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# The Perspective of Emergency Department Staff on Patient-Centered Care Delivery to Reduce Bounce-Back Visits in a Culturally Diverse Community: A Formative Evaluation

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**The Perspective of Emergency Department Staff on Patient-Centered Care Delivery to Reduce Bounce-Back Visits in a Culturally Diverse Community: A Formative Evaluation**

A Scholarly Project Presented to the Faculty of the Nicole
Wertheim College of Nursing and Health Sciences

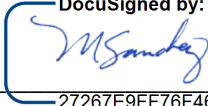Florida International University

In Partial Fulfilment of the Requirements
For the Degree of Doctor of Nursing Practice

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Approval Acknowledged: _____, DNP Program Director

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**Abstract**

**Background:** Emergency department (ED) bounce-back visits pose a significant challenge, contributing to the issue of ED overcrowding. Exploring the perspectives of ED staff on patient-centered care (PCC) is crucial in informing the implementation of targeted PCC interventions aimed at mitigating ED bounce-back visits.

**Purpose:** The purpose of this project was to explore the perspectives of ED staff regarding the provision of PCC within the ED.

**Methodology:** A cross-sectional survey was conducted, employing a convenience sample of the ED staff at a general acute care hospital. There were 47 participants. Inclusion criteria comprised ED nurses and ED technicians who provided direct patient care. The 30-item survey encompassed three sections: socio-demographics, the Provider-Patient-Relationship Questionnaire (PPRQ), and queries related to PCC barriers and enablers. The PPRQ assessed staff confidence in their ability to provide PCC across four domains (effective communication, interest in the patient's agenda, empathy, and patient involvement in care).

**Results:** Most participants were female ($n = 37$, 79%), bachelor-prepared registered nurses ($n = 26$, 56%), ages 24 to 35 years ($n = 25$, 52%), with less than 2 years of ED clinical experience ($n = 21$, 45%). Self-ratings using the PPRQ indicated that most participants perceived themselves as highly competent across all four PCC domains, with effective communication (EC) receiving the highest self-rating mean score. There were statistically significant differences in the reported EC domain by age. A significant difference in reported EC between the age group 25 to 34 years and age group 55 years and older ($p = 0.015$) was observed, with younger ED staff reporting higher levels of EC.

**Conclusion:** It is promising that ED staff generally rated themselves as highly competent across all PCC domains; however, substantial barriers to effective PCC persist. A plausible explanation for the higher levels of EC reported by younger ED staff could be attributed to younger ED staff receiving PCC education and targeted onboarding PCC training, in contrast to older ED staff who may not have been exposed to or trained on PCC concepts. Higher burnout rates among older, more experienced ED staff may also contribute to lower self-ratings in the EC and empathy (E) domains among this group. Addressing the identified barriers for delivery of PCC intervention, alongside other initiatives, is essential to promote PCC and mitigate ED bounce-back visits.

*Keywords***:** Patient-centered care, bounce-back visits, index visit, unscheduled return visit, ED overcrowding, ED overutilization, ED staff, patient experience.

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## Introduction

The emergency department (ED) is a healthcare system component frequented by people of various backgrounds, and ED staff are skilled in providing a myriad of medical services to patients of all ages. People seek medical care in the ED for injuries, traumas, or acute medical complaints that require immediate attention. The ED is also utilized by individuals seeking assistance with minor issues that do not demand immediate attention and can be effectively addressed in alternative healthcare settings, such as primary care or urgent care clinics.

The ED is the busiest and most-utilized service in American healthcare, with approximately 131 million ED visits in the United States (U.S.) in 2020 at an estimated visit rate of 40 visits per 100 people (Cairns et al., 2022). The Office of the Assistant Secretary for Planning and Evaluation (OASPE) made similar estimates, finding that from 2009 to 2018, there were, on average, 44 ED visits for every 100 people (OASPE, 2021). This data indicates that a substantial portion of the population regularly frequents the ED for medical services.

Many patients who come to the ED are discharged shortly after receiving the appropriate treatment, with less than 10% of patients who visit the ED being admitted to the hospital for inpatient services (OASPE, 2021). Most patients discharged from the ED are given instructions to follow-up with an outpatient specialty service or primary care within a specified period. Unfortunately, many ED patients do not abide to these follow-up instructions and end up returning to the ED soon after their initial visit; these subsequent trips to the ED within a brief period of time after the index ED visit are referred to as "bounce-back visits." A bounce-back patient is described by Sah et al (2022) as a patient who returns to the ED within 72 hours of initial discharge.

There are two distinct types of bounce-back patients: those that return because of worsening conditions and are admitted to the hospital and those that return for non-emergent conditions and are subsequently discharged. Sah et al. (2022) found that patients returned to the ED because of patient-related, doctor-related, or illness-related factors. Doctor-related factors include missed diagnoses or treatment errors, illness-related factors such as disease complications or worsening disease conditions, and patient-related factors such as issues with compliance, experience, education, and follow-up. In the same study, patient-related factors were significantly associated with non-emergent bounce-back visits that were usually avoidable (Sah et al., 2022). It has been suggested that the standardized practice of patient-centered care (PCC) in the ED may eliminate the patient-related factors that cause bounce-back visits, which may lead to improved effectiveness and utilization of the ED (Kim et al., 2022; Luciani-McGillivray et al., 2020).

While there is no universal agreement on the definition of PCC, basic tenets include respecting and responding to patient's needs and preferences so that they can make informed decisions that pertain to their individual circumstances (Gremigni et al., 2016). Walsh et al. (2022) defined PCC as a holistic method of delivering care that incorporates therapeutic communication, patient involvement, accessible services, competent staff, and an environment that provides for the patient's physical, cultural, and psychosocial needs. PCC is a proven method of creating therapeutic relationships between healthcare providers and their patients and can have a significant impact on a patient's experience and willingness to comply with treatment plans or follow-up recommendations. The implementation of PCC components in non-ED healthcare settings has been shown to reduce patient dissatisfaction, non-compliance, and bounce-back visits caused by the patient's cultural health literacy or non-compliance with

treatment plans (Kim et al., 2022; Luciani-McGillivray et al., 2020; Nicholas et al., 2020; Walsh et al., 2022 ). A patient who feels heard, empowered, and educated will most likely comply with treatment plans and outpatient follow-up instructions.

## Problem Statement

The primary concern tackled in this DNP study is the recurrence of ED bounce-back visits, contributing to ED overcrowding and overutilization. ED overcrowding is considered a complex problem and remains a compounding factor that leads to decreased patient satisfaction and worsening health outcomes and places a financial burden on the healthcare system. Studies have shown that bounce-back visits to the ED produce a greater cost to the healthcare system than a single-visit, and they significantly contribute to overcrowding in the ED (Kacprzyk et al., 2020). Recognizing the adverse outcomes associated with ED overcrowding and overutilization, it is evident that addressing this issue requires the implementation of evidence-based interventions and sustainable practices.

## Literature Review

The literature review conducted for this DNP study included 10 seminal studies: two systematic reviews, two qualitative studies, one quasi-experimental study, four observational studies, and one narrative review. Five studies identified ED overcrowding as an emerging problem, partly caused by ED bounce-backs (Montoy et al., 2019; Pellerin et al., 2018; Rising et al., 2014; Sah et al., 2022; Shannon et al., 2020). The other five studies identified PCC as an effective tool to reduce ED bounce-backs and improve patient experience (Kim et al., 2022; Luciani-McGillivray et al., 2020; Nicholas et al., 2020; Santana et al., 2017; Walsh et al., 2022). In the synthesizing of the literature, studies with similar objectives were grouped together to

address emerging themes and highlight findings that were highly relevant to this DNP study. Furthermore, the studies included in the literature review provide evidence establishing the clinical problem and the potential importance of this DNP study and identifying PCC delivery as a solution to the problem of ED bounce-back visits and ED overcrowding.

**Theme 1: ED Overcrowding**

ED overcrowding is an emerging problem in healthcare. The studies conducted by Kim et al. (2022), Montoy et al. (2019), Pellerin et al. (2018), Sah et al. (2022), and Shannon et al. (2020) describe and explore the problems of ED overcrowding and identify ED bounce-backs as a key culprit for overcrowding in the ED. Montoy et al. (2019) reported that frequent ED use in the past 6 months was the key predictor of ED bounce-backs. Sah et al. (2022) reported ED bounce-back visits result in overcrowding and compromise the quality of care given in the ED. Specifically, the study highlighted that ED bounce-backs contribute to ED overutilization, increased wait times, poor patient experience and staffing problems. Similarly, the study by Kim et al. (2022) concluded that ED overcrowding resulted in high stress in nurses and burnout. Shannon et al. (2020) results showed that patients who had frequent visits to the ED undoubtedly had a major impact on ED utilization. Lastly, the study by Pellerin et al. (2018), also found that repeated ED visits are a main contributor to ED overcrowding.

**Theme 2: ED Bounce-Back Visits**

Sah et al. (2022) identified common factors leading to ED bounce-backs within 72 hours of discharge. Three main categories were identified: doctor-related, patient-related, and illness-related factors. The most common cause of ED bounce-back was illness-related factors, which are non-modifiable. Doctor-related and patient-related factors are modifiable causes of ED

bounce-backs and are therefore crucial factors to consider when developing solutions to reduce ED bounce-back visits.

According to Rising et al. (2015), including the perspective of the patient in their care may identify the factors contributing to frequent ED visits. The study reported that the main reasons for ED bounce-back were the fears and uncertainty patients had about their medical condition. This study identified four categories that create ED bounce-backs, which are index visits, post-discharge period, overall healthcare use, and the patient's perception.

The studies by Sah et al. (2022) and Rising et al. (2015) both find that bounce-back visits to the ED are closely related to anxiety about their medical condition, uncertainty on how to manage their health after ED discharge, and the lack of resources to follow up to the appropriate medical service after ED discharge.

**Theme 3: PCC Components**

According to the literature reviewed, there are different components of PCC. The study by Walsh et al. (2017) found that successfully implementing the various components of PCC can make a significant impact on the experience of patients. The components of PCC include patient communication, education, respect and trust, comfort of environment, patient/family involvement in shared decision making, emotional support, and continuity/transition of care (Nicholas et al., 2020).

Rising et al. (2014) recommended that ED providers take initiative in ensuring that patient concerns are addressed prior to ED discharge. Approaches to address patient concerns can include shared decision making, communicating test results, and addressing uncertainty related to lack of clarity of their diagnoses or medical condition. All these are considered components of PCC. Santana et al. (2017) grouped the component of PCC based on distinct

levels. The first component is the structure, which involves the healthcare system. The next component is the process, which involves the patients and the healthcare provider. The last component is the outcome, which involves participation of the patient, healthcare provider, and healthcare systems.

**Theme 4: PCC Challenges and Benefits**

The literature shows that PCC has tremendous benefits in the ED, but the implementation of PCC comes with its challenges. Santana et al. (2017) expressed that the implementation of PCC has its challenges and may involve significant changes, specifically concerning ED care delivery and interaction between ED staff and patients. Despite the many challenges involved with PCC implementation, PCC presents a key opportunity for improving health outcomes. The literature overwhelmingly suggests that the benefit of PCC far outweighs the challenges. The findings from Nicholas et al. (2017) amplified the benefits of patient-family-centered care (PFCC) in the ED. Their study included PFCC components such as patient support, parental and family autonomy in making heath decisions, pain management, care coordination, partnership in decision-making, and continuity of care.

Walsh et al. (2022) identified concerns and barriers to providing a positive experience that needs to be considered when adapting PCC. These concerns include overwhelming ED waiting rooms, infrequent updates from staff, difficulty establishing communication with ED staff, limited access to information on ED care processes, dismissive attitudes from ED staff towards patients' and families' input, and the usage of medical language by staff that patients do not understand, which then limits their ability to participate in decision making. Their study showed that patient satisfaction was significantly improved with the use of PCC components

such as frequent communication, respect of patient autonomy, and cultivation of therapeutic relationships.

**Theme 5: PCC Clinical Impact**

Walsh et al. (2022) evaluated the impacts of PCC components on several outcomes in the ED setting. Their systematic review demonstrated that PCC has the potential to lower length of stay, decrease the number of patients who left without being seen, and improve health outcomes and patient satisfaction. Kim et al. (2022) listed the impacts of PCC on ED nurses. PCC improved job satisfaction and decreased burnout, improved communication with families, and motivated shared decision-making between patients and ED providers.

**Theme 6: ED Staff Experience in PCC**

Health workers are key stakeholders in providing PCC in the ED. Two of the included studies discussed ED nurses' experience in providing PCC in the ED. The study conducted by Kim et al. (2022) revealed that ED nurses generally viewed PCC as an admirable practice, yet found it challenging to effectively implement within the demanding environment of the ED. The ED is a challenging environment, and nurses listed that the limitations in time, inadequate resources, and insufficient staffing made it an arduous task to implement PCC. Kim et al. (2022) corroborated earlier research, highlighting the prevalent negative perception among nurses regarding the delivery of PCC in the ED. Their study also identified that nurses felt that emergent medical situations in the ED interfered with creating a rapport between patients and staff. The study by Walsh et al. (2022) identified that therapeutic engagement of ED nurses with patients in the waiting room allowed them to deliver patient-centered, holistic, supportive, and informative care. Their study identified that ED staff given resources are willing and able to implement PCC in the ED.

**Theme 7: PCC Implementation**

Four of the included studies in this literature review identified PCC components and important criteria for the implementation of PCC in the ED. Santana et al. (2017) identified important criteria for providing PCC in the ED such as a clear vision of PCC strategies, an environment that is supportive and accommodating, PCC stakeholders' collaboration, engagement, and effective communication. Santana et al. (2017) developed an evidence-based and patient-centered framework that captures key factors to comprise a PCC delivery model. This framework guarantees the perspective of the patient is echoed alongside the decision making of healthcare providers.

Walsh et al. (2022) supported prior research, which mentioned that PCC requires efforts on all levels in healthcare system to make certain it is practiced meaningfully. Their study also stated that by implementing the components of PCC and suggested methods from the literature, it is possible to build a thorough list of actionable PCC practices. The fundamental practices in the successful implementation of PCC involves patient involvement, communication, access to services, well-trained staff, and an environment that meets patients' psycho-social, physical, and cultural needs (Walsh et al., 2022)

Kim et al. (2022) discussed the importance of communication in PCC. Their study stated that communication was found to be critical to PCC. This is confirmed by other two other studies that regarded communication with patient education as the key to PCC (Luciani-McGillivray et al., 2020; Walsh et al., 2022). The study by Luciani-McGillivray et al. (2020) concluded that PCC interventions like nurse-led systematic post-discharge callback increased patient compliance with post-ED medical follow-up and considerably lowered the rate of patient bounce-back to the ED after their index ED visit. This is a promising study because it shows that

with the proper implementation of PCC components, ED bounce-back rates can be reduced, and patient experience can be significantly improved.

## Purpose of the DNP Project

The objective of this DNP project was to explore the perspectives of ED staff regarding person-centered care (PCC) delivery as a standard practice in the ED, aiming to reduce bounce-back visits within a culturally diverse community.

## Definition of Terms

- **Index visit** – An index visit is defined as the first ED visit for a unique patient or any successive ED visits where the patient had no prior ED visit or hospital admission in the preceding 30 days (Sills et al., 2018).

- **Bounce-back visit** – This term describes patients who return to the ED within a short amount of time after their index visit, for an unscheduled emergency department revisit (Sah et al., 2022).

- **Unscheduled return visit** – An unscheduled return visit is defined as a patient presenting to the ED with the same problem within 72 hours of discharge (Sah et al., 2022). This term is interchangeably used with the term bounce-back visit in literature.

- **Overcrowding** – This is described as the imbalance between the expansion in healthcare demand and the shortage of hospital space, both in the context of the ED beds and other acute care units (Savioli et al., 2022).

- **Overutilization** – This is the overuse or the exploitation of a resource to the point of diminishing returns (Levine & Mulligan, 2015).

- **Patient-centered care** – There is no universally accepted definition of PCC, but it can be generally described as a holistic method to delivering care that incorporates therapeutic

communication, patient involvement, accessible services, competent staff, and an environment that provides for the patients physical, cultural, and psychosocial needs (Walsh et al., 2022).

## Theoretical Framework Guiding the DNP Project

The theory adopted for this DNP study is the interpersonal relations theory by Hildegard Peplau. Interpersonal relations theory by Peplau provided an approach to analyze the nurse-patient therapeutic relationship and solve communication problems, which are key in PCC. Peplau's theory of interpersonal relations is considered a middle-range nursing theory that is rooted in psychiatry (Vogelsang, 2022). Although the theory has its origins from psychiatric nursing, the theory of interpersonal relations has been applied to many areas, including emergency and rural settings. Peplau made special emphasis in her theory of interpersonal relations of the patients' experiences and the effect that nurse-patient relationships have on those experiences (Hagerty et al., 2017).

Peplau defines nursing in her theory as an interpersonal, therapeutic process that happens when healthcare professionals, specifically nurses, take part in therapeutic relationships with people who require healthcare services (Hagerty et al., 2017). Peplau asserted that the focus of scientific research in nursing should be patients, their needs, and their perceptions about the care they received from nurses.

Peplau theorized that the nurse-patient relationship must pass through three distinct phases to be effective (Peplau, 1997). These phases are the orientation, working, and termination phase. In the first orientation phase, patients realize they require help and attempt to adjust to their current or new experiences (Peplau, 1997). In this phase, the nurse meets patients and gains essential information about them as people with unique needs and priorities. It is important at

this first phase to form a relationship of trust between the nurse and the patient, as this would reduce the apprehension of the patient. The second phase is the working phase. This phase accounts for the most time the nurse spends with their patients. In this phase, nurses make assessments about patients to use during teaching and when contributing to the interdisciplinary plan of care (Peplau, 1997). The nurse becomes more familiar with their patients in the working phase. Therapeutic forms of communication are essential tools for nurses to provide reflective and nonjudgmental feedback to patients. The final phase is the termination phase, which is more commonly thought of as discharge planning (Peplau, 1997). The success of the termination phase is contingent on how well nurses and their patients navigate the first two phases. A major part of the termination phase occurs when nurses teach patients about symptom management and recovery at home once discharged from their care (Hagerty et al., 2017).

The theory of interpersonal relations was used in this DNP project as the framework to propose a nurse-patient relationship in the ED that will enable PCC to be effectively delivered during the three phases of the nurse-patient relationship as laid out in the theory. The nurse-patient relationship in the three distinct phases of the interpersonal relations theory served as a guideline in developing future recommendations and implementation of proposed evidence-based PCC interventions as standard practices in the ED.

## Methodology

### Participants and Setting

The DNP study utilized a cross-sectional survey methodology, employing a convenience sample of ED staff at a general acute care hospital. This hospital offers healthcare services to the residents of a major metropolitan area with a population of approximately 223,109 people, wherein the majority (95.8%) self-identified as Hispanic or Latino (U.S. Census Bureau, 2020)

The hospital has 360 acute care beds, multiple inpatient units, and a range of outpatient specialties, with a robust medical staff exceeding 570 professionals and a total employee count surpassing 1,700. Within the ED, the frontline team comprised 55 nurses, 15 ED technicians/paramedics, 20 emergency physicians, six behavioral health technicians (BHT), five patient transporters, four ED unit secretaries, and four advanced practice clinicians (two physician assistants and two advanced registered nurse practitioners).

Typically, a shift in the ED is staffed with two physicians, two advanced practice clinicians, 14 registered nurses (RNs), four ED techs, two BHTs, one ED unit secretary, and additional ancillary staff including radiology technicians, security officers, registration clerks, and environmental service personnel. The ED manages an average of 150 patient visits per day.

Forty-seven ED staff members participated in this DNP study. Inclusion criteria comprised ED nurses and technicians who were full- or part-time hospital employees directly involved in patient care and not in training. The eligible participants consisted of 45 registered nurses (RN), five licensed practical nurses (LPN), and 10 ED technicians. ED physicians and other support staff in the ED, including behavioral health technicians, ED unit secretaries, and radiology technicians, were excluded in this DNP study.

**Protection of Human Subjects**

The study protocol for this DNP study received approval from the Institutional Review Board (IRB) of Florida International University (FIU) and the collaborating hospital, as displayed in Appendix D and Appendix E. All participants in this DNP study received an informational letter (Appendix A) outlining the project's purpose, data collection procedures, benefits, and risks. The DNP study author (student) was accessible to address any questions from

potential participants. It is important to note that no identifiable participant information was collected in any manner or form, and no patients participated in this study.

**Measure**

The 30-item survey was structured into three sections. Section 1 encompassed socio-demographic information, featuring four questions that ascertain the participant's gender, age group (in year ranges starting from 18), ED clinical experience (years), and ED role/educational training. Section 2 comprised a 16-item validated Provider-Patient-Relationship Questionnaire (PPRQ) developed by Gremigni et al. (2016). Section 3 consisted of PCC-related questions derived from supporting literature and specific needs of the DNP study immersion site.

The PPRQ tool developed by Gremigni et al. (2016) was employed in this study to assess the ED staff's self-perceived delivery of PCC during their last patient encounters. This approach aimed to capture their distinctive perspective on the provision of PCC within the ED setting. The PPRQ provides a brief tool for healthcare workers to self-assess their confidence in their daily ability to provide PCC to their patients (Gremigni et al., 2016). The PPRQ, as validated in the study by Gremigni et al. (2016), demonstrated robust reliability and structural validity.

The PPRQ includes four PCC domains: effective communication (EC), interest in the patient's agenda (IPA), empathy (E), and patient involvement in care (PIC). Effective communication refers to communication behaviors such as giving clear information, paying attention to the patient when the patient talks, dealing with the patient in a calm and quiet tone, and showing respect (Gremigni et al., 2016). Interest in the patient's agenda measures how much the provider is interested in knowledge, feelings, desires, and expectations of the patient about the disease and care (Gremigni et al., 2016). Empathy self-assesses the provider's ability to understand the patient's emotions or thoughts and to convey confidence when touching or being

close (Gremigni et al., 2016). Patient involvement in care measures behaviors such as offering the patient the opportunity and time to talk, to express his or her point of view, to decide together what should be done, and to encourage them by infusing optimism (Gremigni et al., 2016).

In responding to the PPRQ items, the respondents are asked to think back to their last patient experience rather than a generic behavior, and then rate how they behaved in accordance with each statement using a 5-point scale (1 = *not at all* to 5 = *very much*). Gremigni et al. (2016) provided instructions on how to score the PPRQ tool in their study, which validated the PPRQ instrument. Scoring the PPRQ involves adding the subscale score of EC by summing up questions 1, 3, 6, and 9; adding the subscale score of IPA by summing up questions 2, 5, 7, and 14; adding the subscale score of E by summing up questions 4, 8, 10, and 12; and adding the subscale score of PIC by summing up questions 11, 13, 15, and 16. The subscale scores are used to measure and identify the self-rated PCC practices of the survey respondents. The total score in each subscale evaluates how effective the PCC domains were delivered in the opinion of the respondent providing care during their last patient encounter. The PPRQ score provides summary information on self-assessed competencies in establishing person-centered relationships with patients (Gremigni et al., 2016). The maximum score possible for each PCC domain is 20, and the minimum score is five. The mean score of the domain is used to evaluate how competent the participants rated themselves in providing the PCC domain.

The third section of the DNP survey comprised 10 questions tailored to address the unique requirements of the DNP study immersion site and from supporting findings presented in the literature on PCC. In this section, the respondents were queried about formal education/training on PCC in the ED, interest in PCC education, knowledge about PCC interventions in the ED, and time limitations to provide PCC (Kim et al., 2022). Survey items

were developed with a focus on reducing ED bounce-back visits with the use of evidenced-based PCC interventions such as identifying patient's health literacy skill level (Kuipers et al., 2021) and implementing a nurse-led systematic post discharge call-back program (Luciani-McGillivray et al., 2020). Respondents were queried if they believed that identification of a patient's level of health literacy was valuable in reducing ED bounce-back visits. Respondents were also queried if they believed a nurse-led systematic post discharge call-back program is valuable in reducing ED bounce-back visits and if they would be interested in participating in a nurse-led, systematic post discharge call-back program in the ED. Lastly, respondents were asked to select all the major barriers that prohibit standardized PCC delivery in the ED, from a list of PCC barriers identified in literature review (Lloyd at al., 2018; Moore et al., 2017).

**Data Collection, Management, and Analysis**

Data collection was conducted using a paper-based survey (Appendix C). The paper-based surveys were collected and subsequently entered into Qualtrics XM for review and initial analysis. The data was then exported from Qualtrics XM and imported into the Statistical Package for Social Services (SPSS) for a comprehensive statistical analysis, which involved employing various techniques such as independent $t$-tests, analysis of variance (ANOVA), and a post-hoc multiple comparison test.

Survey data was securely kept and stored using a password protected laptop computer. The paper-based surveys filled out by participants were safely disposed of with the use of a paper shredder once the data entry into Qualtrics had been finalized. There was no identifiable participant information sought or kept in any manner or form during the entire course of this DNP study.

## Statistical Analyses

Frequencies were calculated for all categorical data (age, gender, years of experience, and role/position) and descriptive statistics were conducted for the variables. For the PPRQ items, the total and mean scores with the standard deviations were calculated for each domain. As described previously, each PPRQ item has five response options: *not at all, very little, moderately, considerably*, and *very much*. Numbers assigned to *not at all* = 1, *very little* = 2, *moderately* = 3, *considerably* = 4, and *very much* = 5. Each domain was represented by four questions, and the responses of each item were summed up and totaled per the domain. The maximum score that can be attained for each domain is 20 and the minimum score is five. A high score indicated a high self-evaluation in that domain, while a low score indicated a low self-evaluation in that domain.

Additionally, ANOVA was conducted to compare the PPRQ mean results of the participants' characteristics (age, gender, years of experience, and role/position) for any significant difference from each other. The independent *t*-test was utilized to compare the PPRQ means of a participant group characteristic from other groups. The multiple comparison test (post-hoc test) was utilized to further analyze which age groups differ from each other.

## Results

The following section provides an overview of results of the cross-sectional survey completed by 47 participants.

### Section 1: Participant Characteristics

A total of 47 ED staff of the eligible 60 participated in this DNP study, which was a 78.3% participation rate. Table 1 below displays the characteristics of the participants (*N* = 47).

**Table 1**

*Characteristics of Participants (N = 47)*

| Characteristics | n (%) |
|---|---|
| **Gender** | |
| Male | 10 (21) |
| Female | 37 (79) |
| Non-Binary/Third Gender | 0 (0) |
| Preferred not to say | 0 (0) |
| **Age group (Years)** | |
| 18 – 24 | 6 (13) |
| 25 – 34 | 25 (52) |
| 35 – 44 | 5 (11) |
| 45 – 54 | 6 (13) |
| 55+ | 5 (11) |
| **Job Role/Position/Education** | |
| RN (MSN) | 3 (6) |
| RN (BSN) | 26 (56) |
| RN (ADN) | 12 (26) |
| LPN | 3 (6%) |
| ED Tech/Paramedic | 3 (6%) |
| **Years of ED clinical experience** | |
| Less than 2 | 21 (45) |
| 2 – 5 | 13 (28) |
| 6 – 10 | 2 (4) |
| 11 – 20 | 4 (8) |
| Greater than 20 | 7 (15) |

*Note.* Emergency department (ED), registered nurse (RN), master's in nursing (MSN),

bachelor's in nursing (BSN), licensed practical nurse (LPN), associate in nursing (ADN)

**Section 2: Patient-Provider-Relationship Questionnaire (PPRQ) Results**

In this section, the 16-item PPRQ results are provided. The PPRQ mean scores are exhibited on Table 2 below, and the mean scores are also illustrated in the bar graph in Figure 1.

**Table 2**

*Provider-Patient Relationship Questionnaire (PPRQ) Results (N = 47)*

| PCC Domains | Mean Score | *SD* |
|:---:|:---:|:---:|
| EC | 19.02 | 1.595 |
| IPA | 18.77 | 2.118 |
| E | 18.45 | 2.385 |
| PIC | 17.81 | 2.976 |

*Note.* Patient-centered care (PCC), Effective communication (EC), interest in the patient's agenda (IPA), empathy (E), and patient involvement in care (PIC)

**Figure 1**

*Profile Plots of Provider-Patient Relationship Questionnaire (PPRQ) Results*
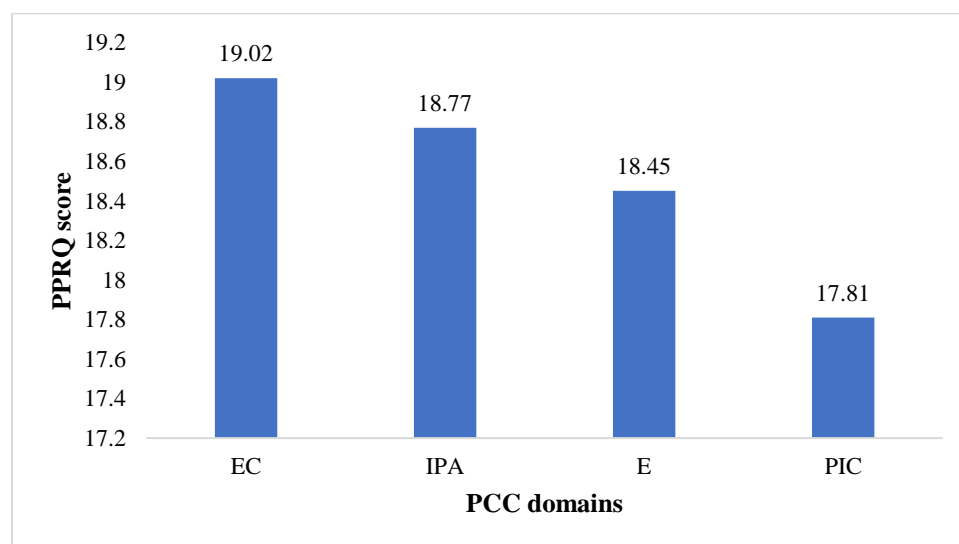
*Note*. Patient-centered care (PCC), effective communication (EC), interest in the patient's

agenda (IPA), empathy (E), and patient involvement in care (PIC)

**Section 3: Barriers and Enablers of PCC**

This section provides the responses of the participants on 10 PCC queries. Eight

questions were dedicated to exploring PCC enablers, while two questions specifically addressed

PCC barriers within the context of delivering PCC in the ED.

**PCC Enablers**

Most of the respondents ($n$ = 35, 75%) indicated that they received formal education or

training on PCC, while 19% ($n$ = 9) did not receive any formal PCC education or training, and

6% ($n$ = 3) were unsure. Figure 2 displays respondents' level of knowledge about PCC

interventions in the ED. Most of the participants exhibited a level of knowledge beyond the

moderate range regarding PCC interventions implemented in the ED ($n$ = 40, 85%).

**Figure 2**

*Level of Knowledge of PCC Interventions in the ED*
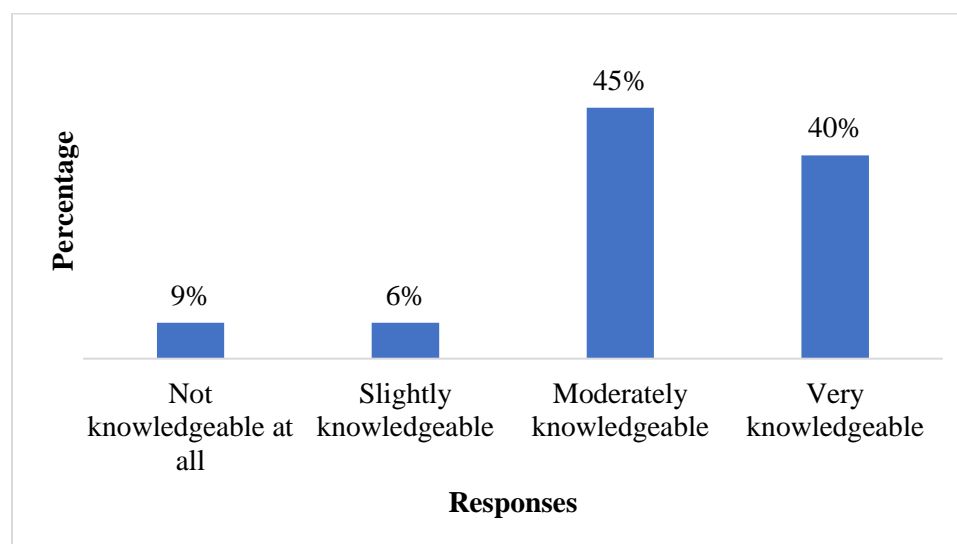
*Note.* Figure 2 illustrates the participants' level of knowledge regarding PCC interventions that were implemented in the ED.

Figure 3 below illustrates the respondents' identification of the time required for delivering patient-centered discharge education in the ED.

**Figure 3**

*Time Needed for Patient Centered Discharge Education.*
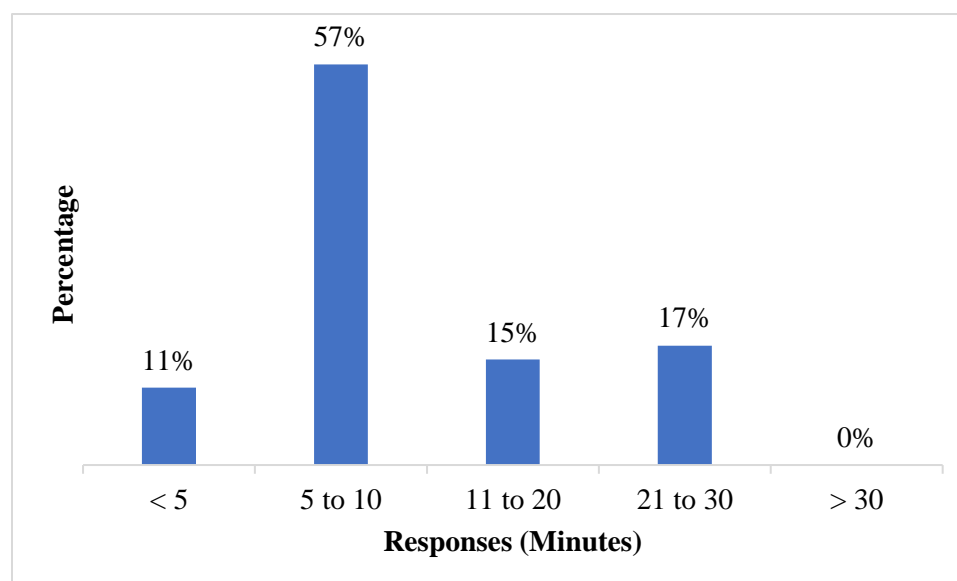


*Note.* Figure 3 illustrates the respondents' perceptions on the amount of time required for patient centered discharged education in the ED.

Forty-seven percent (*n* = 22) of respondents believed there was adequate time for them to provide hourly communication with their ED patients, while 44% (*n* = 21) of respondents did not think that there was adequate time to provide hourly communication, and 9% (*n* = 4) of the respondents were unsure. Most of the respondents (*n* = 41, 87%) were willing to participate in ongoing PCC training/education to help improve patient experience and reduce ED bounce-back visits. Only 4% (*n* = 2) of respondents were not interested in ongoing PCC training/education, and 9% (*n* = 4) were unsure.

Most of the respondents (*n* = 33, 70%) agreed that identification of patient's health

literacy skill level and provision of adequate health education was extremely valuable in

reducing ED bounce-back visits. Figure 4 below displays the respondents' perception on the

value of identifying a patient's health literacy skill level in the ED.

**Figure 4**

*Value of Identifying Patient's Health Literacy Skill Levels in the ED.*
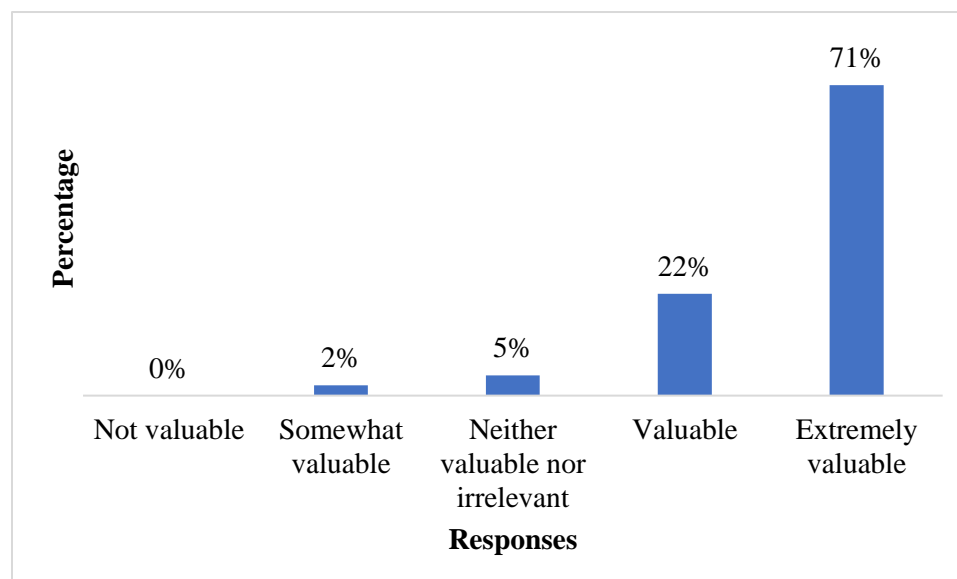


*Note*. Figure 4 illustrates the respondents' perceptions on the value of identifying a patient's

health literacy skill level in the ED.

Most of the respondents (*n* = 29, 61%) indicated that they were interested in participating

in a nurse-led post discharge call back program in the ED. Figure 5 below displays the

perceptions of ED staff on the value of a nurse-led, systematic post discharge call-back program

to reduce ED bounce-back revisits.

**Figure 5**

*Value of a Nurse-Led, Post-Discharge Call-Back Program to Reduce ED Bounce-Back Visits*
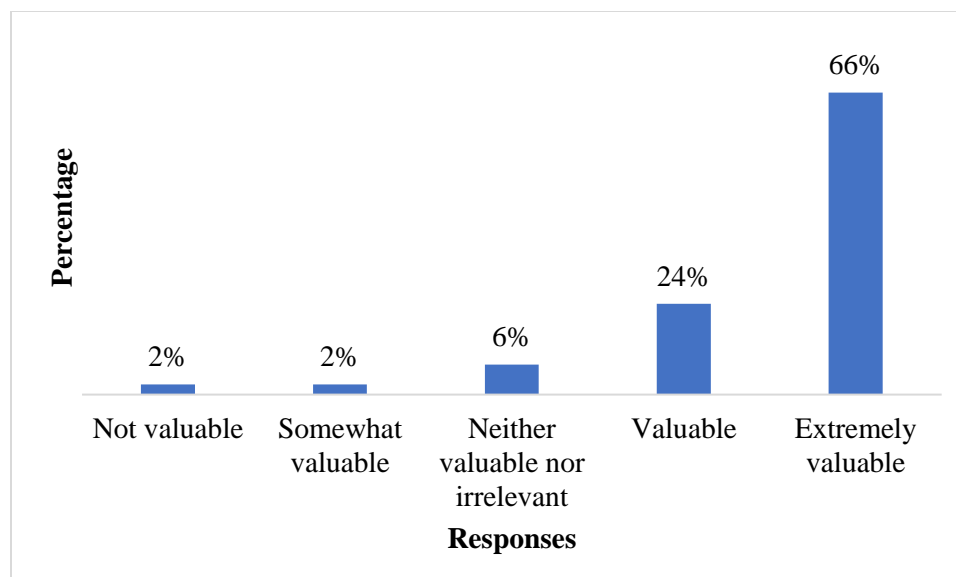
*Note*. Figure 5 illustrates the respondents' perceptions on the value of a nurse-led, systematic post-discharge call-back program to reduce ED bounce-back visits.

**PCC Barriers**

The majority of the respondents ($n = 38$, 80%) believed that time limitation was a major barrier to PCC delivery in the ED when providing patient education during the discharge process. Eleven percent ($n = 5$) of respondents did not believe time limitations to be a major barrier, while 9% ($n = 4$) were unsure. The respondents identified other major PCC barriers in the ED, which are illustrated in Figure 6 below.

**Figure 6**

*Major Barriers to Standardized Patient-Centered Care (PCC) Delivery.*
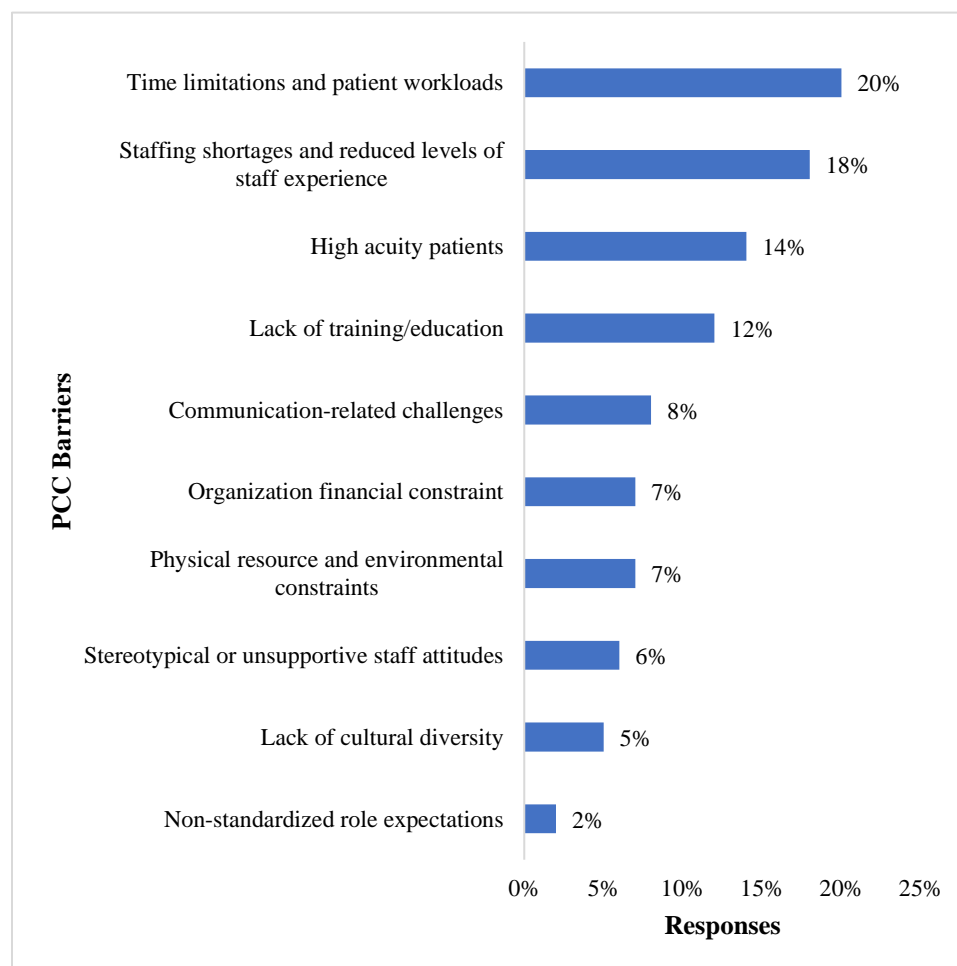


*Note*. Figure 6 illustrates the respondent's perceptions of the major barriers to standardized PCC delivery in the ED.

**Relationship of Demographic Variables and four PCC domains**

There were no significant differences in how ED staff reported provision of PCC across all four domains (PIC, E, EC, IPA) based on gender, years of clinical experience, and professional indicators (current role, educational preparation) demographics. See Appendix G for ANOVA statistics conducted. Table 3 below displays the independent *t*-test table (two tailed) of

the PCC domains based on gender, which show no significant differences ($p > 0.05$) between gender and all four PCC domains.

**Table 3**

*Independent t-test of Patient-Centered Care (PCC) Domains Based on Gender (N=47).*

| PCC domains | Gender | $n$ | $M$ | $SD$ | $p$ (2-tailed) |
|---|---|---|---|---|---|
| PIC | Male | 10 | 17.60 | 1.838 | 0.806 |
| | Female | 37 | 17.86 | 3.233 | |
| E | Male | 10 | 18.50 | 2.173 | 0.938 |
| | Female | 37 | 18.43 | 2.467 | |
| IPA | Male | 10 | 18.40 | 2.011 | 0.544 |
| | Female | 37 | 18.86 | 2.162 | |
| EC | Male | 10 | 19.00 | 1.054 | 0.963 |
| | Female | 37 | 19.03 | 1.724 | |

*Note.* Patient-centered care (PCC), effective communication (EC), interest in the patient's agenda (IPA), empathy (E), and patient involvement in care (PIC).

Regarding the age of the respondents, there were statistically significant differences in the provision empathy (E) and effective communication (EC) PCC domains. The younger respondents reported the highest level of E and EC, whereas the oldest respondents reported the least level of E and EC. There were no significant differences in the respondent's age and the other 2 PCC domains; patient involvement in care (PIC) and interest in patient agenda (IPA). ANOVA test for PIC and age groups of respondents was not significant ($F = 1.083$, $p = 0.377$),

and ANOVA test for IPA and age groups of respondents was not significantly different ($F$ = 1.54, $p$ = 0.208$)$ as detailed in the ANOVA tables in Appendix G.

Table 4 below details the ANOVA results of empathy and respondents age group. The result shows that there is a significant difference in the empathy shown by respondent in the caregiving process based on age group ($F$ = 2.644, $p$ = 0.047$)$.

**Table 4**

*ANOVA table for Age Group (Years) and Empathy*

| Variable (age groups) | Sum of Squares | *df* | Mean Square | *F* | *p* |
|---|---|---|---|---|---|
| Between Groups | 52.624 | 4 | 13.156 | 2.644 | 0.047 |
| Within Groups | 208.993 | 42 | 4.976 | | |
| Total | 261.617 | 46 | | | |

*Note.* This table displays the ANOVA results for the PCC domain, empathy (E), and the age groups of the respondents.

The ANOVA results conducted for age and empathy found the participants 25 to 34 years had the highest level of empathy ($M$ = 19.24, $SD$ = 1.422), followed by age group 18 to 24 years ($M$ = 18.67, $SD$ = 1.751), then age group 35 to 44 years ($M$ = 18.20, $SD$ = 3.033), next in the order is age 55 years and above ($M$ =16.80, $SD$ = 2.588) then ages 45 to 54 years ($M$ = 16.50, $SD$ = 4.037). The ANOVA test indicated a statistically significant difference in empathy levels across age groups ($F$ = 2.644, $p$ = 0.047). A post hoc test was conducted to determine the specific age groups with significant difference. The result of the post hoc test (Appendix G) revealed there is no significant difference in the degree of empathy displayed by respondents based on age group, which is inconsistent to the global effect significance in the ANOVA results.

This signifies that the age groups did not significantly differ from one another in relationship to empathy. This contradictory outcome is a result of a weak significant global effect (*p*-value is very close to the significance level). The ANOVA test detected overall differences across age groups, but the differences are too small to be pinpointed in a post hoc test.

**Table 5**

*Age groups (Years) and Effective Communication (ANOVA)*

| Variables (age groups) | Sum of Squares | *df* | Mean Square | *F* | *p* |
|---|---|---|---|---|---|
| Between Groups | 35.905 | 4 | 8.976 | 4.65 | 0.003 |
| Within Groups | 81.073 | 42 | 1.93 | | |
| Total | 116.979 | 46 | | | |

*Note.* This table displays the ANOVA results for the PCC domain, effective communication (EC), and the age groups of the respondents.

Table 5 above presents the effective communication of respondents based on age group (years). The ANOVA result shows that age group 25 to 34 years had the highest level of effective communication ($M = 19.52$; $SD = 0.653$), followed by age group 18 to 24 years ($M = 19.50$; $SD = 0.548$), followed by age group 35 to 44 years ($M = 19.40$; $SD = 0.894$), followed by age group 45 to 54 years ($M = 17.67$; $SD = 2.422$), and lastly age 55 years and above ($M = 17.20$; $SD = 3.033$). The ANOVA test shows that the difference observed in the level of effective communication of respondents based on age was significant ($F = 4.65$, $p = 0.003$). A post hoc test was conducted (Appendix G) to ascertain the significant differences between the age groups. The result from the post hoc test revealed that there exists a significant difference in the level of effective communication only between the age group 25 to 34 years and age group 55 years and

above ($p = 0.015$). The result implies that the degree of effective communication displayed by

respondents when administering care to patients is significantly greater for ED staff younger than

25 years and lower for ED staff that are above 55 years of age.

## Discussion

This discussion section includes an overview of the results, recommendations for next

steps to be taken, study limitations, and implications. A primary finding from the survey study

conducted revealed most of the ED staff self-reported high competence in all four PCC domains

(E, PIC, IPA, & EC) during their latest patient encounter. The mean scores for all four PCC

domains observed were higher, in comparison to the findings of Gremigni et al. (2016), which

reported scores averaging three points lower in all four PCC domains. In this current DNP study,

effective communication obtained the highest overall mean score of the four PCC domains.

Interestingly, effective communication exhibited the highest level of competency both in this

current study and in the research conducted by Gremigni et al. (2016). This similarity in effective

communication scores in this DNP study and the study by Gremigni et al. (2016) may be

attributed to the long-standing emphasis and focus on teaching effective communication skills in

the training/education of healthcare professionals (Street & De Haes, 2013).

The demographic characteristics of the ED staff in this study mirror those of ED staff

across the U.S., characterized by a younger and less experienced workforce, a trend attributed to

high turnover rates of ED staff (Nursing Solutions Inc., 2023). The findings from this DNP study

revealed a difference in the delivery of empathy and effective communication based on age.

Younger ED staff self-reported providing higher level empathy and effective communications

than the older ED staff. These findings could be indicative of younger ED staff receiving PCC

education in school or during onboarding training versus older ED staff who may have not been educated or trained on PCC concepts.

Another plausible reason for the significant difference in age and provision of the PCC domains, empathy, and effective communication, could be from ED staff burnout. Burnout of experienced and older nurses can lead to emotional exhaustion, which may result in a lack of empathy and compassion towards patients (Richemond et al., 2022). These findings underscore the importance of continuous PCC training and education for all ED staff to ensure ongoing knowledge development in the effective delivery of PCC within the ED.

Most surveyed ED staff expressed a strong belief in the significance of identifying patients with low health literacy skills and implementing a nurse-led post-discharge call-back program, aiming to diminish ED bounce-back visits. Kuipers et al. (2021) discovered in their study that identifying patients with low health literacy skills and delivering personalized health education can contribute to reducing bounce-back visits. Similarly, Luciani-McGillivray et al. (2020) recognized a nurse-led systematic post-discharge call-back program as highly valuable in minimizing bounce-back visits. These are two evidence-based PCC interventions known for their effectiveness in reducing bounce-back visits and enhancing the overall patient experience.

Assessment of patients' health literacy skill levels during the initial encounter can lead to provision of tailored education that aligns with their individual health literacy levels. Kuiper et al. (2021) found that health literacy and communication skills are extremely important in allowing patients to participate in PCC delivery. Identifying patients' health literacy levels can be achieved by incorporating a health literacy self-assessment screening during the triage process. Conducting a health literacy skill screening would permit recognition of patients who may

benefit from additional health education during the discharge process. There are a few simple and brief health literacy screening tools that have been proven to be successful in identifying patients with low health literacy skills (Chew et al., 2004; Ylitalo et al., 2018).

Active participation in post-discharge plans by patients and families and provision of a follow-up call by ED staff after leaving the ED has been shown to reduce ED bounce-back visits (Luciani-McGillivray et al., 2020). This call aims to inquire about their health status and ensure they have adhered to their outpatient follow-up instructions appropriately. The research conducted by Luciani-McGillivray et al. (2020) affirms that a nurse-led, systematic post-discharge call-back program significantly decreased the rate of patient revisits to the ED within 7 days of discharge.

The theory of interpersonal relations by Hildegard Peplau can serve as a guideline when implementing evidence-based PCC interventions. Screening of health literacy skill level of patients can be integrated during the initial orientation phase of Peplau's interpersonal relations theory. Further assessment of the patient's health literacy level can be sustained throughout the second working phase, and targeted education efforts can be undertaken during the termination phase of Peplau's interpersonal relations theory. Identifying patients who may benefit from a nurse post-discharge call back can be incorporated during the termination phase of Peplau's interpersonal relations theory. As emphasized above, Peplau's theory of interpersonal relations can serve as a guiding framework for the implementation of sustainable evidence-based PCC interventions.

Most of the ED staff self-evaluated their knowledge of PCC practices as extremely knowledgeable and expressed a willingness to partake in ongoing PCC training to enhance the

patient experience and mitigate ED bounce-back visits. This affirms the strong commitment of ED staff and their aspiration to enhance the quality of care in the ED, notwithstanding the numerous barriers to delivering PCC in the ED. This aligns with the findings of Kim et al. (2022), indicating that nurses express a keen interest in delivering PCC to their patients, yet encounter numerous barriers.

The top four PCC barriers that were selected by the ED staff in descending order were, time limitation and patient workload, staff shortage and low staff experience, high acuity patients, and a lack of PCC training/education. These represent the main barriers acknowledged by the ED staff, hindering their capacity to deliver PCC in the ED. Given the significant impact of these barriers on PCC provision by the ED staff, it is important for ED leadership and stakeholders to develop strategies to address these PCC barriers (Kuipers et al., 2021).

In summary, survey responses highlight that a sizable portion of ED staff view PCC as a valuable tool in mitigating ED bounce-back visits. Notably, most ED staff, as self-assessed through the PPRQ, consider themselves highly competent in delivering PCC. These findings offer actionable insights for ED leadership and stakeholders to enhance PCC delivery within the ED, by implementing evidence-based interventions to reduce ED bounce-back visits while simultaneously enhancing the overall patient experience.

**Next Steps**

The outcomes of this DNP project underscore the consensus among most ED staff that PCC is an effective strategy for reducing ED bounce-back visits and enhancing patient satisfaction. To progress, stakeholders and ED leaders should consider implementing the two highlighted PCC interventions from this DNP report: the nurse-led call-back program and

identification of patients with low health literacy skill levels. Additionally, ongoing PCC

learning opportunities for ED staff warrant consideration by stakeholders and healthcare leaders.

Addressing the major PCC barriers, as identified by ED staff in this DNP study, is crucial.

Resources and support to enable the implementation and sustained practice of PCC interventions

in the ED are needed.

**Limitations**

There are a few notable limitations to be considered in interpreting these findings. First,

the survey was comprised of only self-report measures. The self-assessment tools used in the

DNP study might have not provided information about actual staff behavior. Second, a

convenience sampling strategy was used. The use of convenience sampling might not represent

non-participant ED staff perceptions about PCC. Third, the PPRQ excludes other domains of

PCC that might have been important to evaluate. Finally, the project took place in a single ED

location, and it is unknown if the findings would be generalizable to other EDs.

**Practice Implications**

This DNP project holds significant implications for the provision of PCC by Advanced

Registered Nurse Practitioners (ARNP) in the ED. PCC has proven to be a beneficial practice

with positive impacts on improving patient health outcomes, staff satisfaction, patient

experience, and concurrently alleviating ED financial burdens, overcrowding, and

overutilization. As emphasized by Kim et al. (2022), PCC in the ED serves as a crucial element

for ensuring quality healthcare, particularly in the chaotic and fast-paced ED environment.

ARNPs can leverage the insights from this study to cultivate enduring PCC practices in the ED,

thereby enhancing the quality of patient care and mitigating the adverse effects of ED bounce-

back visits. It is recommended that ARNPs actively participate in research and quality improvement studies to develop sustainable PCC practices in the ED.

## Conclusions

This DNP study reports on the perspectives held by ED staff regarding patient-centered care (PCC) delivery within the emergency department (ED) setting, shedding light on its potential effectiveness in minimizing ED bounce-back visits. Despite being an increasingly recognized priority in healthcare, PCC has not yet been standardized as an ED practice (Walsh et al., 2022). Future quality improvement (QI) projects should identify sustainable, evidence-based PCC interventions in the ED, particularly tailored for the needs of a culturally diverse community, aiming to effectively curtail ED bounce-back visits.

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# Appendices

## Appendix A: Informational Letter

**FIU** | FLORIDA
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**INFORMATIONAL LETTER**

**The Perspective of Emergency Department Staff on Patient-Centered Care Delivery to Reduce Bounce-Back Visits in a Culturally Diverse Community**

Hello, my name is Solomon Oluwadare Ajijo. You have been chosen at random to be in a research study about patient centered care delivery by nursing staff in the emergency department (ED). The purpose of this study is to gain a deeper insight into how ED staff perceive patient-centered care and how patient-centered care can be effectively delivered in the ED environment. If you decide to be in this study, you will be one of approximately 60 people in this research study. Participation in this study will take about 10 - 20 minutes of your time.  If you agree to be in the study, I will ask you to do the following things:

1. **Complete an anonymous paper survey, answering all the questions contained in the survey.**

There are no foreseeable risks or benefits to you for participating in this study. It is expected that this study will benefit society by standardizing the way patient-centered care is delivered in the ED which ultimately improves health outcomes and patient experiences.

There is no cost or payment to you. If you have questions while taking part, please feel free to stop me and ask.

You *will* remain anonymous and your answers to the survey are completely confidential. The survey will not contain any participant identifiers.

If you have questions for the researchers conducting this study, you may contact Solomon Oluwadare Ajijo at sajij001@fiu.edu, or Dr. Ellen Brown at ebrown@fiu.edu/305-348-1312.

If you would like to talk with someone about your rights of being a subject in this research study or about ethical issues with this research study, you may contact the FIU Office of Research Integrity by phone at 305-348-2494 or by email at ori@fiu.edu.

Your participation in this research is **voluntary**, and you will not be penalized or lose benefits if you refuse to participate or decide to stop participation. You may keep a copy of this form for your records.

**Appendix B: Survey Questions**

# FLORIDA INTERNATIONAL UNIVERSITY



## INTRODUCTION

This Doctor in Nursing Practice (DNP) project aims to understand the perspective of emergency department (ED) staff regarding the delivery of patient-centered care in the ED setting. Please answer the following 30 questions to the best of your knowledge. This DNP project will help understand the gaps in knowledge and will provide the areas of needed improvement. **Please _do not write_ your name or other personal information on this questionnaire. Your answers are anonymous and will be kept confidential. Your participation is completely voluntary.**

**RESEARCHER-DEVELOPED DEMOGRAPHIC INSTRUMENT.** *Please answer the following **4 socio-demographic questions** to better understand your role, position, and professional experience. Please select the appropriate response:*

1. What is your age group (years)?
   - 18-24
   - 25-34
   - 35-44
   - 45-54
   - 55+
2. What is your gender?
   - Male
   - Female
   - Non-binary / Third gender
   - Prefer not to say.
3. What is your current role or position in the ED?
   - RN (MSN)
   - RN (BSN)
   - RN (ADN)
   - LPN
   - ED Tech/Paramedic
4. How many years of clinical experience do you have working in the ED?
   - Less than 2 years

- o 2 – 5 years
- o 6 – 10 years
- o 11 – 20 years
- o Greater than 20 years


**Provider-Patient- Relationship Questionnaire (PPRQ***). The PPRQ reports <u>sixteen common</u> ways of dealing with patients in the hospital setting (Gremigni et al., 2016). Please, think about your <u>**last encounter with a patient**</u>, and rate how you behaved in accordance with each statement using a 5-point scale from 1 = "not at all" to 5 = "very much."*

1. I provided clear information.
   - o Not at all
   - o Very little
   - o Moderately
   - o Considerably
   - o Very much
2. I was interested in what the patient feels about his/her current health status.
   - o Not at all
   - o Very little
   - o Moderately
   - o Considerably
   - o Very much
3. I turned to the patient in a calm and quiet tone.
   - o Not at all
   - o Very little
   - o Moderately
   - o Considerably
   - o Very much
4. I understood the emotions that the patient may have.
   - o Not at all
   - o Very little
   - o Moderately
   - o Considerably
   - o Very much
5. I was interested in what the patient knows about the disease/prognosis.
   - o Not at all
   - o Very little
   - o Moderately
   - o Considerably
   - o Very much
6. I respected the patient as a person.
   - o Not at all
   - o Very little
   - o Moderately
   - o Considerably
   - o Very much

7. I was interested in what the patient wants from care.
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much
8. I was able to listen.
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much
9. I was paying attention to what the patient said.
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much
10. I was able to put myself in "his/her shoes."
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much
11. I gave the patient time to ask and to talk about the disease.
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much
12. I inspired confidence and security when touching the patient and being nearby.
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much
13. I asked questions that allowed the patient to express his or her view.
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much
14. I was interested in what the patient expects from care.
    - o Not at all
    - o Very little
    - o Moderately

- o Considerably
- o Very much

15. I gave the patient encouragement and transmitted optimism.
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much
16. I offered the patient the opportunity to discuss and decide together the "things to do."
    - o Not at all
    - o Very little
    - o Moderately
    - o Considerably
    - o Very much

**Barriers and enablers of Patient Centered Care (PCC).** *Patient-Centered Care can be defined as a holistic method to delivering care that incorporates therapeutic communication, patient involvement, accessible services, competent staff, and an environment that provides for the patients physical, cultural, and psychosocial needs (Walsh et al., 2022).*

*The following **10 questions** are based on literature review and the emergency department needs. For the following questions, think about how the ED environment might impede PCC delivery and the different ways to improve PCC in the ED. Please select the most appropriate response:*

1. Have you received any **formal education/training on Patient-Centered Care (PCC)** in the Emergency Department?
   - o Yes
   - o No
   - o Unsure
2. How **knowledgeable are you about any PCC interventions** that have been implemented in your Emergency Department?
   - o Not knowledgeable at all
   - o Slightly knowledgeable
   - o Moderately knowledgeable
   - o Very knowledgeable
3. Do you believe that **time limitation** is a major barrier to PCC delivery in the ED when giving patient education during the discharge process? (Kim et al., 2022)
   - o Yes
   - o No
   - o Unsure
4. How **long of a time** do you think is needed to provide proper discharge education that is patient centered in the Emergency Department?
   - o Less than 5 minutes
   - o 5 – 10 minutes
   - o 11 – 20 minutes
   - o 21 – 30 minutes

   o Greater than 30 minutes
5. Do you think there is adequate time to provide **hourly communication** with your patients in the ED to improve patient experience and reduce bounce-back revisits? (Kim et al., 2022)
   o Yes
   o No
   o Unsure
6. Will you be willing to participate in **Patient-Centered Care training** to help improve patient experience and reduce ED bounce-back visits? (Kuipers et al., 2021; Kim et al., 2022)
   o Yes
   o No
   o Unsure
7. How valuable is identifying patients with **low health literacy** in the emergency room, to provide them with adequate education on their health during their ED visit? (Kuipers et al., 2021)
   o Not valuable
   o Somewhat valuable
   o Neither valuable nor irrelevant
   o Valuable
   o Extremely valuable
8. How valuable is a **nurse-led, systematic post discharge call-back program** to reduce bounce-back ED revisits? (Luciani-McGillivray et al., 2020)
   o Not valuable
   o Somewhat valuable
   o Neither valuable nor irrelevant
   o Valuable
   o Extremely valuable
9. Would you be interested in participating in a **nurse-led, post discharge call back program** for the patients you have cared for in the ED, 24 to 48 hours after they are discharged home?
   o Yes
   o No
   o Unsure
10. What are the **major barriers** that exist which may prohibit standardized PCC delivery in the ED environment (Moore et al., 2017; Lloyd et al., 2018)? ***Select all that apply:***
   o Staffing shortages and Reduced levels of staff experience
   o Time limitations and patient workloads
   o Lack of Training/education
   o Lack of cultural diversity
   o High acuity patients
   o Communication related challenges
   o Stereotypical or unsupportive staff attitudes
   o Physical resource and environmental constraints
   o Non-standardized role expectations
   o Organization financial constraints

## Appendix C: PPRQ Approval letter

**From:** Paola Gremigni <paola.gremigni2@unibo.it>
**Sent:** Saturday, April 29, 2023 12:32:37 PM
**To:** Dare Ajijo <sajij001@fiu.edu>
**Cc:** Giulia Casu <giulia.casu3@unibo.it>
**Subject:** Re: LETTER OF REQUEST (Permission to use PPRQ)

Dear Solomon Oluwadare Ajijo,
We give you permission to use the PPRQ based on the conditions you indicated in your letter of permission request.
If you would be interested in collaborating with us in a cross-cultural validation study of the PPRQ, please let us know.
You can find the item content and instructions for scoring the PPQR in our published validation study.
Regards

Prof. Paola Gremigni, PhD
Department of Psychology
University of Bologna

Inviato da Outlook per Android

**Appendix D: IRB Approval Letter**

**FIU** | **FLORIDA INTERNATIONAL UNIVERSITY**          **Office of Research Integrity**
                                                        **Research Compliance, MARC 430**

## MEMORANDUM

| | |
|---|---|
| **To:** | Dr. Ellen Brown |
| **CC:** | Solomon Ajijo |
| **From:** | Kourtney Wilson, MS, IRB Coordinator  *KMW* |
| **Date:** | July 14, 2023 |
| **Protocol Title:** | "The Perspective of Emergency Department Staff on Patient-Centered Care Delivery to Reduce Bounce-Back Visits in a Culturally Diverse Community: A Formative Evaluation" |

The Florida International University Office of Research Integrity has reviewed your research study for the use of human subjects and deemed it Exempt via the **Exempt Review** process.

| | | | |
|---|---|---|---|
| **IRB Protocol Exemption #:** | IRB-23-0374 | **IRB Exemption Date:** | 07/14/23 |
| **TOPAZ Reference #:** | 113344 | | |

As a requirement of IRB Exemption you are required to:

1) Submit an IRB Exempt Amendment Form for all proposed additions or changes in the procedures involving human subjects. All additions and changes must be reviewed and approved prior to implementation.
2) Promptly submit an IRB Exempt Event Report Form for every serious or unusual or unanticipated adverse event, problems with the rights or welfare of the human subjects, and/or deviations from the approved protocol.
3) Submit an IRB Exempt Project Completion Report Form when the study is finished or discontinued.

**Special Conditions:**     N/A

For further information, you may visit the IRB website at http://research.fiu.edu/irb.


KMW

**Appendix E: Immersion Site Approval Letter**

## Palmetto General Hospital
A STEWARD FAMILY HOSPITAL

Steward

June 6th, 2023
Nicole Wertheim College of Nursing & Health Sciences
Florida International University

To Whom It May Concern,

This letter is confirmation that your student, Solomon Oluwadare Ajijo, is approved to conduct his DNP project at Palmetto General Hospital. It is understood that this DNP project is part of the requirements for the Doctor in Nursing Practice program at Florida International University. After reviewing the proposal of the DNP project titled "The Perspective of Emergency Department Staff on Patient-Centered Care Delivery to Reduce Bounce-Back Visits in a Culturally Diverse Community," your student has been granted full permission to conduct this project in the Emergency Department at this organization.

As outlined in his DNP proposal, this project will be implemented over a course of approximately 4 weeks, using an anonymous survey/questionnaire. The project will be conducted with verbal consent and voluntary participation of nursing staff in the ED after being provided with an informational letter. The Emergency Department is also aware of staff participation in supporting the student to complete this DNP project, including allowing the student access to the facility, conducting staff interviews, observation of ED practices, attending ED staff meetings, handing out informational letters and providing surveys to the recruited participants. Palmetto General Hospital will provide the necessary means to support and assist the student with his project.

It is expected that Solomon Oluwadare Ajijo will not interfere with normal hospital function, behave in a professional manner, and follow the hospital standards of care. The voluntary participation of PGH nursing staff is supported by our organization for this DNP project and we look forward to working with Florida International University. Thank you.

Sincerely,

Denise Hernandez-Figueroa, MSN, RN
Chief Nursing Officer
Denise.hernandez-figueroa@steward.org

Palmetto General Hospital
2001 W 68th Street, Hialeah, Florida 33016  Tel: 305-823-5000  www.palmettogeneral.org

**Appendix F: IRB Protocol Amendment Approval**

**FIU** | **Research & Economic Development**
FLORIDA INTERNATIONAL UNIVERSITY

## MEMORANDUM

| | |
|---|---|
| **To:** | Dr. Ellen Brown |
| **CC:** | Solomon Ajijo |
| **From:** | Kourtney Wilson, MS, IRB Coordinator    *KMW* |
| **Date:** | September 6, 2023 |
| **Proposal Title:** | "The Perspective of Emergency Department Staff on Patient-Centered Care Delivery to Reduce Bounce-Back Visits in a Culturally Diverse Community: A Formative Evaluation" |

| | |
|---|---|
| **Approval #** | IRB-23-0374-AM01 |
| **Reference #** | 113344 |

The Florida International University Office of Research Integrity has approved the following modification(s):

- Revised and updated some of the multiple-choice responses to the survey.

**Special Conditions:**

There are no additional requirements in regards to your study. However, if there are further changes in the protocol after you commence your study, then you are required to resubmit your proposal for review. For further information, you may visit the FIU IRB website at http://research.fiu.edu/irb.

KMW

**Appendix G: Supplemental Data**

**Cross Analysis of Patient-Centered Care Domains and ED Roles/Education of Respondents**

**Table S1**

*Current Roles/Education in the ED and PIC (ANOVA)*

| ED Roles/Position | *N* | *M* | *SD* | | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| RN (MSN) | 3 | 16.67 | 2.887 | Between Groups | 5.693 | 4 | 1.423 | 0.149 | 0.962 |
| RN (BSN) | 26 | 18.00 | 2.757 | Within Groups | 401.583 | 42 | 9.562 | | |
| RN (ADN) | 12 | 17.58 | 3.988 | Total | 407.277 | 46 | | | |
| LPN | 3 | 18.00 | 1.732 | | | | | | |
| ED Tech | 3 | 18.00 | 2.646 | | | | | | |
| Total | 47 | 17.81 | 2.976 | | | | | | |

*Note.* Emergency department (ED), patient involvement in care (PIC), registered nurse (RN),

master's in nursing (MSN), bachelor's in nursing (BSN), licensed practical nurse (LPN),

associate in nursing (ADN).

**Table S2**

*Current Role/Education in the ED and Empathy (ANOVA)*

| ED Roles/Position | *N* | *M* | *SD* | | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| RN (MSN) | 3 | 17.33 | 3.786 | Between Groups | 10.354 | 4 | 2.589 | 0.433 | 0.784 |
| RN (BSN) | 26 | 18.58 | 2.403 | Within Groups | 251.263 | 42 | 5.982 | | |
| RN (ADN) | 12 | 18.08 | 2.610 | Total | 261.617 | 46 | | | |
| LPN | 3 | 18.67 | 1.155 | | | | | | |
| ED Tech | 3 | 19.67 | 0.577 | | | | | | |
| Total | 47 | 18.45 | 2.385 | | | | | | |

*Note.* Emergency department (ED), registered nurse (RN), master's in nursing (MSN),

bachelor's in nursing (BSN), licensed practical nurse (LPN), associate in nursing (ADN),

empathy (E).

**Table S3**

*Current Role/Education in the ED and Interest in Patients Agenda (ANOVA)*

| ED Roles/Position | *N* | *M* | *SD* | | Sum of Squares | *Df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| RN (MSN) | 3 | 18.33 | 2.887 | Between Groups | 11.522 | 4 | 2.880 | 0.621 | 0.650 |
| RN (BSN) | 26 | 19.12 | 1.681 | Within Groups | 194.904 | 42 | 4.641 | | |
| RN (ADN) | 12 | 18.25 | 2.958 | Total | 206.426 | 46 | | | |
| LPN | 3 | 19.33 | 1.155 | | | | | | |
| ED Tech | 3 | 17.67 | 2.082 | | | | | | |
| Total | 47 | 18.77 | 2.118 | | | | | | |

*Note.* Emergency department (ED), registered nurse (RN), master's in nursing (MSN), bachelor's in nursing (BSN), licensed practical nurse (LPN), associate in nursing (ADN), interest in patient's agenda (IPA).

**Table S4**

*Current Role/Education in the ED and Effective Communication (ANOVA)*

| ED role/position | *N* | *M* | *SD* | | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| RN (MSN) | 3 | 19.67 | 0.577 | Between Groups | 5.261 | 4 | 1.315 | 0.494 | 0.740 |
| RN (BSN) | 26 | 19.15 | 1.461 | Within Groups | 111.718 | 42 | 2.660 | | |
| RN (ADN) | 12 | 18.50 | 2.195 | Total | 116.979 | 46 | | | |
| LPN | 3 | 19.33 | 1.155 | | | | | | |
| ED Tech | 3 | 19.00 | 1.000 | | | | | | |
| Total | 47 | 19.02 | 1.595 | | | | | | |

*Note.* Emergency department (ED), registered nurse (RN), master's in nursing (MSN), bachelor's in nursing (BSN), licensed practical nurse (LPN), associate in nursing (ADN), effective communication (EC).

**Cross Analysis of Patient-Centered Care Domains and ED Clinical Experience (Years)**

**Table S5**

*ED Clinical Experience (Years) and PIC (ANOVA)*

| ED Experience | *N* | *M* | *SD* | | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| < 2 years | 21 | 17.71 | 3.149 | Between Groups | 9.639 | 4 | 2.41 | 0.255 | 0.905 |
| 2 - 5 years | 13 | 18.08 | 3.73 | Within Groups | 397.637 | 42 | 9.468 | | |
| 6 - 10 years | 2 | 16 | 1.414 | Total | 407.277 | 46 | | | |
| 11 - 20 years | 4 | 17.5 | 1.915 | | | | | | |
| > 20 years | 7 | 18.29 | 1.799 | | | | | | |
| Total | 47 | 17.81 | 2.976 | | | | | | |

*Note.* Emergency department (ED), patient involvement in care (PIC).

**Table S6**

*ED Clinical Experience (Years) and Empathy (ANOVA)*

| ED experience | *N* | *M* | *SD* | | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| < 2 years | 21 | 18.81 | 2.089 | Between Groups | 12.088 | 4 | 3.022 | 0.509 | 0.73 |
| 2 - 5 years | 13 | 18.62 | 2.815 | Within Groups | 249.529 | 42 | 5.941 | | |
| 6 - 10 years | 2 | 18.5 | 0.707 | Total | 261.617 | 46 | | | |
| 11 - 20 years | 4 | 17.5 | 3.109 | | | | | | |
| > 20 years | 7 | 17.57 | 2.507 | | | | | | |
| Total | 47 | 18.45 | 2.385 | | | | | | |

*Note.* Emergency department (ED), empathy (E).

**Table S7**

*ED Clinical Experience (Years) and IPA (ANOVA)*

| ED experience | *N* | *M* | *SD* | | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| < 2 years | 21 | 18.86 | 2.372 | Between Groups | 11.805 | 4 | 2.951 | 0.637 | 0.639 |
| 2 - 5 years | 13 | 18.85 | 2.075 | Within Groups | 194.621 | 42 | 4.634 | | |
| 6 - 10 years | 2 | 16.50 | 2.121 | Total | 206.426 | 46 | | | |
| 11 - 20 years | 4 | 18.50 | 1.915 | | | | | | |
| > 20 years | 7 | 19.14 | 1.574 | | | | | | |
| Total | 47 | 18.77 | 2.118 | | | | | | |

*Note.* Emergency department (ED), interest in patient's agenda (IPA).

**Table S8**

*ED Clinical Experience (Years) and EC (ANOVA)*

| ED experience | *N* | *M* | *SD* | | Sum of Squares | *Df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| < 2 years | 21 | 18.95 | 1.746 | Between Groups | 4.004 | 4 | 1.001 | 0.372 | 0.827 |
| 2 - 5 years | 13 | 19.23 | 1.641 | Within Groups | 112.974 | 42 | 2.69 | | |
| 6 - 10 years | 2 | 20 | 0 | Total | 116.979 | 46 | | | |
| 11 - 20 years | 4 | 19 | 1.414 | | | | | | |
| > 20 years | 7 | 18.57 | 1.512 | | | | | | |
| Total | 47 | 19.02 | 1.595 | | | | | | |

*Note.* Emergency department (ED), effective communication (EC).

**Cross Analysis of Patient-Centered Care domains and age group of the respondents**

**Table S9**

*Age Groups (Years) and PIC (ANOVA)*

| Age groups | N | M | SD | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| 18 - 24 | 6 | 18.83 | 0.983 | Between Groups (Age) | 38.07 | 4 | 9.517 | 1.083 | 0.377 |
| | 2 | | | Within Groups (age) | | | | | |
| 25 - 34 | 5 | 18.28 | 1.969 | | 369.207 | 42 | 8.791 | | |
| 35 - 44 | 5 | 17.60 | 1.949 | Total | 407.277 | 46 | | | |
| 45 - 54 | 6 | 16.33 | 5.391 | | | | | | |
| 55+ | 5 | 16.20 | 5.263 | | | | | | |
| | 4 | | | | | | | | |
| Total | 7 | 17.81 | 2.976 | | | | | | |

*Note.* Patient involvement in care (PIC).

**Table S10**

*Age Groups (Years) and Empathy (ANOVA)*

| Age group | N | M | SD | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| 18 - 24 | 6 | 18.67 | 1.751 | Between Groups | 52.624 | 4 | 13.156 | 2.644 | 0.047 |
| 25 - 34 | 25 | 19.24 | 1.422 | Within Groups | 208.993 | 42 | 4.976 | | |
| 35 - 44 | 5 | 18.20 | 3.033 | Total | 261.617 | 46 | | | |
| 45 - 54 | 6 | 16.50 | 4.037 | | | | | | |
| 55+ | 5 | 16.80 | 2.588 | | | | | | |
| Total | 47 | 18.45 | 2.385 | | | | | | |

*Note.* Empathy (E).

**Table S11**

*Multiple Comparisons of Different Age Groups (Post-Hoc test)*

| Dependent Variable | (I) age group (Years)? | (J) age group (Years)? | Mean Difference (I-J) | Sig. |
|---|---|---|---|---|
| E | 18 – 24 | 25 – 34 | -0.573 | 1.000 |
| | | 35 – 44 | 0.467 | 1.000 |
| | | 45 – 54 | 2.167 | 0.999 |
| | | 55+ | 1.867 | 1.000 |
| | 25 – 34 | 35 – 44 | 1.04 | 1.000 |
| | | 45 – 54 | 2.74 | 0.099 |
| | | 55+ | 2.44 | 0.310 |
| | 35 - 44 | 45 - 54 | 1.7 | 1.000 |
| | | 55+ | 1.4 | 1.000 |
| | 45 - 54 | 55+ | -0.3 | 1.000 |

*Note.* Empathy (E).

**Table S12**

*Age Group (Years) and IPA (ANOVA)*

| Age | N | M | SD | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| 18 – 24 | 6 | 19.33 | 1.211 | Between Groups | 26.399 | 4 | 6.6 | 1.54 | 0.208 |
| 25 – 34 | 25 | 19.04 | 1.513 | Within Groups | 180.027 | 42 | 4.286 | | |
| 35 – 44 | 5 | 19.60 | 0.894 | Total | 206.426 | 46 | | | |
| 45 – 54 | 6 | 17.33 | 2.805 | | | | | | |
| 55+ | 5 | 17.6 | 4.336 | | | | | | |
| Total | 47 | 18.77 | 2.118 | | | | | | |

*Note.* Interest in patient's agenda (IPA).

**Table S13**

*Age Groups (Years) and EC (ANOVA)*

| Age | N | M | SD | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| 18 – 24 | 6 | 19.5 | 0.548 | Between Groups | 35.905 | 4 | 8.976 | 4.65 | 0.003 |
| 25 – 34 | 25 | 19.52 | 0.653 | Within Groups | 81.073 | 42 | 1.93 | | |
| 35 – 44 | 5 | 19.4 | 0.894 | Total | 116.979 | 46 | | | |
| 45 – 54 | 6 | 17.67 | 2.422 | | | | | | |
| 55+ | 5 | 17.2 | 3.033 | | | | | | |
| Total | 47 | 19.02 | 1.595 | | | | | | |

*Note.* Effective communication (EC).

**Table S14**

*Multiple Comparisons of Different Age Groups (Post-Hoc Test)*

| Dependent Variable | (I)age group (Years)? | (J)age group (Years)? | Mean Difference (I-J) | Sig. |
|---|---|---|---|---|
| EC | 18 - 24 Year | 25 - 34 | -0.02 | 1.000 |
| | | 35 - 44 | 0.10 | 1.000 |
| | | 45 - 54 | 1.83 | 0.274 |
| | | 55+ | 2.30 | 0.091 |
| | 25 - 34 Year | 35 - 44 | 0.12 | 1.000 |
| | | 45 - 54 | 1.85 | 0.054 |
| | | 55+ | 2.32 | 0.015 |
| | 35 - 44 Year | 45 - 54 | 1.73 | 0.456 |
| | | 55+ | 2.20 | 0.163 |
| | 45 - 54 Year | 55+ | 0.47 | 1.000 |

*Note.* Effective communication (EC).