ORIGINAL RESEARCH

The impact of a global service-learning immersion experience on the efficacy of caring and professional nurse values development among nursing students in the US and Portugal: A mixed methods study

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ABSTRACT

Background and objective: Caring is a core value in nursing. Nurse educators play a vital role in cultivating caring attributes and professional values in baccalaureate students through innovative pedagogies such as global service-learning. Developing caring behaviors and professional values may improve patient care, nurse satisfaction, and retention. The objective of this study was to explore the impact of a global service-learning immersion experience on the caring efficacy and professional nursing values among junior nursing students in the United States and Portugal.

Methods: An explanatory sequential mixed methods study was conducted with junior nursing students from the United States and Portugal (n = 21). The Caring Efficacy Scale (CES) and the Nurses Professional Values Scale-Three (NPVS-3) were administered pre-and post-immersion, with one open-ended reflection question post exchange. Data were analyzed using SPSS version 30.0 with descriptive and inferential statistics, thematic analysis, and integration of quantitative and qualitative findings.

Results: A statistically significant increase was found in Caring Efficacy Scale post score (p = .045). The NPVS-3 total post score was not statistically significant; however, mean scores increased from 114.44 (SD = 15.78) to 118.94 (SD = 9.46). The NPVS-3 Caring Factor (p < .001) and Professionalism Factor (p = .040) showed statistically significant improvement post exchange. Mixed methods integration demonstrated strong convergence through a central theme of Transformative Experience.

Conclusions: Participation in a global service-learning immersion fostered meaningful transformation in students' perspectives and strengthened understanding of caring and professional nursing values. Integration of qualitative findings with improvements in Caring Efficacy and NPVS-3 Caring and Professionalism factor scores demonstrated a strong theory-to-practice connection aligned with Watson's Theory of Human Caring and Mezirow's Transformative Learning Theory. These findings support global service-learning immersion as a valuable strategy for promoting compassionate, ethical, patient-centered, globally informed nursing practice.

Key Words: Caring, Education, Global service-learning, Professional nurse values

1. BACKGROUND

Caring is recognized as a critical core value by leading national nursing organizations such as the American Association of Colleges of Nursing[1] and National League for Nursing,[2] along with international public health organizations including the Canadian Nurses Association,[3] the

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International Council of Nurses,[4] and the World Health Organization.[5] The American Association of Colleges of Nursing's Essentials[1] promulgate contemporary nursing is based on compassionate care and serve as a model for nursing education. The National League for Nursing characterizes caring as actions that enhance health, encourage healing, and cultivate hope while responding to complexities of the human condition.[6] Additionally, the National League for Nursing's Research Priorities in Nursing Education (2024-2027) identify promoting caring and civility in academic and clinical environments as a critical priority for addressing and reducing bullying and harassment.[6]

The nursing profession is guided by the ethical standards outlined in the American Nurses Association's Code of Ethics for Nurses.[7] Provision 1 of the Code of Ethics for Nurses highlights "the nurse practices with compassion and respect for the inherent dignity, worth, and unique attributes of every person".[7] (p. 1) Moreover, the Code of Ethics for Nurses elucidates "nurse educators have a particular responsibility to foster and develop students' commitment to the full scope of practice, to professional and civic values, and to informed perspectives on nursing and healthcare policy".[7] (p. 29) Educating baccalaureate nursing students to these professional nursing values has never been more critical given the increased diversity and complexity of the health care milieu.[8]

Caring is considered by many to be the essence of nursing. The American Nurses Association cites its most recent definition of nursing as encompassing caring as both an art and a science and as foundational to professional nursing. Meleis highlights caring as "central to the discipline of nursing, and the fundamental act of caring is central in the processes that bring patients and nurses into each other's lives".[9] (p. 165) However, research indicates threats to caring in nursing exist. These threats are defined by the persistent nursing shortage and nurse staff turnover rates exacerbated by the effects of the Covid-19 pandemic; advancements in medical technologies used in nursing practice that can compromise the nurse-patient relationship; increased nursing workload and patient acuity; and organizational priorities focused on meeting benchmarks at reduced costs.[10–13] This array of threats may contribute to the depersonalization of patient care, missed or neglected caring opportunities between nurse and patient, and reduced patient satisfaction.[10,12,14,15] Job satisfaction can be negatively affected when nurses face workplace obstacles that interfere with their ability to express caring behaviors toward patients.[16] This is concerning for our nursing workforce and discipline and signifies a substantial challenge that needs to be addressed in nursing education, practice settings, and future nursing education research.

The Quality and Safety Education for Nurses Institute emphasizes that future nurses must possess the knowledge, skills, and attitudes of patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, safety, and informatics as essential competencies.[17] By demonstrating these key competencies, nursing students will be able to ensure the future provision of safe patient-centered care. Attitudes associated with patient-centered care involve understanding healthcare from patients' perspectives, respecting and promoting their individual values, seeking learning opportunities with diverse patients, and actively supporting care for individuals and groups with differing values.[17] This identifies the need for humanistic nursing care in the current complex health care system.

The goal of nursing education is to develop caring and competent nurses who can foster relationships with patients, families, and coworkers while providing ethical, safe, and effective nursing care across a variety of healthcare settings.[18,19] Nurse educators play a vital role in creating opportunities for nursing students to develop caring attributes, caring competencies, and professional nurse values. Values and attitudes of compassion and caring, along with the processes involved in developing a caring relationship, can be fostered and nurtured when baccalaureate nursing students are given opportunities to acquire knowledge and experience with humanistic caring concepts throughout their educational program.[20]

Caring efficacy is a salient concept in the development of a caring nurse-patient relationship for nursing students and professional nurses.[16,21] Caring efficacy is defined as a nurse's confidence in their ability to express a caring connection with patients, thereby facilitating a caring relationship.[22] Caring efficacy also shares attributes with similar terms such as caring ability, confidence to care, caring competence, and self-efficacy in nursing.[16,21,23–26]

Professional core nurse values, defined as human dignity, integrity, autonomy, altruism, and social justice, when taught in nursing education, help foster the development of baccalaureate nursing students into caring, ethically sensitive professionals who are better prepared to care for patients who may be ethically complex and challenging.[27–29] Green noted: "When nursing students fail to develop and adopt professional values, they are more likely to violate the code of ethics, thereby harming the public image and professional credibility of nursing".[30] (p. 589)

Research has shown that professional nurse values are positively correlated with increased caring behaviors among baccalaureate nursing students; thus, nurse educators should intentionally incorporate teaching strategies to foster the development of professional nurse values.[29,31] In addition,

the AACN Essentials recognized areas of competencies that have the potential to be included in nursing education and are essential to nursing practice. AACN Essential Domain #9 is Professionalism, which is defined as the "formation and cultivation of a sustainable professional nursing identity, accountability, perspective, collaborative disposition, and comportment that reflects nursing's characteristics and values"[1] (p. 11). This specific AACN Essential Domain could support the integration of professionalism-related curricular content into undergraduate nursing education.

Global Service-Learning (GSL), defined by Hartman and Kiely, is "a community-driven service experience that employs structured, critically reflective practice to better understand common human dignity; self; culture; positionality; socio-economic, political, and environmental issues; power relations; and social responsibility, all in global context"[32] (p. 60). Global service-learning additionally offers nursing the opportunity to enhance its role in advancing global health and empowering global communities, particularly vulnerable and marginalized populations, to build their capacity for growth and development.[33] Reciprocal global service-learning in nursing education is a two-way experiential learning opportunity in which nursing students from other countries participate in service-learning activities in the United States.[34] Nursing research on the impact of global service-learning immersion on caring efficacy and the development of professional nurse values has been insufficient among baccalaureate nursing students. By gaining a more in-depth understanding of these concepts, nurse educators will be better informed to develop nursing curricula that foster humanistic caring practices and professional identity formation in students.

Purpose of study

The primary purpose of this study was to examine the impact of a global service-learning immersion experience on the caring efficacy and the development of professional nursing values among junior-level nursing students in the United States and Portugal. The secondary purpose was to interpret the essence of caring and professional nurse values from the perspective of junior-level nursing students following a global service-learning immersion experience in the United States and Portugal.

2. METHODS

2.1 Study design

A two-phase explanatory sequential mixed-methods study was employed, utilizing pre- and post-surveys with junior nursing students from the United States and Portugal.

2.2 Research questions

There were four research questions guiding this study and were as follows: Is there a significant difference in mean scores of caring efficacies in junior nursing students before and after participating in a global service-learning immersion experience, is there a significant difference in mean scores of nurse professional values in junior nursing students before and after participation in a global service-learning immersion experience, how do junior nursing students describe the essence of caring and professional nurse values in nursing when reflecting upon Watson's 10 Caritas Processes after participation in a global service-learning immersion experience in the United States and Portugal, and in what ways do the qualitative themes derived from the participant self-reflection questions inform the quantitative outcomes of the Caring Efficacy Scale and the Nurses Professional Values Scale-Three?

2.3 Theoretical frameworks

Two theoretical bases provided the foundation for the study. The first theoretical basis was Watson's seminal Theory of Human Caring, grounded in Caring Science, with an emphasis on one's moral commitment to protect and enhance human dignity.[35,36] The second theoretical basis was Mezirow's Transformative Learning Theory.[37] Transformative learning is defined by Mezirow as "learning that transforms problematic frames of reference, sets of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets) to make them more inclusive, discriminating, open reflective, and emotionally able to change".[38] (p. 58). An additional element, Kim's Critical Reflective Inquiry Model (CRI), was incorporated to support the importance of reflection in global service-learning.[39,40] The CRI comprises three phases of reflection: Descriptive, Reflective, and Critical/Emancipatory.[39] By weaving this model into the study, nursing students can be exposed to a new way of thinking and reflecting on their personal worldviews, beliefs, and values as they relate to their nursing practice. It can be a starting point for introducing students to the identification of "good practice versus ineffective practice".[39] (p. 1211)

2.4 Setting, sampling, and recruitment

The study was internet-based. Following IRB approval from the University of Massachusetts Dartmouth, and a letter of support from the University of the Azores School of Health, a purposive convenience sampling method was employed to invite and recruit a total of 21 junior-level nursing students from a public university located in Southeastern Massachusetts (US) and a public university in Portugal, who had been accepted to participate in a 2025 global service-learning immersion exchange. Potential participants were

informed the study would be conducted in two phases. Upon electronic consent, participants entered into phase one of the study. Participants were informed there would be minimal risks to participate, and anonymity would be assured via a participant-selected unique 3-digit identification number. A $20 digital Amazon gift card was provided to each participant as an incentive upon completion of the study.

2.5 Global immersion exchange

The global service-learning (GSL) immersion exchange was developed as a reciprocal international educational initiative for undergraduate nursing students from the United States and Portugal. The purpose of the GSL exchange was to provide students with structured opportunities for experiential learning across diverse healthcare systems, community-based settings, and cultural environments. The GSL immersion exchange involved junior-level undergraduate nursing students enrolled in a community health nursing experiential course in both countries. The reciprocal international exchange was designed to include approximately 8–10 undergraduate nursing students from each participating institution in the United States and Portugal. The immersion experience spanned 8–9 days in each country, with the initial phase in Portugal followed by the reciprocal experience in the United States. This bilateral structure allowed students from both countries to engage in shared learning, examine similarities and differences between healthcare systems, and develop cross-cultural relationships through collaborative educational and research activities.

Participation in the global exchange was voluntary, and interested students were required to complete an application in the early spring semester. After acceptance into the exchange program, participating students from the United States and Portugal met on Zoom to build relationships, establish communication between exchange partners, and prepare for the international learning experience. Each U.S. nursing student was paired with a nursing student from the University of the Azores to form a collaborative peer relationship that continued throughout pre-immersion preparation, the international exchange, and scholarly activities. The exchange's research topic and project focused on vulnerable individuals experiencing substance use disorder and the associated stigma in both countries.

Before the exchange, U.S. undergraduate nursing students completed introductory Portuguese language classes to improve basic communication with peers, nursing faculty, professionals, and community members and to deepen understanding of Portuguese culture and healthcare. This preparation supported culturally responsive engagement and readiness for international healthcare settings.

During the US-based part of the GSL experience, students engaged in community and healthcare activities to understand population health, health promotion, behavioral health, and healthcare systems. They visited a community health center to explore primary care, interdisciplinary collaboration, community resources, and barriers related to social determinants. Students also visited a wellness center serving individuals with substance use and mental health issues, learning about recovery models, prevention, and interdisciplinary support. These experiences exposed them to stigma, access issues, and community interventions that impact health outcomes.

Students also participated in a guided observational experience at a local hospital to examine acute healthcare delivery, organizational structures, nursing roles, interprofessional collaboration, and the relationship between acute care and community-based services. Cultural immersion experiences in the United States complemented healthcare-focused activities by offering opportunities for students to engage with local communities, faculty, and peers and to explore how cultural diversity, social context, and lived experiences influence health beliefs and healthcare practices.

The Portugal-based component of the GSL experience offered students opportunities to examine healthcare delivery and nursing practice in an international context. Students participated in community health clinic experiences, observing primary and preventive healthcare services, exploring Portugal's universal healthcare system, and examining approaches to community and population health. During these clinical observations, U.S. nursing students shadowed Portuguese community health nurses during patient care encounters and home care visits. These experiences enabled a comparative analysis of nursing roles, scope of practice, healthcare access, and models of community-based care between Portugal and the United States. Students also participated in observational experiences in a Portuguese hospital to examine healthcare organization, nursing practice, interdisciplinary collaboration, and variations in healthcare delivery models. These experiences enabled students to critically compare acute care environments, professional nursing responsibilities, and approaches to patient-centered care across healthcare systems.

In Portugal, students' experiences with public health and community agencies enhanced their understanding of healthcare disparities and services for vulnerable groups. They also visited a homeless shelter for individuals using illicit substances and a community agency offering support, treatment, and recovery for those with substance use disorders, addictive behaviors, and mental health issues. Engaging with healthcare and social service professionals, students learned about public health strategies, harm reduction, recovery-oriented

care, behavioral health interventions, and interdisciplinary support. These experiences deepened their understanding of the social, behavioral, and structural factors affecting health among marginalized populations.

A key part of the GSL experience was an international student research project on substance use disorder and stigma. Nursing students from the U.S. and Portugal examined the global effects, societal perceptions, healthcare responses, and prevention strategies. Examining the literature and recent data on substance use, community observations, and cross-cultural perspectives, students prepared research presentations. The process culminated in symposia in both countries, where students shared their findings with faculty, peers, healthcare professionals, and community members.

The GSL immersion offered students an educational experience that integrated healthcare observation, cultural exchange, international collaboration, and scholarly inquiry. Through reciprocal learning in the U.S. and Portugal, students critically examined healthcare systems, developed cultural humility and competence, strengthened their professional identity, and deepened their understanding of caring relationships across diverse populations. They engaged with diverse healthcare systems, community resources, population health initiatives, and nursing practices across sociocultural contexts. Interactions with nursing faculty, healthcare workers, community partners, and peers fostered shared learning, cross-cultural dialogue, and insight into how cultural, organizational, and societal factors shape nursing education and healthcare. These international experiences broadened students' perspectives on global nursing and substance use disorder and fostered an understanding of universal values such as human dignity, caring, advocacy, and dedication to improving health outcomes across diverse populations (see Table 1).

Table 1. Comparison of global service-learning activities in the United States and Portugal

Country	Community Setting	Global Service-Learning Activities
United States	Pre-immersion preparation	U.S. nursing students participated in introductory Portuguese language classes before the international immersion experience to develop basic communication skills and deepen understanding of Portuguese culture and customs.
United States	Community health center	Observed interdisciplinary healthcare in a community setting and explored barriers to healthcare access and resource allocation.
United States	Wellness center	Visited a community wellness center providing services for individuals experiencing substance use disorders and mental health conditions. Observed health promotion, recovery-oriented care, harm reduction and prevention strategies, and interdisciplinary approaches to behavioral healthcare.
United States	Local hospital	Participated in guided observational experiences, explored organizational structure and patient care delivery, and interacted with healthcare professionals.
United States	Cultural immersion experiences	Participated in culturally and historically grounded activities to reflect on how culture, diversity, and social context influence health beliefs and healthcare delivery in the Southcoast area of Massachusetts.
United States & Portugal	Collaborative student research and symposiums	Collaborated in student teams to investigate substance use disorder and stigma through shared learning, literature reviews, and discussions with community partners and healthcare professionals in both countries. Presented research findings and recommendations culminating in two scholarly symposia held in the United States and Portugal at the conclusion of each immersion exchange.
Portugal	Community health clinic	Observed the delivery of primary and preventive healthcare, learned about Portugal's universal healthcare system, shadowed Portuguese community health nurses during patient care and community outreach activities, and compared nursing roles, scope of practice, and healthcare delivery models with those in the United States.
Portugal	Local hospital	Participated in guided observational experiences at a Portuguese hospital, compared nursing roles and care models, examined interdisciplinary collaboration, and explored differences in healthcare delivery between Portugal and the United States.
Portugal	Public health and community agencies	Participated in community outreach activities and visited a homeless shelter serving individuals actively using illicit substances. Also visited a community agency providing treatment and recovery services for individuals with substance use disorders, addictive behaviors, and mental health conditions. Observed healthcare provided by a mobile unit, where nurses and mental health providers dispensed medications to community members in need who were unable to receive care at the agency due to a lack of transportation.
Portugal	Cultural immersion experiences	Engaged with local communities, explored Portuguese history and traditions, participated in cultural activities, and reflected on how culture influences health beliefs, healthcare practices, and patient experiences.

Note. The table above outlines the global service-learning activities students participated in during their immersion exchange in the United States and Portugal.

2.6 Data collection

2.6.1 *Instruments*

Participants were asked to complete a researcher-developed sociodemographic survey with 8 items. Caring efficacy was measured using the Caring Efficacy Scale © (CES), which contains 30 items. Scale items of the CES have a six-point response range from strongly disagree (-3) to strongly agree (+3). The scale "ratings are converted to a 1 to 6 scale for scoring and statistical analysis".[25] Higher mean scores on the scale indicate higher caring self-efficacy.[25] The reliability and validity of the CES have "yielded a Cronbach's alpha of .88".[41] (p.166) Cronbach's alpha for the CES in the current study was 0.92.

Professional nurse values were measured utilizing the Nurses Professional Values-Scale-Three (NPVS-3). The NPVS-3 © is a 28-item tool with a Likert-scale format ranging from one (not important) to five (most important). " Each item in the NPVS-3 is a short descriptive phrase reflecting a specific code provision and its interpretive commentary".[42] (p. 403) All items are phrased in the positive direction with a possible score ranging from 28 to 140. The total score is calculated by summing all items. A higher score indicates a stronger nurse professional value orientation.[42] The NPVS-3 tool is considered reliable with a Cronbach's alpha of .94.[42] Cronbach's alpha for the NPVS-3 in the current study was 0.93. Permission was obtained from the instrument authors for use in the study.

Participants in this study were asked to complete the Caring Efficacy Scale © (CES) and the NPVS-3 prior to attending the immersion exchange and once again in phase two at the completion of the exchange in March 2025. Additionally, participants were invited to complete one self-reflective question in phase two to gather potentially rich qualitative data that could inform the quantitative results.

2.6.2 *Data collection procedures*

All data collection occurred in March, 2025. All junior nursing students participating in a 2025 global service-learning immersion exchange received an email regarding the research study opportunity. Participants who consented to participating completed a sociodemographic survey, the Caring Efficacy Scale, and the Nurse Professional Values-Three Scale pre-exchange during phase one. Participants then completed the CES and NPVS-3, along with one self-reflection question, post-exchange during phase two. The self-report surveys and qualitative self-reflective question were delivered online using the Qualtrics platform. Demographic data were not collected for the qualitative reflection question in phase two. Pre- and post-exchange surveys were linked using participants' unique 3-digit ID numbers, thereby facilitating correlation of participant data post-collection.

2.6.3 *Data storage*

All completed data were downloaded from Qualtrics[43] into IBM SPSS 30.0 and stored on an encrypted, two-step authenticated, password-protected laptop for analysis. Data were available only to the PI and her dissertation committee. The protected personal PI laptop was kept secure at the PI's home. Survey data files and written critical reflection data will be retained for 3 years after the study's completion.

2.7 Data analysis

2.7.1 *Quantitative data analysis*

Data from the sociodemographic questionnaire, the Caring Efficacy Scale © (CES), and the Nurse Professional Values Scale-Three© (NPVS-3) were downloaded from Qualtrics into the IBM Statistical Package for the Social Sciences (SPSS) version 30.0. Data transformation on the 15 negatively worded CES items was not necessary prior to analysis, as the negatively worded items were reverse-coded when the CES survey was developed in Qualtrics at the beginning of the study. Descriptive statistics were computed for all study variables and examined for missing data, skewness, and outliers. Missing data in this study were managed by listwise deletion conducted in the SPSS program. Listwise deletion is the deletion of cases with missing values.[44] No missing data were noted in the sociodemographic survey results. Frequency distributions were graphically displayed in a histogram to determine symmetry of the data. Box plots were also examined for the presence of outliers; none were identified.

The normality of both the CES and the NPVS-3 scales was assessed using the Shapiro-Wilk test and showed no evidence of non-normality. Visual examination of the histograms and QQ plots for both scales indicated no presence of outliers. Levine's test for equality of variance for the CES and the NPVS-3 was conducted, and both results were non-significant. The Wilcoxon Signed-Rank test and a Paired-samples *t*-test were conducted in this study. Data were also examined to ensure that the assumptions were met for the Wilcoxon Signed-Rank Test and the Paired Samples *t*-test. Reliability measures of the Caring Efficacy Scale © (CES) and the Nurses Professional Values Scale-Three © (NPVS-3) instruments were performed in SPSS to determine the scales' Cronbach's alpha. The CES Cronbach's alpha was .92, and the NPVS-3 Cronbach's alpha was .93, both of which were considered acceptable for this study. For all statistical tests utilized in the data analyses, statistical significance was set as $p < .05$.

1) Research Question One

" Is there a significant difference in mean scores of caring efficacies in junior nursing students before and after participating in a global service-learning immersion experience?" Descriptive statistics provided information on the characteristics of the study sample, as well as the mean and standard deviation for each student's level of caring efficacy.

To determine the difference between the medians of students' caring efficacy scores before and after the global service-learning exchange, the Wilcoxon Signed-rank test was conducted. This statistical test is a "non-parametric technique analogous to the paired t test and is conducted to compare paired measures".[45] (p. 464). Additionally, this test can be useful when the study sample size is small.[45] The Wilcoxon Signed-Rank test was initially performed to examine research question one, as the assumptions for the non-parametric test were met, given the small, underpowered sample. Due to the significant Wilcoxon Signed- Rank result for the CES, a Paired Samples *t*-test was conducted. All assumptions for the Paired Samples *t*-test were met. The Caring Efficacy Scale's overall pre-post mean scores were examined using a Paired Samples *t*-test.

2) Research Question Two

"Is there a significant difference in mean scores of nurse professional values in junior nursing students before and after participation in a global service-learning immersion experience?" Descriptive statistics provided information on the characteristics of the study sample and the mean and standard deviation for each participant's nurse professional values development. To determine the difference between the medians of students' nurse professional values scores before and after the global service-learning exchange, the Wilcoxon Signed-Rank test was conducted. Additionally, an analysis of the three factors of the Nurses Professional Values Scale-3 was conducted using the Wilcoxon Signed-Rank test. The three factors included Caring, Activism, and Professionalism.

2.7.2 *Qualitative data analysis*

1) Research Question Three

"How do junior nursing students describe the essence of caring and professional nurse values in nursing when reflecting upon Watson's 10 Caritas Processes after participation in a global service-learning immersion experience in the United States and Portugal?" To elicit meaningful reflections, participants were prompted with a qualitative self-reflection question that encouraged them to consider a specific situation during their exchange experience that influenced their understanding of caring and professional nurse values. The research design intentionally sought to determine whether students could relate their experiences to any of Watson's 10 Caritas Processes. To deepen these reflections, students were also provided with guided questions derived from Kim's Critical Inquiry framework, facilitating a comprehensive and structured approach to their responses.[39]

Qualitative data obtained from participants' self-reflection questions were analyzed using Braun and Clarke's six-step thematic analysis method, as this study was inspired by theory.[46] Thematic analysis is considered flexible and allows rich, detailed data to be illuminated. Thematic analysis enables the identification of shared themes among participants.[44] It can also be used to describe the experiences, meanings, and perspectives of research subjects.[46]

2.7.3 *Mixed methods analysis*

1) Research Question Four

"In what way do the qualitative themes derived from the participant self-reflection questions inform the quantitative outcomes of the Caring Efficacy Scale and the Nurses Professional Values Scale-Three?" Integration of quantitative and qualitative data was conducted following individual analyses of each data strand to obtain a more in-depth understanding of the overall findings.[47,48]

2.7.4 *Data verification procedures*

To establish scientific rigor in the qualitative portion of this study, the researcher followed Lincoln and Guba's seminal framework.[49] Lincoln and Guba are noted as "the most common criteria used to evaluate qualitative research".[50] (p. 89) This framework includes four criteria: credibility, dependability, confirmability, and transferability.[50]

Credibility refers to confidence in the truth and interpretation of the collected data, enhanced through the use of an audit trail.[44,50] This researcher maintained a detailed record of all research planning, data collection, data analysis, and results. Credibility can also be enhanced through triangulation by using multiple methods to obtain study results, as in this study, which employed two quantitative surveys and one qualitative self-reflection question. Dependability refers to the reliability and consistency of the data over time and under similar conditions, yielding the same results with similar participants.[44,50] Confirmability refers to the extent to which the data are representative of participants' responses rather than the researcher's personal biases. The researcher included examples of participant quotes gathered from the reflections in the results section to enhance confirmability. Transferability refers to how the results from the study can be applicable to other populations or settings. In this study, the results derived may be applicable to associate degree or graduate nursing programs and to nursing programs in other countries.[44,50]

Trustworthiness through member checking for the reflection question was not possible in this study due to the anonymity of participants' responses in Qualtrics. The researcher conducted frequent debriefing sessions with her dissertation chair to review student reflection responses for potential errors in interpretation, facts, accuracy, and appropriate theme identification. Lastly, the researcher strove to maintain reflectivity throughout the research process by using a journal for self-reflection, which was shared with her dissertation chair.

2.8 Ethical considerations

Institutional Review Board approval from the university where the research was conducted was obtained prior to the initiation of the study and data collection. Participation in this study was voluntary. Consent forms to participate were sent electronically to all eligible participants. Prior to providing consent, potential participants were informed about the study's purpose, procedures, risks, benefits, and their right to withdraw at any time. The consent form emphasized that there was no academic penalty for any student's lack of participation in the study. A link to the survey instruments followed the electronic consent. Confidentiality was maintained throughout the study. To ensure participant anonymity, each participant provided a self-selected 3-digit ID number when completing the surveys in both phases. Qualitative reflective responses were not linked to any participants.

3. Results

3.1 Quantitative findings

A total of 21 CES and NPVS-3 surveys were completed in phase one. A total of 23 CES surveys and 23 NPVS-3 surveys were completed in phase two. The extra two completed surveys post-exchange could be explained by participants responding to the gift card incentive twice. After examining the data, 18 pre-post survey pairs were included in the analyses. Eight cases were excluded from the analyses due to an inability to be paired.

The study employed quantitative analyses using various statistical methods, including Descriptive statistics, the Wilcoxon Signed-Rank test, and the Paired-Samples *t*-test.

Descriptive statistics were used to describe the sample. Sociodemographic data indicated that participants (N = 21) were majority female (81.0%). The average age of participants was 21 years of age (52.0%). The majority of participants attended the University of the Azores. The majority of participants (86%) had traveled outside of their home country prior to this study. 76% of participants (N = 16) reported having participated in a service-learning or community service experience during their nursing education. There were nine participants (43%) who were familiar with Watson's Theory of Human Caring. All of the study participants had completed a self-reflection assignment during their nursing education. Lastly, only 33% (N = 6) of participants reported having work experience in a health-related field. One participant stated working as a medical assistant (see Table 2).

The Wilcoxon Signed-Rank test was conducted on the CES and NPVS-3 scales for the 18 paired data points, as all assumptions were met. Caring Efficacy Scale scores, pre-post exchange, were statistically significant (p = 0.017), Z = -2.377. The NPVS-3 pre-post exchange scores were non-significant, (p = .121), Z = -1.549. Both tests were two tailed.

Table 2. Demographic characteristics

Characteristic	Category	%
Age	21 years	52
Gender	Female	81
University	University of Azores	57
Travel outside home country	Yes	86
Participation in service learning/community service during nursing education	Yes	76
Familiar with Watson's Theory of Human Caring	No	57
Completed a self-reflection assignment in nursing courses/clinical	Yes	100
Previous work experience in a health-related field	No	67

Note. Sociodemographic results of the total sample size.

The Caring Efficacy Scale's overall pre-post exchange scores were then examined using a Paired Samples *t*-test, revealing a statistically significant increase, average pre-score mean of 4.67 (SD = .48), to post-score mean of 4.89 (SD = .60), t(-2.16) (p = .045), two-sided. In contrast, the Nurses Professional Values Scale-Three (NPVS-3) overall post- mean scores, conducted with a Paired Samples *t*-test, showed a non-significant increase from 114.44 (SD = 15.78) to 118.94

(SD = 9.46) with a *p*-value of .106 (see Tables 3 and 4).

Table 3. Pre and Post Immersion Caring Efficacy Scores Among Junior Nursing Students

Measure	Pretest M (SD)	Posttest M (SD)	*t*	*p*
Caring Efficacy Scale (CES)	4.67 (0.48)	4.89 (0.60)	-2.16	.0455

Note. Two-tailed paired *t*-tests were conducted to compare pre- and post-immersion caring efficacy scores.

Table 4. Pre and post immersion nurse professional values scores (NPVS-3) among junior nursing students

Measure	Pretest M (SD)	Posttest M (SD)	*t*	*p*
Nurses Professional Values Scale–3 (NPVS-3)	114.44 (15.78)	118.94 (9.46)	-1.71	.106

Note. Two-tailed paired *t*-tests were conducted to compare pre- and post-immersion mean nurses' professional values scores.

Non-parametric and parametric testing were conducted on the three NPVS-3 factors, Caring, Activism, and Professionalism. There was evidence of a significant change in the NPVS-3 "Caring Factor" post result, pre mean score, 39.77 (SD = 4.29), post mean score 44.61 (SD = 4.03), *t*(-5.618), ($p < .001$) and the "Professionalism Factor" pre mean score 31.66 (SD = 5.62), post mean score 33.50 (SD = 3.31), *t*(-2.227,) ($p = .40$), while "Activism Factor" remained non-significant, pre mean score 39.16 (SD = 6.91), post mean score 40.83 (SD = 4.23), *t*(-1.403), ($p = .179$), 2 sided (see Table 5).

Table 5. Pre–post immersion NPVS-3 factor scores

Factor	Pre Mean (SD)	Post Mean (SD)	*t*	*p*
Caring	39.77 (4.29)	44.61 (4.03)	-5.62	< .001
Professionalism	31.66 (5.62)	33.50 (3.31)	-2.23	.040
Activism	39.16 (6.91)	40.83 (4.23)	-1.40	.179

Note. Two-tailed paired *t* tests were conducted to compare pre- and post-immersion mean NPVS-3 factor scores.

3.2 Qualitative findings

The qualitative findings from this study were notably rich and insightful. Watson's Ten Caritas Processes were highlighted in the students' reflections, except for Caritas Process number three (Being sensitive to self and others by cultivating one's own spiritual practices; beyond ego-self to transpersonal presence) and Caritas Process number ten (opening to spiritual, mystery, unknowns-allowing for miracles). Content related to spirituality may be important for educators to consider when developing curricula to facilitate students' understanding of the concept of spirituality in nursing practice. Additionally, Watson's Caritas Process number one, "sustaining humanistic-altruistic values by practices of loving-kindness, compassion, and equanimity with self/other," was most frequently referenced in the students' self-reflection responses. Students acknowledged the need for compassionate, holistic, dignified, culturally competent care, underscoring the importance of humanistic practices in nursing care.

3.2.1 *Overarching theme: A transformative experience*

Thematic analysis revealed one overarching theme, A Transformative Experience, which students described as "Perspective changing," "Eye opening," "Stepping out of one's comfort zone," "Personal growth," "New horizons," "Inspirational," "New and increased insight," and "This experience was one that I will carry for a lifetime." Transformative learning theory was one of two theoretical frameworks guiding this study. These student quotes aligned well with Mezirow's definition of transformative learning. Mezirow defines transformative learning as "learning that transforms problematic frames of reference, sets of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets) to make them more inclusive, discriminating, open reflective, and emotionally able to change".[38] (p. 58)

3.2.2 *Subtheme 1: Humanized approach to care*

Watson's theory was exemplified in the first subtheme, Humanized Approach to Care. Several students described observing nursing care in both countries as compassionate, transpersonal, holistic, patient-centered, individualized, and relevant to sustaining human dignity. One student noted, "this experience emphasized the importance of tactile touch, individualized care, and holistic nursing care." "The nurse was able to connect with each mother and baby and demonstrated the importance of individualized care." Another student identified "a humanized approach improves patient experience, promotes trust, and facilitates adherence to treatment, reinforcing the nurse's role as a compassionate caregiver." Watson's Theory of Human Caring was also a foundational theoretical framework critical to this study. Watson defines caring as "the moral ideal of nursing whereby the end is protection, enhancement, and preservation of human dignity".[51] (p. 38)

3.2.3 *Subtheme 2: Role of the nurse*

The Role of the Nurse was illuminated by students in multiple ways. Students' perspectives on the role of the nurse were likely shaped by shadowing nurses in a community health center setting in both America and the Azores. Students expressed the importance for the nurse to be present in order to authentically listen to the patient. Having the ability to connect with patients facilitated the nurse in providing em-

pathy and reassurance. One student expressed " The nurse's actions embodied transpersonal care by addressing both the emotional and physical needs of the patient." Another student realized her love for community health by sharing " I learned that love for community health and outreach from this experience and want to implement it into my nursing career."

Another student described:
" one of the essential things in being a nurse is being present and empathetic to our clients because when we focus only in the illness we miss the other dimensions that person has a human being and we end up not looking at out [pacient] in a holistic way that is fundamental to patient-centered care."

Also included in this subtheme of the Role of the Nurse was the concept of cultural diversity, as highlighted by a student, "another aspect is respecting, accepting, and embracing diversity that exists in our community." Additionally, a student expressed that having an open mindset and being flexible contribute to the nurse's ability to provide compassionate care. Lastly, several reflections emphasized the importance of providing patient-centered care, sustaining human dignity, using touch, promoting health independence, and providing comfort through presence and clear communication when caring for patients.

3.2.4 *Subtheme 3: Professional nurse values*

The third subtheme, Professional Nurse Values, encompassed attributes such as love, dignity, respect, compassion, genuine caring, kindness, trust, and the sustaining of human dignity. One student expressed a new perspective on nursing as "not only physical care, but how I can be able to be a friend to someone in need. I was [guide] with love, respect, dignity, and confidence." A second quote referred to "keeping respect and learning with other patients will help me how to help others." Lastly, the opportunity for American students to observe nurses providing care in the Azores impacted one student, as expressed by "Being able to witness firsthand how the Portuguese nurses value the patients as individuals rather than their condition alone has impacted my values when caring for patients."

3.2.5 *Subtheme 4: Different realities*

The fourth subtheme, Different Realities, lends itself to be connected back to perspective transformation, identified in Mezirow's theory. The two-way exchange allowed students to observe differences in healthcare systems in the United States and in Portugal. It also provided students the opportunity to see the many different approaches to nursing care emphasizing culturally competent care. This nursing exchange afforded students with a glimpse into the meaning and importance of global health care.

A poignant quote highlighted the impact language barriers can have on access to healthcare:
" I got to see how difficult it was to get in a country where they spoke a language that I was unable to understand and speak. It really gave me the patient perspective in this sense, since many patients in America do not speak English as their first language, making it challenging and scary to navigate healthcare and society." Another student expressed, " Having this experience allowed me learn more about another culture and the differences between culture here and in America." Also noted was the ability for patients to have a private hospital room in the United States. This point was reflected in a statement, " If we learn and talk about individual care, we should start by individualizing the rooms."

3.2.6 *Subtheme 5: Carrying knowledge forward*

The fifth and final subtheme, Carrying Knowledge Forward, described how impactful the nursing student exchange was on students' ability to understand there is extensive knowledge to gain in nursing as evident by one student's reflection, "Through this experience, I realized there is much to learn in nursing and how many different approaches there are to the same situation." Also noted were insights into culturally competent nursing care. "The BTA experience has made me more prepared to provide culturally competent care to my future patients and will make me a better nurse in the future." The experience was also equated with personal growth as evident by a statement," It allowed me to grow immensely as a person and will influence my nursing career greatly in the future." Lastly, a third quote identified to capture this subtheme was expressed, " This experience was one that I will carry for a lifetime. It has truly represented Watson's theory."

3.2.7 *Summary of qualitative reflections*

Nursing students' reflections on this two-way global service-learning immersion exchange in the United States and Portugal revealed numerous connections to Watson's Theory of Human Caring and Mezirow's Transformative Learning Theory.[35,37] There was evidence of perspective transformation in several students and an understanding of concepts related to providing compassionate, humanistic nursing care from a global perspective.

Moreover, students were able to connect their experience to several of Watson's 10 Caritas Processes, especially Caritas Process #1, defined as "Sustaining humanistic-altruistic values by practice of loving-kindness, compassion, and equanimity with self/other." One student expressed, "described in point 1 practicing loving-kindness and equanimity for yourself and others in the 10 Caritas Processes by Watson is something that really fits into the program Bridging the

Atlantic."[35]

Finally, one student summarized the nursing student exchange experience as, "I would connect BTA to the practice of developing and sustaining a helping-trusting, authentic and caring relationship. This experience was very eye-opening and broadened my horizons to a new healthcare system and practices, which I hope to use in my own nursing career."

The exchange facilitated the acquisition of knowledge about global healthcare and transpersonal care, connecting students' experiences to Watson's Theory of Human Caring and Mezirow's Transformative Learning Theory. The exchange fostered a deeper understanding of caring and professional nursing values in practice. Ultimately, students' self-reflections demonstrated a shift in perspective for many participants and a lasting positive impact on their professional nursing practice.

3.3 Mixed methods findings: Data integration

Integration of quantitative and qualitative data was conducted following individual analyses of each data strand to obtain a more in-depth understanding of the overall findings, as illustrated in the joint display table.[47,48] Findings from the data integration of the quantitative and qualitative results are shown in Table 6.

The statistically significant Caring Efficacy Scale post-mean score converged with students' descriptions of a transformative experience characterized by humanized care, confidence, empathy, development of authentic, caring relationships, and holistic nursing practices. Participants described increased awareness of presence, touch, respect, and trust-building as essential components of caring, which helps provide explanatory insight into the observed quantitative gains. Additionally, themes related to professional nurse values and cultural awareness expand on the quantitative NPVS-3 factor findings by showing how ethical principles, respect for diversity, and cultural competence were internalized through experiential learning. Together, these integrated findings suggest the global service-learning immersion experience not only improved caring efficacy scores but also fostered enduring professional nurse values and personal transformation consistent with Watson's Theory of Human Caring and Mezirow's Transformative Learning Theory. The integrated findings also provide a richer, more comprehensive understanding of the educational impact of the global service-learning immersion than either quantitative or qualitative findings alone.

4. Discussion

The core values of caring and professionalism are vital to the development of one's professional practice and should therefore be cultivated in nursing education. Research has shown that professional nurse values are positively correlated with increased caring behaviors among baccalaureate nursing students; thus, nurse educators should intentionally incorporate teaching strategies to foster the development of professional nurse values.[29,31]

Global service-learning immersion experiences in undergraduate nursing education have the potential to foster caring and professional nursing values among students.[28] These experiences offer unique opportunities for nursing students to engage with diverse populations in unfamiliar cultural contexts. Schofield et al. contended professional caring can be fostered through service-learning pedagogy when students can reflect on themselves, thus challenging their personal beliefs and assumptions.[52] When students participate in service-learning experiences during undergraduate nursing education, caring increases, including meeting patients' spiritual and emotional needs, recognizing empathy, and transforming the affective domain.[53,54] Through the process of reflection, students discover new meanings of caring. Observing health care through a service-learning lens can lead to a transformative, reciprocal learning experience that fosters the values of caring, altruism, empathy, compassion, and cultural competence.[55–57]

The nursing education literature has not provided sufficient evidence regarding research examining the effects of global service-learning immersion experiences on baccalaureate nursing students' development of professional nursing values and caring efficacy. To the best of this author's knowledge, no research study has been identified in the nursing literature on these shared concepts as they relate to global service-learning.

The primary purpose of this study was to examine the impact of a global service-learning immersion experience on the caring efficacy and the development of professional nursing values among current junior-level nursing students in the United States and Portugal. The secondary aim was to interpret the essence of caring and professional nurse values from the perspective of junior-level nursing students following a global service-learning immersion experience in the United States and Portugal. Integration of quantitative and qualitative data enabled a more in-depth understanding of the overall findings.[47,48] The statistically significant Caring Efficacy Scale post-mean score aligned with students' descriptions of a transformative experience characterized by humanized care, confidence, empathy, the development of authentic, caring relationships, and holistic nursing practices.

Table 6. Joint display of the quantitative and qualitative findings with meta-inferences

Quantitative Results	Theme & Subthemes	Excerpts	Mixed-methods interpretation Meta-inferences
Caring Efficacy Caring Efficacy Scale (CES) post mean score: 4.89 (SD = .60), *t*(-2.16), *p* = .045 (Range 4.67- 4.89) **Nurses Professional Values** Nurses Professional Nurses Value Scale-3 (NPVS-3): **Caring Factor** post mean score: 44.61 (SD = 4.03), *t*(-5.618), (*p* < .001) (Range 39.77- 44.61)	Transformative Experience-Humanized approach to care	"This experience emphasized the important of tactile touch, individualized care and holistic nursing care" Participant #1 "A humanized approach improves patient experience, promotes trust, and facilitates adherence to treatment, reinforcing the nurse's role as a compassionate caregiver" Participant #13 "I would connect BTA to the practice of developing and sustaining a helping a trusting, authentic and caring relationship…." Participant #17 "The BTA program was very important to me and allowed me to have a new and increased insight on health care and providing [cultural] competent [ans] compassionate care" Participant #4	Convergence The significant improvement in caring efficacy and PNVS-3 Caring factor scores is explained and validated by participants' adoption of a humanized, holistic approach emphasizing presence, trust, touch, compassion, and individualized care
Caring Efficacy Caring Efficacy Scale (CES) post mean score: 4.89 (SD = .60), *t*(-2.16), *p* = .045 (Range 4.67- 4.89)	Transformative Experience-Role of the nurse	"One of the essential things in being a nurse is being present and empathetic to our clients …." Participant #9 "Another aspect is respecting, accepting, and embracing diversity that exists in our community "Participant #9 "In my opinion the health fair was amazing and we could promote health at all levels, therefore I think it goes hand to hand with the 8th practice" Participant #20	Convergence Caring efficacy outcomes are reinforced by students' expanded understanding of the nurses' role as an empathetic professional nurse engaged in health promotion, respecting diversity, creating a healing environment at all levels, and patient advocacy
Nurses Professional Values Nurses Professional Nurses Value Scale-3 (NPVS-3): **Professionalism Factor** post mean score: 33.50 (SD = 3.31), *t*(-2.227), (*p* = .040) (Range 31.16- 33.50)	Transformative Expérience-Professional nurse values	"Not only physical care but how I can be able to be a friend to someone in need. I was [guide] with love, respect, dignity, and confidence" Participant #14 "Keeping respect and learning with others will help me how to help others" Participant #15	Convergence The statistically significant increase in professionalism values is explained by students' internalization of ethical practices, respect for persons, and accountability, reflecting professional identity development
Caring Efficacy Caring Efficacy Scale (CES) post mean score: 4.89 (SD = .60), *t*(-2.16), *p* = .045 (Range 4.67- 4.89) **Nurses Professional Values** Nurses Professional Nurses Value Scale-3 (NPVS-3): **Caring Factor** post mean score: 44.61 (SD = 4.03), *t*(-5.618), (*p* < .001) (Range 39.77- 44.61) **Professionalism Factor** post mean score: 33.50 (SD = 3.31), *t*(-2.227), (*p* = .040) (Range 31.16- 33.50)	Transformative Experience-Carrying knowledge forward	"Through this experience, I realized there is much to learn in nursing and how many different approaches there are to the same situation" Participant #1 "This experience was one that I will carry for a lifetime. It has truly represented Watson's theory" Participant #19 "It allowed me to grow immensely as a person and will influence my nursing career greatly in the future" Participant #18	Convergence Caring efficacy and professional nurse values were further explained by students' intention to integrate caring principles and professional nursing values into future practice, indicating transformation
Caring Efficacy Caring Efficacy Scale (CES) post mean score: 4.89 (SD = 0.60), *t*(-2.16), *p* = .045 (Range 4.67- 4.89) **Nurses Professional Values** Nurses Professional Nurses Value Scale-3 (NPVS-3): **Caring Factor** post mean score: 44.61 (SD = 4.03), *t*(-5.618), (*p* < 0.001) (Range 39.77- 44.61) **Professionalism Factor** post mean score: 33.50 (SD = 3.31), *t*(-2.227), (*p* = .040) (Range 31.16- 33.50)	Transformative Experience-Different realities	"Having this experience allowed me to learn more about another culture and the differences between here [an] in America" Participant #4 "My BTA experience during the BTA 2025 study abroad trip was amazing…it was an eye opening experience that changed my perspective on healthcare and culture" Participant #2 "This experience was eye opening and opened my horizons to a new healthcare system and practices which I hope to use in my own nursing career" Participant #17	Convergence Exposure to diverse cultural and healthcare contexts broadened students' perspectives strengthening cultural competence and reinforcing caring and professional values reflected in the caring efficacy and NPVS-3 two factor outcomes

Note. Quantitative findings were analyzed using a paired *t*-test.

Participants described an increased awareness of presence, touch, respect, and trust-building as essential components of caring, which helps explain the observed quantitative gains. Additionally, themes related to professional nurse values and cultural awareness expand upon the quantitative NPVS-3 factor findings by illustrating how ethical principles, respect for diversity, and cultural competence were internalized through experiential learning. The results of this research study provide valuable insights into baccalaureate nursing students' perceived caring and professional nurse values through a global immersive student exchange experience.

5. Conclusion

The results of this research, conducted to understand the impact of a global service-learning immersion experience on the efficacy of caring and professional nurse values development among nursing students in the United States and Portugal, indicate significant differences between pre-test and post-test scores for caring efficacy and caring and professionalism factors related to nurse professional values. This study reveals the importance of incorporating innovative pedagogical strategies, such as immersive global service-learning in nursing education and caring and transformative theories, to promote the development of professional nursing identity and ethical nursing values grounded in humanistic caring ideals, as emphasized in the AACN Essentials.[1]

5.1 Limitations

Several limitations were identified in the study. Due to the small sample size (N = 18), the generalizability of the findings is considered limited. In addition, the use of self-report surveys to collect quantitative data may introduce social desirability response bias.[44] Moreover, potential threats to the instruments' internal and external validity may have arisen if students did not answer the survey questions honestly.[58]

Due to purposive convenience sampling, selection bias was evident, as participants were selected from a specific population. Also, students who were accepted into the "Bridging the Atlantic" exchange willingly applied to the program, which contributed to sampling bias and thus affected the generalizability of the study's findings. The sample was homogeneous, represented by participants with similar demographics related to age and level in their nursing program; the majority were female, aged 21, and from two universities. Demographic data were collected only in phase one during the quantitative data collection and not in phase two during the reflection question data collection.

Finally, this study employed a single-group pretest-posttest design without a control group or participant randomization; therefore, causality cannot be established.

5.2 Implications for nursing education, practice, and research

Curricular design that integrates theory with immersive experiential learning opportunities and values such as caring, human dignity, respect, integrity, and altruism into nursing education can help students build a strong professional identity and ethical foundation. By incorporating global service-learning, reflective practice, and the intentional teaching of caring and professional values into nursing education, nursing students can experience transformative learning. This approach better prepares students for contemporary practice and may improve patient care outcomes and future nurse retention.

This study adds new knowledge to the current body of literature, suggesting innovative teaching strategies, such as global service-learning, can foster caring in the affective domain, as well as cultural competence and professional nursing values. However, no prior studies examined the development of both caring efficacy and professional nursing values among undergraduate nursing students through global service-learning immersion experiences. This identifies potential future research opportunities regarding these concepts and pedagogy, employing qualitative, mixed-method, or randomized controlled design. Future nursing research could examine the longitudinal effects of a global immersive service-learning exchange on novice nurses' transition to nursing practice, focusing on the embodiment of humanistic caring praxis, professional identity, cultural humility and competence, and resilience in professional practice.

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Authors contributions

Dr. Richardson was responsible for study design, data collection, interpretation of results, and writing and revising the manuscript. Dr. Brisbois, Dr. McCurry, and Dr. Leone-Sheehan also assisted with manuscript review. All authors read and approved the final manuscript.

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The authors declare that they have no known competing fi-

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

DATA SHARING STATEMENT

No additional data are available.

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