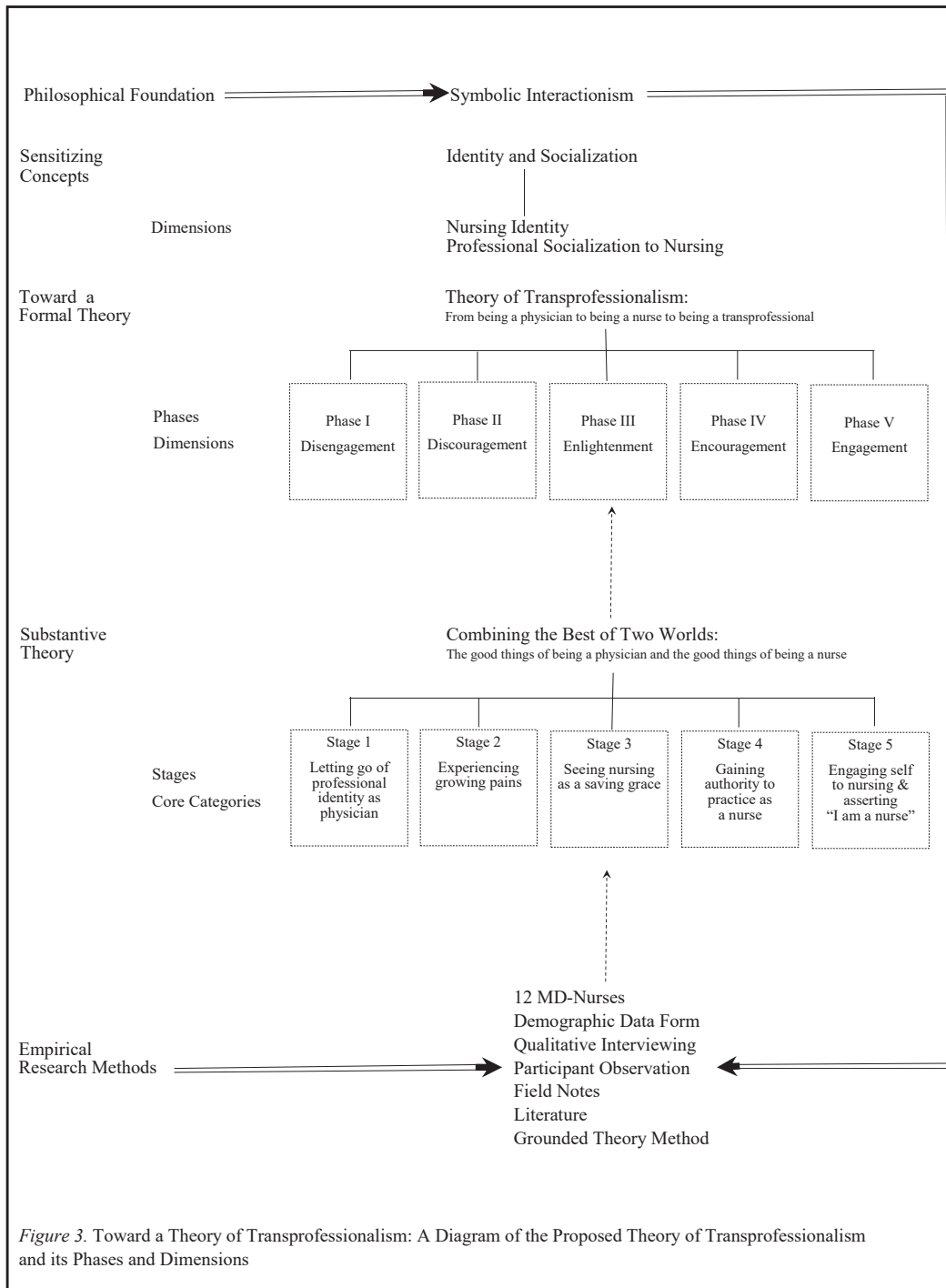
Theory of Transprofessionalism. The prefix trans means across, over, beyond (Harper, 2001). From this meaning of the prefix trans, a definition is derived for transprofessionalism. Transprofessionalism is a state when there are two or more professional identities existing in a professional individual. One professional identity would be dominant at any one time and that dominant professional identity would serve as the primary descriptor. The dominant professional identity would represent the profession that the individual is currently practicing. For a Transprofessional Physician-Registered Nurse, the dominant professional identity would be as a Registered Nurse.

Implications for Research, Education and Practice
This study illustrated the ability of FEPs to embrace their new professional identity as nurses. This might help dispel the doubts of nursing leaders about the ability of physicians to successfully transition to being nurses and be fully socialized to the profession of nursing. This study opens opportunities for further research such as studies that explore the quality of patient outcomes when care is provided by TP-RNs compared to other subsets of nurses.

The *Theory of Transprofessionalism* is anticipated to further explicate the process of nursing identity development in TP-RNs. This proposed formal theory can perhaps also

Figure 3. Toward a Theory of Transprofessionalism: A Diagram of the Proposed Theory of Transprofessionalism and its Phases and Dimensions

conceptualized as having five phases: (a) disengagement, (b) discouragement, (c) enlightenment, (d) encouragement, and (e) engagement. These phases correspond to the five stages of the substantive theory of letting go, growing pains, nursing as a saving grace, gaining authority as a nurse, and engaging self to nursing and asserting "I am a nurse."

Why the Name Transprofessionalism?
The name of the substantive theory combining the best of two worlds inspired the naming of this proposed theory as

explain the process of nursing identity development in other non-physician professionals who choose to change careers to nursing. In proposing this formal theory, illustrations from the current study are used and they are framed according to the Conceptual-Theoretical-Empirical (CTE) Structure (Fawcett, 1999) (Figure 2). A diagram of the proposed theory is illustrated in Figure 3.

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JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Effectiveness of Nurse Residency Programs

Tracy Perron, Mackenzie Gascoyne, Teena Kallakavumkal, Meghan Kelly, & Nina Demagistris

Correspondence to:
Tracy Perron, PhD, RN
Perront@tcnj.edu

Authors'Affiliation
Tracy Perron, PhD, RN
Associate Professor
The College of New Jersey

Mackenzie Gascoyne, BSN, RN
The College of New Jersey

Teena Kallakavumkal, BSN
The College of New Jersey

Meghan Kelly, BSN
The College of New Jersey

Nina Demagistris, BSN
The College of New Jersey
Trenton, NJ

Conflict of Interest
The authors declare that there is no conflict of interest.

Abstract

Background: Nurse residency programs are used increasingly by healthcare facilities to address the transition from new graduate nurse (GN) to independent clinician. This role acquisition represents both a time of elevated stress for the new nurse in acquiring experience to match textbook knowledge and a period of increased financial burden on the hospital in orienting new employees. Nurse residency programs vary in length, structure, and content, as there is little research on best practices for their development and implementation.

Objective: The purpose of this article is to examine the effectiveness of these programs in terms of job satisfaction and performance, increased retention, and the financial impact of the programs on healthcare institutions.

Conclusions: Research studies indicate that nurse residency programs have resulted in increased retention in the first year following hire and in improvements in overall job satisfaction and perceived clinical-decision making. Decreased attrition results in financial benefits to facilities due to decreased hiring and training costs. Further research is needed to compare the effectiveness of specific programs and interventions and to examine the effectiveness of programs beyond the first year of hire.

Keywords: nurse residency, transition to practice, graduate retention, job satisfaction

Background

Increasing numbers of healthcare facilities are developing and implementing nurse residency programs to promote the transition of new GN's to independent professionals. With the increasing utilization of these programs, there is a need for further research to examine their efficacy. This article provides a review of the current literature regarding the effectiveness of nurse residency programs on nurse retention and job satisfaction and the impact on the finances of healthcare organizations.

Nurse residency programs have gained popularity with healthcare facilities in the last two decades as a method to strengthen the nursing workforce; however, the format, length, and structure of these programs vary by institution (Cochran, 2017). Three structures-didactic-based, simulation-based, and clinical preceptorships - are the most commonly employed by organizations (Walsh, 2018). The literature suggests that didactic-based programs, which rely on classroom instruction and case studies, aid in the transition to a clinical environment by focusing on attainment of critical thinking skills in a structured environment (Walsh, 2018). Simulation-based programs utilize new technology and a relaxed environment to allow the new graduates to develop their clinical decision-making and communication skills (Walsh, 2018). Clinical preceptorship and mentorship enables the new graduate to learn from an established nurse on the unit, giving the new graduate necessary experience in adapting their classroom skills to the clinical setting (Brook, Aitken, Webb, MacLaren, & Salmon, 2018). Given the variety of programs available, determining the particular method to employ can be guided by existing research regarding best practices.

Best Practices

Current literature, based on guidelines set forth by the Institute of Medicine (IOM), advocates that nurse residency programs should follow formal guidelines that aim to increase retention, strengthen nurses' proficiency, and enhance patient outcomes (Crimlisk et al., 2017). Further research by Cochran (2017) proposes that the most effective nurse residency programs are ten to fifteen months in length, as this allows the nurse to progress from possessing textbook knowledge to applying skills in the clinical setting, and ultimately to assimilating into the professional nurse role. To be most effective, Slate, Stavarski, Romig, and Thacker (2018) suggest that nurse residency programs should be created in conjunction with nursing schools and mandated by hospitals for all new graduates. Research by Cochran (2017) suggests that incorporating evidence-based practice (EBP) projects into the residents' curriculum further promotes teamwork, independence, and continuing education; providing time to review EBP projects also increases group advocacy.

Research related to best practices for developing a nurse residency program also focuses on the value of a strong preceptor-resident relationship. A preceptor, or mentor, allows the new nurse to understand the culture of the unit and excel at prioritization and teamwork while caring for patients (Walsh, 2018). Research findings by Cochran (2017) further indicate that new nurses desire a close preceptor relationship that extends beyond orientation and provides additional clinical training. Results from a longitudinal study by Slate et al. (2018) concur that nurse residency programs should train excellent preceptors. In fact, Cochran (2017) argues that those chosen to mentor new graduates are the most significant aspect to consider in building a nurse residency program. Walsh (2018) specifies that preceptors and new nurses should complete collective checklists that outline the nurse's experiences, such as patient diagnoses and nursing skills, to standardize the program. Furthermore, Slate et al. (2018) suggest that preceptors should be trained for their role with online resources, case studies, reflection, in person training, and idea mapping. There should also be a minimal number of preceptors working with an orientee to maintain consistency (Slate et al., 2018). Additionally, research shows that preceptorships decrease turnover by an average of 11% (Brook et al., 2019). This finding has broader implications, as decrease turnover is often employed as a measure of job satisfaction (Al-Dossary, Kitsantas, & Maddox, 2014).

Benefits and Impact on Retention

Cochran (2017) indicates that many nurses are leaving the profession due to various factors, including serious job stress and emotional distress. These stressors indicate that nurses often feel underappreciated and under supported in developing their nursing judgement and time management skills (Cochran, 2017). This is especially pertinent to new graduate nurses, who comprise nearly ten percent of the current nursing workforce (Letourneau & Fater, 2015). New graduate nurses experience many demands in making their transition from student to autonomous nurse (Al-Dossary et al., 2014). The literature indicates that the new nurse must develop skills in delegation, prioritization, decision-making, collaboration, conflict resolution, and sharing/accepting constructive feedback (Walsh, 2018). Additionally, Crimlisk et al. (2017) suggest new graduate nurses may not only be experiencing stress from a new professional role as a registered nurse (RN), but also from potential relocation and newfound personal autonomy. Walsh (2018) estimates that one in five new graduate nurses resign from their first employer within a year of starting, and one in three departing within two years. Cochran (2017) estimates that new graduate nurse turnover rates are as high as 35-61%, compared with a seasoned nurse turnover rate of 13%. Increases in turnover rates lead to increases in costs for the healthcare facility and decreases in overall quality of care (Al-Dossary et al., 2014).

However, the literature indicates that after introducing nurse residency programs, retention rates of new graduate nurses increases to as high as 94-97% (Cochran, 2017). This increase was also supported in research findings by Eckerson (2018), which found that nurse residency programs correlated with retention rates above 90% for the first year of hire. Moreover, multiple sources suggest that nurse residency programs also increased new graduate job satisfaction and performance, particularly in-patient assessment skills, communication, and utilization of technology (Al-Dossary et al., 2014; Letourneau & Fater, 2015). In fact, after completing a nurse residency program, nurse residents demonstrated an increase of 12% in their knowledge and 41% increase in their critical thinking skills; after completing a one-year nurse residency program, nurses also felt more comfortable handling their responsibilities and recognizing available support (Cochran, 2017).

Nurse residency programs create a support system of other new graduates that are in the same stage of transition; solidarity often mitigates the consequences of stress such as "burnout and compassion fatigue." These programs increase confidence, self-proclaimed proficiency, fulfillment, and a decrease in distress (Walsh, 2018). To further decrease anxiety and ease a new graduates' transition, Cochran (2017) reveals that nurses who perceived their work environment as healthy experienced less "reality shock;" healthy work environments encourage professional development, scholarship, and mitigate nurse-to-nurse bullying. Reality shock was most prominent at six months after hire and deflated to the lowest degree at twelve months after hire; this reality shock decreased nurses' confidence at five to seven months with elevated anxiety levels up to nine months post hire (Cochran, 2017). This literature suggests that nurse residency programs should strive to promote healthy environments, thus reducing reality shock in new graduates. Despite research indicating that nurse residency programs provide a number of benefits, many institutions remain focused on the potential financial implications of developing such a program (Pillai, Manister, Coppolo, Ducey, & McManus-Penzero, 2018).

Financial Implications

Recent literature suggests that one of the greatest perceived barriers to implementing a nurse residency program is the financial burden placed on the healthcare facility (Pillai et al., 2018). According to Pillai et al. (2018), hospitals are frequently driven by cost reimbursements and patient satisfaction, leading to tighter budgets and allocated resources. Implementing a nurse residency program results in additional costs to the facility, due to the length of the program, needed educational materials, and salary costs for educators and preceptors (Pillai et al, 2018). Increased retention rates can save institutions time and money needed for recruitment and orientation (Cline, Frentz, Fellman, Summers, & Bras-

sil, 2017). Nursing shortages, particularly as baby boomers begin to retire, have been persistent in acute care settings, placing a focus towards hiring new graduate nurses to address this problem (Cochran, 2017). As of 2012, around 26% of new graduate nurses have left their position within 25 months of starting (Wolford, Hampton, Tharp-Barrie, & Goss, 2019).

The literature reveals that it is more expensive to hire a new graduate nurse than an experienced nurse. Hiring new graduate nurses to start in the workforce is a large financial investment as the cost of hiring and training one can range from $60,000 to $96,000 (Cline et al., 2017). Research indicates that this can be attributed to new graduate nurses needing increased supervision, guidance, education, and training (Al-Dossary et al., 2014). One study found that training costs as much as $90,000 per nurse, inciting a need for creating retention among new nurses (Wolford et al., 2019). This same study showed that the nurse residency program broke even on program costs after eight months due to the decrease in new nurse turnover, creating a positive return on investment (Wolford et al., 2019).

Nurse residency programs are cost effective, as they have been shown to save hospitals significant amounts of money (Walsh, 2018). Residency programs are associated with increased retention rates, which is financially beneficial to institutions (Letourneau & Fater, 2015). Walsh (2018) found that at one hospital system, an increase in the retention of new graduate nurses yielded an estimated savings of four million dollars. A pilot study by Fiedler, Hicks, Read, Jegier, and Lane (2014) found that implementing a nurse residency program resulted in an estimated thirteen million dollars in savings for the institution due to increased graduate nurse retention.

Not only do nurse residency programs allow for an increase in retention, but they also decrease the costs for hospital systems, as there is less of a reliance on contracted workers. One research study conducted a cost benefit analysis on a total of fifteen hospitals to determine the cost efficiency of nurse residency programs, based on new graduate nurse turnover rates and contract labor usage (Letourneau & Fater, 2015). This analysis showed that nurse residency programs had a positive impact on new graduate nurses, as there was a 36% reduction in turnover rates, and found the total cost benefit to be between $8.1 million to $41.7 million (Letourneau & Fater, 2015) for each program. Another study found that lower turnover rates corresponded with a decrease in annual contract labor dollars from an average of $19,099 to $5,490 (Cochran, 2017). Based on recent literature, nurse residency programs ultimately provide financial savings for healthcare facilities (Cochran, 2017; Fiedler et al., 2014; Letourneau & Fater, 2015).

Discussion

Limitations

Founded on the available research, there are several limitations to the applicability of the studies contained in this article and the resulting recommendations. The majority of these studies included only limited sample sizes, as nurse residency programs tend to orient a small number of participants each year due to time and financial constraints (Wolford et al., 2019). Additionally, much of the research on the effectiveness of nurse residency programs focuses only on the first year of practice, with limited data on nurse residency programs' effects beyond the first year as a professional nurse (Al-Dossary et al., 2014; Crimlisk et al., 2017; Eckerson, 2018). There is also no standard format or methodology used to either develop or evaluate nurse residency programs and the nature of each orientation program varies by facility (Al-Dossary et al., 2014; Walsh, 2018).

A further limitation in the generalizability of the studies' findings is that primarily qualitative methodologies have been utilized by researchers, with no true experimental research designs employed (Edwards, Hawker, Carrier, & Rees, 2015). The small sample sizes, methodology, and short duration of available studies limit the certainty with which the results can be applied on a wider scale. Further research should be conducted to lessen this knowledge gap and add to the understanding of effects of nurse residency programs on new graduate nurses.

Future Research

The limitations described above present opportunities for further research on the topic of the effectiveness of nurse residency programs. Randomized controlled trials and large-scale studies of greater number and duration could provide clearer evidence of the benefits and limitations of nurse residency programs. Direct comparison research of different programs could provide further guidance on which methods are most effective in acclimating new graduate nurses during the role acquisition process, as there is currently no standard format or length for nurse residency programs (Wolford et al., 2019). Additionally, facilities that do not currently have a nurse residency program could follow the published template of an existing program, testing the reproducibility of previous studies (Pillai et al., 2018).

Implications for Nursing

The transition for new graduate nurses from student to autonomous professional nurse can be a challenging and stressful experience (Eckerson, 2018). Following graduation, new nurses can enroll in nurse residency programs to help the role acquisition process progress more smoothly. Nurse residency programs provide additional structure, education, and guidance that could enable new graduate nurses to gain confidence and surer clinical decision-making skills (Eckerson, 2018; Wolford et al., 2019). Nurse resi-

dency programs, however, vary in length, format, and clinical work requirements, so new graduate nurses should independently research the different programs offered. There is little research comparing different nurse residency programs with each other, so no one type of program is recommended above another (Edwards et al., 2015; Walsh, 2018). Rather, new graduate nurses should determine whether the program offered by the facility and its resulting contract requirements best match the nurses' values and goals, in order to provide a better fit for not only the nurse but also the healthcare facility (Walsh, 2018).

Nurse residency programs also have an influence on more than just the new graduate nurse. These programs have been found to reduce turnover, resulting in a more stable workforce that is comfortable with the policies of the hospital, and thus positioned to deliver safer care (Al-Dossary et al., 2014; Crimlisk et al., 2017; Eckerson, 2018). Nursing turnover places a high monetary burden on healthcare facilities, as funds that could be spent elsewhere are diverted to orienting new staff members (Walsh, 2018). The financial burden of developing a nurse residency program is offset by the money saved in needing to train and hire new nurses (Eckerson, 2018).

Additionally, nurse residency programs provide a method for nurses to guide and mentor the newest members of the profession, enabling them to become more confident and skilled providers (Fielder et al., 2014; Slate et al., 2018). Nursing support has been critical to the formation of nurse residency programs at healthcare facilities, and continued efforts to develop, evaluate, and modify nurse residency programs would allow nurses to strengthen the skills and abilities of their hospital's workforce (Crimlisk et al., 2017; Fiedler et al, 2014).

Conclusion

Current literature indicates that nurse residency programs are increasingly instituted by healthcare facilities to ease the transition for new graduate nurses into competent members of the profession. Nurse residency programs offer benefits to new graduate nurses in terms of clinical decision-making, increased job satisfaction, and improved self-esteem (Walsh, 2018). These programs are also correlated with increased retention rates of new graduate nurses, resulting in lower expenditures for organizations (Cochran, 2017). Further research is needed to determine to the efficacy of these programs beyond the first year of practice, and to evaluate and standardize which program formats and methodologies are the most effective in acclimating new graduate nurses to clinical practice.

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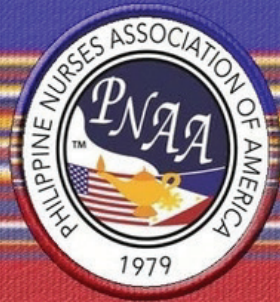
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