Philippine Nurses Association of America, Inc.

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Editor’s Perspective

Journal of Nursing Practice Applications & Reviews of Research (JNPARR): A Diverse and Vibrant Community of Scholars

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Welcome to the latest edition of our Philippine Nurses Association of America Inc. peer-reviewed international research journal. As the Editor-in-Chief, I am truly honored to work with authors and editors on a publication that serves as a vehicle for the dissemination of scholarly works around nursing practice, education, administration, and research.

In this editorial, I want to take the opportunity to pause and reflect on the key role that the Journal of Nursing Practice Applications & Reviews of Research (JNPARR) plays in supporting a diverse and vibrant community of scholars – a role that serves as a springboard for progress in all areas on nursing practice. This journal enables nurse scholars to contribute to our understanding of health, driving forward progress, and inspiring change in nursing practice.

Nursing has long been the cornerstone of patient care, adapting to the ever-changing health care needs of the population. Nursing is a dynamic and resilient profession. It is thought of as the profession that brings comfort, care, compassion, and healing to patients. However, contemporary nurses are now not only caregivers. Nursing now expands into other areas such as research, education, and leadership/administration. Contributions to research, innovation, patient advocacy, and many other areas far transcend traditional patient care roles, actively shaping the future of healthcare. Nurses work in a variety of settings, including schools, business sectors, public and private health facilities, home health, and many other settings in the community. Although each setting informs different nursing roles and responsibilities, the primary goal of a professional nurse remains the same: to be the client’s advocate and provide optimal care based on evidence obtained through research (Tingen et al., 2009).

Evidence-based practice, utilizing best evidence as the basis of nursing practice, is recognized as critical to improving healthcare quality and patient outcomes. Although the purposes of nursing research (conducting research to generate new knowledge) and evidence-based nursing practice (utilizing best evidence as basis of nursing practice) seem quite different, an increasing number of research studies have been conducted with the goal of translating evidence effectively into practice (Chien, 2019). JNPARR contributes to the dissemination of scholarly works with this goal in mind--to be the client’s advocate and provide optimal care based on evidence obtained through research, thus improving healthcare quality and patient outcomes.

Both research studies and evidence-based projects are housed within the pages of this issue, and I want to express my gratitude for the steadfast commitment of our contributors to advancing knowledge in the nursing discipline. JNPARR stands as a beacon in this dynamic and ever-changing environment, providing a platform where rigorous research meets the analysis of peer review, warranting high standards of scholarly excellence.

Our journal is more than a repository of articles; it is evidence of the collective pursuit of knowledge in our nursing profession. In each carefully constructed manuscript, we can appreciate the author’s culmination of hours of commitment, meticulous and rigorous methodology, and the shared ambition to contribute valuable insights and knowledge to our nursing discipline. In the pursuit of academic excellence, we must also acknowledge the challenges that our contributors face in their shared commitment to scholarship—from the intricacies of research design and data collection to the nuances of interpretation and implications to practice. JNPARR is committed to supporting scholars in overcoming these challenges by providing rich feedback by content experts in our double-blinded peer review process and providing a platform for the dissemination of research that stands up to the scrutiny of the global academic community.

It is also noteworthy to acknowledge the global tapestry woven by our journal’s contributors. The diversity of perspectives, methodologies, and cultural contexts by our authors enrich our discourse within JNPARR, creating a platform where ideas intersect, challenge, and inspire change.

I extend my deepest appreciation to our reviewers, editorial board members, and the entire JNPARR team for their commitment to maintaining the highest standards of peer review. Your expertise and dedication ensure that the research published in our journal contributes meaningfully to our nursing discourse and has a lasting impact on clinical significance.

To our contributors, your passion for and commitment to advancing knowledge is the driving force behind JNPARR. Your

scholarly contributions are not only a demonstration of your individual and professional pursuits but a testament to a collective effort to influence and shape the future of nursing. Continue to push boundaries and use evidence to improve current practice, use scientific evidence to challenge assumptions, and initiate new avenues of inquiry and innovation in support of best practice.

In closing, I encourage you to peruse the pages of this latest issue with the same enthusiasm and curiosity that defines our community of scholars and that help shape our nursing profession. I hope you find that this journal serves as a source of inspiration, education, and reflection for your nursing practice.

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Cynthia Ayres, PhD., RN, FNAP
Editor-in-Chief

President's Message

OUR UNITED VOICES: WE CARE

The Journey of PNAA Impactful Contributions

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Greetings to my fellow PNAA colleagues across the country. As we journey through this remarkable past year and beyond together, I am excited to share with you our vision, progress, commitment, and impactful contributions of PNAA and constituents under the guiding mantra: **Our United Voices: WE CARE.** The PNAA Executive Board, committee chairs, including Ad Hoc Committees, have worked diligently on many projects since July 2022 to support the PNAA strategic priorities 2022-2024. WE CARE is more than just a phrase; it's an acronym that reflects our values and principles as an organization. **It stands for Wisdom, Excellence, Collaboration, Advocacy, and Equity.** These principles serve as our organization's foundation as we continue to make a positive impact on our members, the nursing profession, and the communities we serve. Since the induction of the PNAA Executive Board 2022-2024, the PNAA has embarked on a journey to uphold the principles of WE CARE through a series of transformative programs. I am pleased to share that several initiatives are fully implemented, demonstrating our unwavering commitment to our members and to the many communities we serve.

WISDOM. PNAA believes in the power of knowledge and continuous learning. Two regional conferences were successfully conducted. The leadership institute and education day programs were thoughtfully planned to ensure that members were provided with cutting-edge information, resources, and expert speakers in their respective fields of practice. The fall season came with excitement! In October 2022, the 19th PNAA South Central Regional Conference was held in Galveston, TX. The conference theme was "Our United Voices: Embracing Excellence and Advocacy." PNA Texas Golden Triangle (PNATGT) for the first time was the host chapter, led by a dynamic and energetic Mrs. Lorelei Miranda, President. It was an authentic Texan treat for all the attendees as they celebrated the Networking Night with the theme "Put on Your Boots, Y'all, SCR has Talents." In October 2023, the 21st PNAA Western Regional Conference (WRC) was held in Maui, Hawaii. This conference theme was "Lokahi (United) WE CARE and PNA Maui, Hawaii" led by Ms. Angelina Saiki, PNAMHI President; PNAMHI Executive Board; Retired Colonel Bob Gahol, WR, VP; WR Chapter Presidents and delegates; and PNAA Executive Board were all mesmerized by the majestic beauty of the island and the fun adventures with their loved ones. The 44th PNAA National Convention aboard the Royal Caribbean Wonder of the Seas was one to remember! Spanning over seven nights, it was a unique experience both learning and having time to enjoy the outdoor and indoor activities on one of the largest cruise ships in the world. The convention theme was "Our United Voices: Anchoring our Culture of WE CARE." The PNA Central Florida was the host chapter, Agapito Santa Romana, President and Mr. Manny Ramos, SCR, VP.

EXCELLENCE. Is not just a goal, it is a standard. PNAA has an established recognition program to honor outstanding contributions of its members. At the 44th PNAA National Convention, the 2023 National Excellence Achievement Awards were presented to the following recipients: Clinical Staff Nurse awardee was Lawrence A. Racsa, MSN, RN, CRRN, CNRN, SCRN, CCRN; Nurse Informaticist awardee was Susan Repotente, BSN, RN; and Pedro Oblea, PhD, RN was the Nurse Researcher awardee. The PNA Northeast, Florida received the 2023 DAISY Team Award for Advancing Health Equity by conducting free monthly clinics to indigent people in Jacksonville, Florida.

In addition, the PNAA Scholarship Committee under the leadership of Dr. Ira Martin awarded a total of eight scholarship grants, four BSN nursing students and four post graduate students for $2,000 each. The four BSN recipients of 2023 PNAA Scholarship Awards were Donnalyn Larisma, Trish Aryanna Bajao, Angela Degracia, and Micah Elissa Tiamzo. The four post graduate scholarship recipients were: Ma. Arleen E. Azores, Abraham B. Asto, Maricon B. Dans, and Lozel S. Greenwood

As a PNAA member of over 20 years, my vision for **PNAA Camp Aruga Leadership Boot Camp** became a reality through the commitment and dedication of the steering committee: Manny Ramos, South Central Region (SCR), Vice President (VP), Program Director; Rosie Antequino, Past President, PNA Central Florida, Program Manager; advisers were Dr. Gloria Lamela Beriones, President; Dr. Marlon Garzo Saria, President-Elect; Dr. Leo-Felix Jurado, Executive Director; Atty. Leticia Hermosa, Parliamentarian/Legal Adviser; and members were Manelita Dayon, North Central Region

(NCR), VP; Bob Gahol, Western Region, VP; and Dr. Warly Remegio, Eastern Region, VP. The goals of the leadership bootcamp were to increase membership engagement by building strong relationships among chapter leaders/members, enhance leaders' skills in organizational governance, increase resiliency and advocacy, and promoting the *Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity through Diversity, Equity, Inclusivity.* In January 2023, the 1st *PNAA SCR Camp Aruga Leadership Boot Camp* held at Wekiwa Springs Youth Camp Apopka, Florida was attended by 68 participants. In June 2023, the 1st *PNAA NCR Camp Aruga* was held at Potawatomi Inn, Pokagon State Park, Indiana with 58 participants. In August 2023, the 1st *PNAA Eastern Region Camp Aruga* was held at Skyland, Shenandoah National Park, Luray, Virginia with 53 participants. In addition, in October 2023, the 1st P*NAA Western Region Camp Aruga* was held at NatureBridge at Golden Gate, Sausalito, CA. These leadership bootcamps were conducted as workshops in various beautiful nature settings. Several participants commented: SCR,*" awesome and fun thank you PNAA for investing in us,"* NCR, *"it was so much fun & I learned the "Six Thinking Hats" and "we will put it to use,"* Eastern Region, *"terrific experience that exceeded my expectations and thank you PNAA."*

PNAA Mentoring Program Patnubay sa Pagtatagumpay (P3) is a new PNAA program inspired and adopted from Dr. Priscilla Sagar's PNAA iLDP project management. The purpose of the mentoring program is for mentors to guide the mentees on their career advancement. A passionate steering committee led by Dr. Priscilla Sagar, Dr. Warly Remegio, Co-Chair; advisers Dr. Gloria Beriones, Dr. Marlon Saria, & Dr. Leo-Felix Jurado, members include Manelita Dayon, Manny Ramos, Bob Gahol, Melissa Cunanan, PNAA Board Member, Ninotchka Brydges, PNAA Accredited Provider Program Director, Susan Repotente, PNAA Board Member and Chairperson Website Committee, and Carol Robles, PNAA Communications and Marketing Chairperson. To date, there are seven live webinars (pulong) thoughtfully planned & conducted by PNAA P3 Mentoring Program planners. Most of the speakers are PNAA members who are accomplished in their fields of practice.

Kababayan Emotional Wellness Program (KEWP) is led by Practice Committee Chairperson Dr. Riza Mauricio, Dr. Jennifer Aying, Dr. Anecita Fadol, and members of Practice Committee. The purpose of KEWP is to promote resiliency and emotional wellness of PNAA members (Filipino American nurses) through peer-to-peer support led by trained facilitators. These facilitators are registered nurses and PNAA Chapter leaders. Dr. Riza Mauricio, Director of KEWP received a grant through the ALL IN: WellBeing First for Healthcare campaign, to enhance the KEWP for the purpose to train Filipino American nurses with peer-to-peer support led by trained facilitators. This program is really needed by PNAA members/nurses amidst the COVID -19 pandemic which increased nurses' burn-out and stress.

PNAA iLDP –The Leadership Development Program was established in 2018 by Dr. Dino Doliente. Mr. Manny Ramos, Program Director together with Mr. Pete Calixto, PNAA Past President, Mindy Ofiana, PNAA Legislative Committee Chairperson, PNAA and chapter leaders as faculties. To date, the program has produced 127 iLDP Fellows. In 2023, fourteen (14) chapter leaders graduated from the leadership program. Dr. Priscilla Sagar, a proud graduate of iLDP, commented "I'm a product of iLDP and Mentoring Program was my project management and now being shared to my fellow Filipino nurses, I am so glad."

COLLABORATION. PNAA has strong collaborative partnerships with organizations such as Nurses on Board Coalition (NOBC) whose mission is to improve the health of communities through the service of nurses on boards and other bodies. Dr. Marlon Saria, President-Elect is a member of the NOBC steering committee. In July 2023, PNAA and PNAAF received an Organizational Award from Asian Pacific Islander American Health Forum in Washington, DC for the collaborative partnerships with CDC Project Firstline. PNAA Infection Prevention Champions (IPC) played vital roles in educating healthcare workers in series of webinars to prevent the spread of infections during the height of COVID-19 pandemic. The CDC infection prevention guidelines were interpreted in five Asian languages with one being Tagalog. In addition, PNAA has collaborative partnerships with Alzheimer's Association that brought PNAA with other organizations to Capitol Hill in May 2023, advocating and celebrating the new FDA approved Alzheimer's drug. The PNAA, in collaboration with Alzheimer's Association, developed a four-webinar series on Alzheimer's disease and other forms of dementia, including treatment and resources for caregivers, two webinars have been provided with two more remaining to educate healthcare workers and caregivers.

In May 2023, the PNAA and the Collaborative Center for X Linked Dystonia Parkinsonism (CCXDP) collaborative partnership was formalized. The three-webinar series on X-Linked Dystonia (XDP) was coordinated by Dr. Mary Dioise Ramos, Education Chairperson. In August 2023, the first webinar was X-Linked Dystonia Parkinsonism (speakers were Drs. Sharma, Bragg, and Ozelius). In September 2023, the second webinar was XDP Treatment and Management: Emerging Therapies and Best Practices. In October 2023, the third webinar was XDP Clinical Research: Updates on Trials, Advocacy Efforts, and Future Directions. X-Linked Dystonia Parkinsonism is endemic in the province of Aklan. The goal was to raise healthcare workers and public awareness about XDP.

Additionally, PNAA has strong collaborations with the following organizations with significant contributions to the nursing profession. These professional organizations include the American Nurses Association (ANA), National Coalition of Ethnic Minority Nurse Organizations (NCEMNA), Nursing Organizations Alliance (NOA), Asian Health Coalition, ALL of Us Research, and Asian Engagement and Recruitment Core (ARC).

ADVOCACY. The PNAA Human Rights Committee and Global Affairs Committee have been working in partnership with Migrant Workers Office (MWO) in Washington, DC for Post-Departure Orientation of newly arrived Filipino nurses. Dr. Gloria Beriones (PNAA President), Dr. Leo-Felix Jurado (PNAA Executive Director), and Atty. Leticia Hermosa (PNAA Legal Adviser) are working closely with Human Rights Committee and Global Affairs Committee chairpersons Ms. Marife Sevilla and Madelyn Yu and advisers Ms. Lolita Compas, Dr. Mary Joy Garcia Dia, and Ms. Virginia Alinsao to address and find solutions on reported cases of Filipino nurses, such as lack of or poor orientation, being assigned as a charge nurse without orientation, and high patient-to-nurse ratios. These newly arrived Filipino nurses are expressing that they are experiencing unsafe patient care and work environments and are scared of losing their license. Just earlier this year in January, Dr. Gloria Beriones brought to the attention of Dr. Jennifer Mensik Kennedy, ANA President and Dr. Robyn Begley, CEO, American Organizations of Nursing Leadership (AONL) and CNO, Senior Vice President Workforce, American Hospital Association, the plight of the newly arrived Filipino nurses. Our recommendation is for the newly arrived nurses to have a thorough orientation and safe nurse-to-patient ratio based on acuity of patients.

In March 2023, PNAA leaders, including Dr. Beriones, Dr. Jurado, Marife Sevilla, Madelyn Yu, Dr. Mary Joy Garcia-Dia, Lolita Compas, and Atty. Leticia Hermosa had a virtual meeting with Ambassador Romualdez and Saul De Vries, Labor Attache. The PNAA leaders informed them about the exploitative experiences of newly arrived Filipino nurses by recruiting agencies. Ambassador Romualdez expressed his full support of the PNAA advocacy initiatives and expressed his appreciation to PNAA for the help they provide to the newly arrived nurses. He designated the Labor Attache Saul De Vries as direct contact for Ms. Marife Sevilla, Chair of Human Rights Committee for any concerns about the newly arrived Filipino nurses. In June 2023, the MWO in collaboration with PNAA and the National Filipino American Lawyers Association (NFALA), agreed to provide Special-Pre-Departure Orientation Seminars (S-PDOS) to Filipino nurses in the Philippines who are preparing for employment in the US. The MWO provided S-PDOS webinars in July, August, September, October, and November 2023. PNAA consistently participated and was well represented by Ms. Virginia Alinsao, the speaker on US Healthcare System, as she explained the different healthcare facilities: hospital, long term facility, nursing home/skilled nursing facility, rehab facility, and home health as well as covering regulatory agencies. Ms. Melissa Cunanan described the living situations in the US and how nurses can integrate in their new environment. Mindy Ofiana served as the moderator. Additionally, the Human Rights and Global Affairs Committees provided four live webinar series to inform, provide true stories, real experiences, and educate Filipino nurses preparing to come to the US. The webinar International Nurses Recruitment: What You Need to Know by Atty. Angela Librado-Trinidad, Labor Attache and Atty. Felix Vinluan was provided in November 2022. The webinar International Nurses Recruitment: Nurses' Narrative and Lessons Learned by Marife Sevilla, Atty. Magen Kellam, Kaye Mendoza, and Jessica Camello was provided in December 2022. The webinar International Nurses Recruitment: Resources for Newly Arrived Nurses was provided in January 2023 by Dr. Gloria Beriones, Atty. Mukul Bakhshi, Mr. Thomas Alvarez, and Atty. David Seligman, and the International Nurses Recruitment: Avalon10: The Sentosa Nurses' Journey and Advocacy was provided on March 2023

Alliance for Ethical International Recruitment Practices. Dr. Gloria Beriones, PNAA President is a member of the Advisory Board and has been consulted by Atty. Mukul Bakhshi and vice versa on cases reported to PNAA. The partnership to protect the Internationally educated nurses is the priority goal of the alliance. Dr. Gloria Beriones and Dr. Mary Joy

Garcia-Dia participated and contributed to the revision of the Health Care Code for Ethical International Recruitment and Employment.

RESPECT. This is a fundamental right of every person and nurses play a vital role in applying this core value in nursing practice, leadership, management, education, research, and community outreach. PNAA Task Force the Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity through Diversity, Equity, Inclusion, Belongingness, and Social Justice is an exemplar. The first webinar in September 2023, Sensitivity Training to Reduce Implicit Biases Towards Transgender Patients by Dr. Marion Yates and Dr. EM V. Garcia, really made us examine our implicit biases when taking care of LGBTQ patients. Hence it is very important to be aware of our many implicit biases that hinder us from performing a comprehensive assessment and interventions due to our poor judgments as healthcare providers. Remember, every patient regardless of sexual orientation is a human being deserving of dignity and respect.

EQUITY. The CDC defines health equity as the state where every person has a fair and just opportunity to achieve his/her highest level of health. To achieve this will require a multisectoral collaborative partnership among professional organizations, civic organizations, churches, private individuals, or community to address and find solutions to social determinants of health. Nurses on Board Coalition (NOBC), of which the PNAA is a member organization, promotes engagement and leadership roles of minority Filipino nurses. The PNAA Task Force, the Future of Nursing: 2020-2030: Charting a Path to Achieve Health Equity through DEIBSJ, wants to focus on transgender patients' health, well-being and what really matters to them. The PNAA Task Force's mission is to achieve health equity through diversity, equity, inclusion, belongingness, and social justice. A total of three webinars in 2023 on *Sensitivity Training to Reduce Implicit Biases Towards Transgender Patients* were delivered.

These impactful contributions of PNAA to the nursing profession, healthcare, and communities we serve are exemplary endeavors of Standing and Ad Hoc Committees led by profoundly committed and dedicated leaders and members. The mission of PNAA is alive. My profound appreciation to the PNAA Executive Board and the Standing and Ad Hoc Committees for a job well done.

Gloria Lamela Beriones, PhD, RN, NEA-BC
President 2022-2024
Philippine Nurses Association of America, Inc

JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Leveraging Community Partnerships to Empower Filipino Texans towards Patient-Centered Outcomes Research (PCOR)

Sarah Christie, Pamela E. Windle, Shela E. Ecobiza, & M. Danet Lapiz-Bluhm

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Conflict of Interest
The authors declare no conflict of interest.

Abstract

Background: Understanding the barriers to healthcare experienced by Filipino Americans (FAs) can provide insight towards implementing patient-centered care that considers key components that limit healthcare accessibility for this population. Patient-centered outcomes research (PCOR) can facilitate the discovery of healthcare issues, facilitators and barriers to health and healthcare, community engagement, and data dissemination. The Filipino American Patient-Centered Outcomes Research "Nayon" (village) (FAPCORN) network was established in Texas.

Objective: This paper describes the health and healthcare issues among FAs residing in Texas and associated factors to promote community engagement toward PCOR.

Methods: FA stakeholders in Texas attended community-based "pulong at samasama" (PASS) or focus group meetings which surveyed their health and healthcare priorities and engagement. A total of ten PASS meetings (in-person and virtual) were held over a 20-month period and attended by 87 total stakeholders (8-10 per meeting). Data were analyzed for emerging themes using NVivo software.

Results: Common health issues shared include diabetes and hypertension. Barriers to health and healthcare are lack of knowledge about the prevention or management of these chronic conditions, limited health access related to cost and transportation, complexity of the healthcare system, cultural barriers, and lack of Filipino providers. Participants suggested some mechanisms to address these issues including expansion of telehealth, utilization of nurse practitioners, implementation of culturally sensitive care, education on selecting and using insurance, greater emphasis on preventative healthcare education, access to affordable healthcare, information on immigrant healthcare services, organized community engagement with incentives, patient-friendly technology, and the opportunity to participate in FA outreach.

Conclusion: The FAPCORN meetings provided FAs the opportunity to voice their health and healthcare issues. The data highlight the need for cultural considerations in patient education, outreach, and accessibility to healthcare. Knowledge of these issues can help inform community-based interventions to improve patient-centered health outcomes and address health inequities.

Keywords: *Filipino Americans, Texas, health priorities, community issues, patient-centered outcomes research*

Background

In the past three decades, the number of Asian Americans in the United States (US) has tripled making them the fastest growing racial-ethnic group. The third-largest Asian American population (Budiman, 2021), Filipinos in the US experience health disparities. Filipino Americans (FAs) have higher diabetes and cardiovascular disease incidence and mortality rates than other ethnic populations, including other Asian American populations (Araneta et al., 2005; Jose et al., 2014; Nguyen et al., 2020; Lapiz-Bluhm & Nguyen, 2020). The disproportionate effects of these chronic diseases on the FA population make it imperative to distinguish FA from other Asian American populations. However, research data often aggregates all Asian American subgroups which can lead to a false representation of the FA population in these studies (Holland, 2012).

In 2019, the Patient-Centered Outcomes Research Institute (PCORI) funded the "Mag-PCOR Muna Tayo" project to build capacity and engage FAs in patient-centered outcomes research (PCOR) and conduct comparative effectiveness research (CER) (PCORI, 2021, Vargas et al., 2020). The aim of the project was to create a community-based nationwide FA PCOR "Nayon" (translation: village) or FAPCORN in five US states with large FA populations: California (CA), Hawaii (HI), Texas (TX), New York (NY), and New Jersey (NJ). An academic research collaborator (ARC) and a patient advocate leader (PAL) led each FAPCORN. The ARC is an active member of the Philippine Nurses Association of America (PNAA) and the PAL is an engaged community partner. Both the ARC and the PAL engage with the FA community to create a local infrastructure designed to address community needs and improve healthcare based on the concerns voiced by community stakeholders.

Filipinos in Texas

Texas is among the top five states with the greatest Filipino population in the US, about 139,905 (United States Census Bureau, 2019). The current health policies in Texas create challenges for residents to access adequate healthcare. One of the fastest-growing states, Texas has the highest uninsured rate in the US, with nearly onethird of residents lacking access to health insurance (Blumenthal & Radley, 2021). Additionally, it remains one of the 14 states yet to expand Medicaid under the Affordable Care Act (Blumenthal & Radley, 2021). Texas has high rates of premature death from preventable conditions and lacks mental healthcare related to limited public health funding. The cost of healthcare per household is disproportionately higher than other states. Addressing the disparity in health-care accessibility among Texas residents is the first step to improving overall health measures.

Within the context of the healthcare access issues in Texas, this paper reports on the health and healthcare concerns as well as other related issues identified by Filipinos residing in the state. A community-based patient-centered outcomes research approach was used to elicit important health and healthcare issues among Filipinos in Texas.

Methods

Design, Setting and Sample

This study is part of a larger project, "*Mag-PCOR Muna Tayo:* Nationwide Capacity Building for FAs to Engage in PCOR and CER" (PCORI, 2021). Using a qualitative exploratory research design, this study held focus groups among Filipinos who live in Texas to address 18 open-ended questions on their perceptions, experiences, and ideas related to health and healthcare in the FA community (see Table 1).

During the project period (2019-2021), the two Texas FAPCOR "*nayon*" leaders (i.e., ARC or Academic Research Collaborator and PAL or Patient Advocate Leader) collaborated with the local Texas chapters of the Philippine Nurses Association of America (PNAA). Stakeholders who responded were then asked to participate in the "p*ulong at sama-sama*" (PASS) or focus group meetings. Stakeholders were requested to encourage others to participate. The stakeholders included Filipino patients and family members, healthcare providers, community organizers and leaders, caregivers, researchers and students, members of government, non-profit representatives, and religious affiliates. Flyers via email were also distributed to increase participant recruitment.

Prior to the COVID-19 pandemic, the PASS meetings were held in locations convenient and accessible for participants, primarily in Houston, Texas where both the ARC and PAL reside. During the COVID-19 pandemic, the PASS meetings were held virtually via Zoom. This change in platform allowed the ARC and PAL to reach out to other PNAA chapters and Filipino organizations beyond the Houston area which improved representation.

Data Collection

Ten (10) one-hour PASS meetings (in-person and virtual) over 20 months were attended by Filipinos (8 to 10/meeting; N = 87). The participants were asked about personal and familial experiences and perceptions related to health and healthcare issues, barriers to quality healthcare, health and healthcare access, engaging FAs in PCOR, dissemination of PCOR results, and FAPCOR prioritized healthcare issues (see Table 1). The PASS meetings started with the ARC and PAL explaining the purpose of the meeting along with obtaining consent to participate and model release for any photographic documentation. Attendees were informed that participation was voluntary and of the protection of personal information, the confidentiality of data, and the aggregation of data. For in-person meetings, the PAL collected

Table 1

List of Questions to the Filipino American (FA) Stakeholders

Question Category	Questions asked
Identification of healthcare issues	1. What general issues are important to you? What about health-specific issues? 2. What general issues are important to your family and Filipino friends? What about health-specific issues? 3. What have been your experiences with health care? What about your family? Your friends?
Barriers to good quality care	4. What do you consider barriers to good quality health care? What about your family and/or friends? 5. What do you personally think could be changed to improve the current healthcare system?
Information needed about health and healthcare access	6. What are the things you would like to know more about healthcare and healthcare access? What about your family and/or friends?
Engaging Filipino Americans	7. What do you personally think would engage more Filipinos to participate in community-led activities to promote better health care? 8. How would you like to be involved in engaging Filipino Americans on their health care? Please describe.
Dissemination of results	9. How do you think your Filipino friends would like to receive research results from this project or any other projects involving Filipino Americans? 10. How would you like to be involved in disseminating research results to other Filipinos? 11. How would we engage other Filipino-Americans and Filipino healthcare stakeholders to disseminate results from the PCOR project and other research projects involving Filipino-Americans?
Prioritized health care issues	12. What would we prioritize as the most important health care issue of our state nayon? 13. What are your ideas in order to address these prioritized health care issues? 14. How would you like to be involved in addressing these prioritized healthcare issues? 15. How would we engage other Filipinos and stakeholders to help us resolve these prioritized issues? 16. How would we disseminate the information to other Filipinos? 17. What specific steps should we take from here on? 18. What have we learned from this research project? What are its strengths and weaknesses? What are your suggestions to make it better?

demographic questionnaires (i.e., age, gender, employment status, type of insurance, and community role or stakeholder status) which was done before the start. When the meetings were held virtually, the PAL emailed the demographic questionnaire to the participants prior to the PASS meeting. The PAL sent the completed questionnaires to the National Coordinating Team to enter the data into Excel.

The participants were encouraged to elaborate on answers, clarify, and respond in their preferred language. Most participants responded in English although some used a combination of English and Tagalog. The Texas FAPCOR "*nayon*" leaders are fluent in English, Tagalog and Visayan. There were no requests for other Filipino languages during the meetings. Questions were presented one at a time to encourage reflection and elaboration. Once no new themes emerged, the ARC-PAL team guided stakeholders to the next question. At the close of the meeting, the participants were reassured that responses are secure and only available to the research team. They then partook in some refreshments and received a $10 gift card in appreciation for their participation. During the COVID-19 pandemic when meetings were held via Zoom, the participants received a $15 electronic gift card which was sent by e-mail.

This project was approved as a non-regulated research activity by the Institutional Review Board of the University of Texas Health Science Center at San Antonio (UT Health San Antonio). The project's National Coordinating Center is located at UT Health San Antonio.

Data Analysis

Descriptive statistics were used to analyze the demographic data. The qualitative data analysis followed the six steps developed by Braun and Clarke (2006), which include familiarizing, assigning codes, searching for patterns or themes, reviewing themes, defining themes, and reporting. Field notes were taken during the meeting by both the Texas ARC and PAL; they reflected the points at the end of the meeting and noted when data saturation was reached. The ARC and PAL subsequently compiled the field notes which they submitted to the National Coordinating Center at UT Health San Antonio. Three staff at the National Coordinating Center read and re-read the field notes for familiarization. Two staff members were assigned codes. Subsequently, data was analyzed using the NVivo software (QSR International). The themes were shared with the Hawaii FAPCOR "*nayon*" ARC and PAL for feedback and further review. The data were also shared with the FA community in Texas during a town hall meeting via Zoom. The town hall meetings provided the opportunity to disseminate the results and get feedback on whether the findings are reflective of the views of the wider FA community in Texas. The general FA population who attended the town hall meeting agreed with the data presented.

The trustworthiness of the data analyses was ensured through the implementation of procedures to enhance credibility, transferability, dependability, and confirmability (Stahl & King, 2020) Credibility was established through prolonged engagement, discerning observation of the participants during the interview, and the use of Braun and Clark's six steps in data analysis. Both Texas FAPCOR leaders (i.e., ARC and PAL) are Filipino Americans known and trusted in the community, which enabled them to obtain detailed information and have a sociocultural context to the data gathered, allowing transferability. Great effort was made to eliminate the researchers' bias to ensure dependability by remaining objective, and confirming that the findings were derived from the information obtained from the participants. The findings, interpretations, and conclusions of this study were compared with the results of similar studies to verify confirmability. Triangulation, having both leaders provide observations and review the analyses to ensure that the account is robust and comprehensive, was used to ascertain credibility and confirmability.

Results

Demographics

Table 2 shows the demographics of the participants. Most participants were female (62%), college graduates (68%), employed full-time (52%), and have employer-based health insurance (52%). All the participants self-identified as Filipino American belong to various Filipino American community stakeholder groups including healthcare providers (32%), patients (21%), family members (13%), church members (9%), caregivers (8%), community leaders (7%), academics (5%), non-profit representatives (2%), and policymakers (1%).

Responses to Open-Ended Questions

The responses of the participants to the 18 open-ended questions (see Table 1) are categorized into six general categories: Identification of prioritized healthcare issues, barriers to good quality healthcare, information needed about health and healthcare access, engaging FAs in research and dissemination of results. The themes within each category are reported below.

Identification of Health and Healthcare Issues

The participants shared their concerns about health and healthcare issues that affected either themselves or family members. Issues identified include the prevalence of chronic diseases and lack of relevant education on prevention and management, as well as mental health.

Prevalence of Lifestyle Modifiable Conditions and Lack of Relevant Education. Many participants identified lifestyle-modifiable chronic conditions such as diabetes, hypertension, obesity and chronic kidney disease as leading health concerns among the FA community. The increase in the incidence of diabetes and hypertension among Filipino Americans was attributed to an underlying lack of education on disease prevention and management. One participant shared, *"We need to ask ourselves how to prevent this disease, have better food choices, and [have] education about the cause of these diseases."* Another participant commented on the differences in preventative care in the US and the Philippines, *"There is a lack of education and preventative care. We focus on the cure here in the US. In the Philippines, public health goes to the people's houses. But here, nobody wants to go to a public health clinic."* Many participants also pointed to the composition of the FA diet as a barrier to adopting a healthy lifestyle due to Filipino foods being typically high in salt and fat. Education on how to prepare healthier foods was highlighted as a need. One participant stated, *"I want to know how to cook healthy Filipino foods- less fat, low salt."* This knowledge is important as *"access to food is very easy - high cholesterol, high-fat meals, and very tasty food."*

Mental Health: Stigmatization and Lack of Access. Mental health awareness was also recognized across meetings as an important issue, specifically due to stigmatization. Several participants shared the lack of mental health resources and the stigma associated with mental health issues. One participant opened this discussion by stating, *"We, Filipinos, are very proud. We don't want to talk about anxiety or depression because we don't want to be branded in our community. It is a stigma. It is a secret. We don't say it."* Another participant disclosed their personal

Table 2
Demographics of the Filipino American (FA) stakeholders who participated in the *"pulong at sama-sama"* (PASS) or focus group meeting

Variables		Frequency	Percentage
Gender	Male	29	34%
	Female	53	62%
	Unidentified	5	4%
Age	21-35	17	20%
	36-50	12	14%
	51-65	26	32%
	66-80	17	20%
	>80	6	7%
	Did Not Answer	6	7%
Education	High School	0	0%
	Some College	8	9%
	College Graduate	58	68%
	Graduate	15	18%
	Did Not Answer	5	5%
Employment	Full	44	52%
	Part-time	3	4%
	Retired	18	21%
	Unemployed	2	2%
	Student	4	5%
	Homemaker	2	2%
	Disabled	2	2%
	Did not answer	10	12%
Insurance	Employer	44	52%
	Medicare	24	28%
	Medicaid	6	7%
	Other	11	13%
	None	0	0%
Community/ Stakeholder Role	Filipino American	77	91%
	Family member of a Filipino American Patient	11	13%
	Church	8	9%
	Patient	18	21%
	Community Member	33	39%
	Community Leader	6	7%
	Caregiver	7	8%
	Researcher/ Academic/ Student	4	5%
	Healthcare Provider	27	32%
	Policy Maker	1	1%
	Non-profit Representative	2	2%
	N/A	5	6%

experience with friends and family in the FA community regarding mental health: *"I have had to convince three different people not to end their life. It is very serious that they should not feel down about themselves and feel worthless. It depends on your economic [class]. The middle class can afford the therapies, but their family has a stigma about mental health. The lower class cannot afford health care. There is limited or no access to the therapies."*

All participants concurred that mental health was an issue and two key interventions that could potentially address the issue: engaging more members of the FA community to talk openly about mental health, and more mental health resources. One participant proposed this solution: *"We need to know how our Filipino American culture perceives mental health. How we talk about it amongst our loved ones. From there, we can adjust how we can share our experiences and spread awareness to others."* Another participant emphasized the importance of *"mental health management resources, preventative mental health care, and access to care"* as leading solutions.

Barriers to Good Quality Healthcare

Participants shared their concerns about barriers to good quality healthcare that affected either themselves or family members. Emerging themes included: Health care affordability and lack of health insurance, limited access to healthcare services, complexity of the healthcare system and its quality, and need for culturally and linguistically congruent care.

Healthcare Affordability and Lack of Health Insurance. Having affordable healthcare was recognized as a fundamental facilitator of good health among the participants. However, many participants, both with and without insurance, expressed concerns about accessing healthcare in times of need. One participant asked, *"What if we don't have insurance, or don't have a job and will get sick?"* Lack of insurance creates angst and fear, *"We don't have Medicare and my fear is when we get sick."* For those with insurance coverage, healthcare accessibility and affordability is a concern. One insured participant reported, *"Our barrier is the changes done with Medicare, especially our medication co-pay. My medications are expensive. One cost $200+ and another one $100+, and this is monthly. Yes, we do have supplemental insurance, but the co-pay is high."* Similarly, several other participants emphasized increasing copays and the affordability of medications vital to their well-being. One participant with diabetes stated, *"My medication, 'Trulicity' has a co-pay of $500 per month."* Healthcare providers participating in the discussion also shared concerns for their patients pertaining to healthcare costs and coverage. A physician noted, *"There are issues with some health insurance for some patients. It is hard to find a physician to take care of them when they are discharged."* A nurse who interacts with many uninsured patients highlighted the need for more information about resources available for the uninsured, *"If there is no insurance, where can a person get MD access, PAP smear… etc."*

Limited Access to Healthcare. Access to healthcare was a shared concern among the participants as it related to provider availability and transportation. Due to the lack of providers, the participants shared that they resort to emergency services. According to one participant, *"It's hard to get an appointment with my father's doctor so we must use emergency services for my father's treatment sometimes.*" Another participant drew attention to the disparity of specialists in rural areas as a main barrier that prevents the management of health conditions, *"It is hard to get a specialist here like an endocrinologist, pedia, [and] heart. You must be referred outside our area and depending on the kind of insurance you have, in-network or out of network, you must pay upfront, especially for surgeons."* A healthcare professional weighed in on the disparity of providers and that there is a *"concentration of MDs in urban areas, not in rural areas. There are not enough MDs in smaller towns where patient care is delayed. What if a patient has a stroke? There is a time limit to be seen in order to prevent further damage."*

Participants indicated difficulty in arranging transportation to medical appointments in areas with minimal or no public transportation. Transportation barriers mainly applied to families in rural areas outside city limits, however, those residing in urban areas also voiced issues with having reliable and timely transportation. For example, one urban resident discussed the difficulties in relying on public transit: *"Sometimes I would be turned away for showing up too late and would have to take more time off work to set up another appointment."* Participants also had difficulty with personal transportation and that of family members. Many participants were caregivers to family members who could not drive. One participant shared his struggles to get his father to his appointments, *"My father can't drive to his doctor's appointment, so I have to bring him to see the doctor on my off days."* Older adults discussed feeling remorse for relying on family support for doctor visits, and some admitted to occasionally skipping appointments to not burden loved ones. One popular solution proposed at the meeting was to increase the availability of telehealth appointments and remove the transportation barrier. Other participants highlighted the need for *"more nurse practitioners as a bridge for access to care."*

Complexity of the Healthcare System and its Quality. Many participants expressed difficulty in navigating the hospital systems in both in-patient and out-patient settings. Issues with the continuity of care were raised, one participant explained, *"There are a lot of physicians which brings*

a lack of coordination. I have a PCP, an endocrinologist, and another MD. They don't talk to each other. There is a lack of follow-up." Another participant further illustrated, *"There is a lack of transition care, especially at discharge with all the medication changes."* In addition to the lack of coordination, many participants also expounded on the desire for more time with healthcare providers to fully understand their health issues. One participant disclosed, *"I wish I had more time with my physician. Every time I go in I leave with more questions because I only get 10-15 minutes to go over my health."* A physician who participated in this discussion explained, *"the amount of time physicians are allotted to see and spend time with the patients is very short."* The participants were unanimous; there needs to be more time with healthcare providers so they can provide explanations to the patients and better coordination of care.

Culturally and Linguistically Congruent Care. Communication was one of the most common recurring cultural barriers experienced by participants. One participant reported, *"language is my main issue. I don't understand what the doctor is talking or explaining about."* Another participant stated the only way she could go to the doctor is if she brought her daughter to translate. In addition to translation services, participants agreed that having access to more FA physicians could help overcome cultural barriers and result in better care. One participant stated, "We want more Filipino doctors so they can understand our culture and have a good rapport." Other participants suggested having more FA-specific services to help bridge the cultural gap often experienced in the clinical setting. A healthcare provider noted her experience witnessing the disparity in the level of care and understanding compared to other ethnicities, *"Equality in treatment is needed, especially with minorities."* All participant statements shared a common theme – cultural sensitivity in healthcare is necessary to provide quality care.

Information Needed about Health and Healthcare Access
In terms of information pertaining to health and healthcare accessibility, the participant shared that they need information on how to navigate the healthcare system and technology, education on healthcare insurance and coverage, assistance accessing healthcare technology, and information on how to advocate for a greater focus on primary care.

Navigation of the Healthcare System and Technology. The participants shared the difficulty in navigating the healthcare system especially based on their immigration status. One participant discussed the need for clarification on what services were available and explained, "*As a non-immigrant or a new resident in this place, what are the basic benefits we can tap in? For the green card holder, what are the basic benefits the county or the city can provide? I wish they will itemize the different benefits for the non-immigrants, residents, or citizens. There is a lot of confusion if they can access the services or not.*" In agreement , another participant illustrated the ambiguous nature of Medicaid and the difficulty navigating the system: "*I have Medicaid and need assistance in finding the correct form to apply. I need to know, being an immigrant, what are the eligible services available to me.*" A non-immigrant also reported having difficulty navigating the complexities of the healthcare system, "*I want to know where a patient can be referred for questions on insurance and what will be covered.*" A healthcare provider brought attention to the gaps in insurance coverage when in transitional periods, "*we have to buy personal insurance until we get Medicare. There will be a gap if we want to retire early.*"

In addition to information related to navigating the insurance system, many participants expressed concerns for senior members of their families related to use of technology to access healthcare. With scheduling and managing appointments becoming more dependent on being tech-savvy, many seniors are left feeling frustrated and unable to get the care they need. One participant stated, *"how can seniors get gadgets to access care? Maybe through assistance with technology?"* In agreement with his statement, another participant stated, *"We need a program or resource to assist with working around technology."*

The need for resources that engage and educate FAs in primary care and disease prevention also was expressed by many participants. A healthcare provider participant stated, *"The issues are access to care, lower cost, and how to advocate/educate (especially school children) the need for preventive care. There are programs but not available to all people."* Other participants suggested having more FA-specific information services to help bridge the cultural gap often experienced in the clinical setting. One participant suggested, *"We need Fil-Am information center. We have a lot of needs and need to include Filipino doctors to help with our information."*

Engaging Filipino Americans
When asked for suggestions on the best approach for healthcare engagement in the FA community, many participants subscribed to the idea of health promotion activities tied into FA events as well as widespread advertisement. One participant advised, "*Here in Texas, especially in the Valley, when we have celebrations, we have different booths that provide different information. We collaborate with the Fil-Am association and introduce to them what is the mission and vision of the project.*" Many participants also suggested integrating health promotion in community institutions such as church gatherings, boy scout and girl scout clubs, event centers, the Filipino Student Association, nursing organizations, and other volunteer organizations. One solution offered by a participant who is a healthcare professional was to contact local nursing organizations to host events that

focus on diet and exercise. The participant emphasized the importance of FA community engagement, "*If both nursing and Filipino American organizations can get together to focus on the education and implementation of a healthy lifestyle, it will engage the community*." Additionally, these events should be advertised through multiple media such as Facebook, Filipino American food markets, hospitals, and Filipino TV. Many participants stated that they would be willing to participate in these events if advertised properly and had someone to accompany them to the event. One participant stated, "*Engage one family member that is social and the whole family will participate.*" Another participant acknowledged, *"If our friends are doing it, I will be much more likely to participate in any activity."*

Dissemination of Results and Prioritized Healthcare Issues
Suggested venues for disseminating research results were social media, Filipino newsletters and newspapers, news services like Balita News and GMA Pinoy TV, and community resources like nursing organizations and Filipino stores. Others suggested dissemination through professional conferences, a healthcare provider said, *"I would like results from research like this to be discussed during nurse conferences and forums, so I can share the information with my patients."* Communicating the results to Filipino organizations was also considered important as suggested, *"Connect all Fil-Am organizations and ask representation from the Chamber of Commerce to share the outcome of your research project. Then we tie it up with the Consulate and become a focal point to get information about medical benefits."*

Discussion

The goal of this study was to understand the health and healthcare experiences of Filipinos in Texas. Through the engagement of diverse FA stakeholders throughout the state, the study identified their prioritized health and healthcare issues, barriers to good quality healthcare, the information needed about health and healthcare access, FA community engagement, and dissemination of research results. To the best of our knowledge, this study is the first in-depth health and healthcare assessment of FAs in Texas despite the state being top five nationally in terms of the Filipino population. Research among Filipinos in the US has been limited, a limitation significantly related to health disparities.

A systematic review of health issues among Filipinos highlighted the prevalence of lifestyle-modifiable cardiometabolic diseases such as diabetes and hypertension among Filipinos (Lapiz-Bluhm & Nguyen, 2020; Coronado, 2021). FAs in Texas affirmed that the same issue continues to plague the community, along with obesity and kidney diseases. They recognized that diet plays an important role in preventing cardiometabolic disorders. However, they have difficulty finding the balance of a healthy diet and lifestyle while also eating Filipino foods. Hence, it is important to provide culturally congruent education on self-care and healthy lifestyles to this group. Current dietary surveys do not account for culturally specific foods consumed in the FA diet which consists of rice and deep-fat fried food (Vance, 2004). Staples of the FA diet include rice, fried fish ("*tuyo*"), preserved red meat ("*tocino*"), sausage links ("*longaniza*"), and egg rolls ("*lumpia*") which can be calorie laden and high in fat and salt. As in most cultures, it is challenging to remove a staple food that is incorporated into many dishes and is affordable compared to other foods (Leake, 2003). The importance of understanding the FA diet is the foundation for the implementation of a healthy lifestyle in this population. Education on a healthy diet, which was identified by the participants, must take into consideration. The expectation to totally remove many staple Filipino foods is impractical for sustaining a healthy diet.

The affordability of healthcare was considered a leading barrier to health despite the majority of participants having insurance. From this study, 52% of participants had insurance through their employer, 28% had insurance through Medicare, 7% had Medicaid, 13% were listed as other, and 0% were uninsured. The cost of healthcare affects their ability to seek healthcare. Expensive copays, deductibles, and premiums discouraged treatment. They shared seeking medical attention if they felt it was necessary; they would try home remedies for acute illnesses. They seemed to understand the importance of primary care and preventative medicine, but participants delayed health check-ups due to the cost despite having insurance.

Most participants were >50 years and discussed the hassles and cost of dealing with maintenance medications for multiple comorbid chronic illnesses. These issues influence the management of these disease conditions and are associated with poor outcomes. It is recognized that the high drug prices in the US, which can be twice as high in other comparable counties, are harmful to patients and the country as a whole (Mulcahy et al., 2021). Studies show that the high cost and out-of-pocket expenses of drugs cause many Americans – particularly those with chronic conditions such as diabetes – to delay or skip taking needed treatments (Cohen & Cha, 2019; Cohen & Boersma, 2019). Filipinos in Texas are especially vulnerable due to the non-expansion of Medicaid in the state (Blumenthal & Radley, 2021). Additionally, the difficulty in understanding how to navigate the system, use of related technology, and immigration status may further complicate issues among Filipinos.

Accessibility to medical facilities and personnel was another recognized barrier to healthcare. Many reported transportation issues related to their inability to drive or the location of their residence. Studies show that rural residents who exhibit poorer health are more likely to be disabled,

uninsured, and have greater travel burdens than their urban counterparts (Laditka, 2009).This disparity in healthcare also leads to family members assuming caregiving and transportation responsibilities, which can be stressful.

The lack of healthcare access related to transportation highlights the need for alternative ways to deliver care. The COVID-19 pandemic experience showed that telehealth can be an alternative means of providing care to the greater population. Telehealth has been used by the US Department of Veterans Affairs (VA) before the pandemic with reported savings in cost and facilitation of health care. By implementing telehealth for rehabilitation services, the VA reduced the cost of services for both provider and patient and saved over $2317.51, reduced patient travel 179.8+/-182.7 miles per patient, saved an average of $1150-$1330 in travel expenses per patient (Levy et al, 2015). Using telehealth services can address transportation barriers and improve healthcare access. In addition to accessibility issues regarding transportation and geographical distance to available doctors, many patients reported issues with the quality of service received (Levy et al, 2015).

Receiving healthcare from providers who are either Filipinos or understand the cultural complexities in providing care to FAs was a consistent theme. Many participants discussed their experiences with language barriers, the lack of resources that could better accommodate health instructions for FAs, and the need for better rapport with doctors through having more FA providers. The importance of this finding is seen in promoting a healthy lifestyle while accommodating the FA diet. A culturally tailored intervention can lead to better results rather than blanket referrals to what is considered traditionally healthy by American standards. The language barriers also support the need for more culturally sensitive care. The importance of having a means to effectively communicate during a doctor's visit cannot be understated. Language barriers are associated with unequal access to healthcare, leading to unequal health outcomes and health disparities in the population (Hilfinger, 2012). A systematic review that studied the effects of language barriers in healthcare reported that language barriers between patients and physicians greatly reduced the quality of healthcare delivery and patient safety (Al Shamsi, 2020).

Open discussions about mental health were also an important issue for FAs in Texas. Many participants recounted that discussion about mental health issues is taboo, which affects mental health-seeking behaviors. One mental health study found that 27% of Filipino American participants had a major depressive episode or clinical depression of varying severity, which is three times that of other ethnicities in the U.S. Another study found that Filipino American youths were at higher risk of depression during adolescence and young adulthood compared with their Chinese American peers (Constante, 2022). Reasons for such high rates of mental health issues could be in part due to Filipino American values such as, "kapwa" (a sense of connectedness), "pakikisama" (social conformity), "hiya" (the shame of not representing oneself in an honorable way) (Constante.2022). These cultural values emphasize the importance of putting others before yourself and being a hard worker, which are all generally good things but may be contributing to the guilt experienced by those that have trouble meeting the cultural standards. For example, many of the participants had trouble focusing on their own health issues and instead brought up the health issues of family members in meetings as many of them were the caretaker of their families. The burden of having to take on the responsibility for the well-being of others can contribute to their own well-being set aside in order to fill this role. In an article that examines the relationship between Filipino American values and mental health issues experienced, the author discusses how "hiya" could contribute to an individual not seeking mental health care out of fear of bringing shame upon their family, community, and themselves (Constante.2022). Trying to fulfill this role of being the family caretaker and role model can lead to the internalization of issues to prevent others from having the perception that they cannot meet the expectations placed upon them. The first step to improving mental healthcare among FAs is to first open up the discussion and break down the stigma surrounding mental health issues. Participants suggested community activities as means of mental health education and awareness. The involvement of FA organizations and institutions as well as the use of multiple diverse media platforms were seen as important for community engagement and the dissemination of research findings.

Strengths and Limitations

Identified study limitations include small sample sizes with each meeting averaging eight-ten participants, potential bias in the selection of participants, and limited discussion time with each meeting capped at an hour. The data collection through focus groups may have been subject to groupthink and bias. Nevertheless, the study participants are representatives of the Texas FA population from diverse social backgrounds which included community members from healthcare, religious, academic, caregiving, political, and non-profit organizations. The town hall meetings allowed for input from the general FA population; the participants agreed with the data shared.

Conclusions

This study is the first to focus on the health concerns, facilitators, and barriers to healthcare among Filipinos in Texas as well as their research engagement and acceptable research dissemination strategies. Lifestyle-modifiable chronic diseases (i.e., diabetes, hypertension, and chronic kidney disease) and mental health are priorities for this

population. Barriers to health included the lack of education on health promotion and disease management, cost of healthcare, lack of health insurance, lack of transportation, limited healthcare providers especially specialists and FAs, cultural and language barriers, complex healthcare services, and immigration status. Gaining insight into these issues is a starting point to develop interventions that are culturally relevant to the community to improve FA patient outcomes.

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Self-efficacy and Cystic Fibrosis: An Integrative Review

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Abstract

Background: Cystic fibrosis (CF) requires a complex, daily care regimen. Although adherence to therapies is positively related to outcomes, adherence to therapies in CF remains low. Self-efficacy has been shown to be positively related to adherence to therapies in other chronic illnesses.

Objective: The purpose of this integrative review was to examine the state of the science related to self-efficacy in individuals with CF.

Methods: A literature search was conducted using the Moher et al. steps in the review of literature and reported utilizing the PRISMA schematic. PubMed, CINAHL, Scopus, and PsycINFO databases were searched. Articles were included if they: 1) were available in full text; 2) were available in the English language; and 3) included self-efficacy in CF.

Results: A total of 13 articles were included in the review. Analysis revealed that: 1) self-efficacy is related to CF outcomes; and 2) behavioral interventions have the potential to improve self-efficacy.

Conclusion: Although literature related to CF and self-efficacy is scarce and more research is needed on this topic, improving self-efficacy in those with CF has the potential to achieve better clinical outcomes through enhanced adherence to therapies.

Keywords: *self-efficacy, cystic fibrosis, integrative review, adherence*

Background

Cystic fibrosis (CF) is the most common life-limiting genetic defect among Caucasians worldwide (Cystic Fibrosis Foundation [CFF], 2022). and affects over 30,000 individuals in the United States alone (CFF, 2022). Cystic fibrosis is an autosomal recessive disease characterized by an interruption in the sodium chloride transportation mechanism at the cellular level, caused by a mutation of the gene that produces cystic fibrosis transmembrane conductance regulator (CFF, 2022). This disruption results in copious amounts of tenacious secretions which impact primarily the pulmonary but also the gastrointestinal, endocrine, and in women, reproductive systems (CFF, 2022). Advances in clinical care have increased life expectancies to 47.4 years and improved the quality of life for people with CF (CFF, 2022). These advances present the challenge of adhering to a complex medical plan of daily care to a population of which greater than half are now adults (CFF, 2022). Although adherence to therapies is positively related to outcomes, adherence rates to therapies among those with CF remain low (Eakin et al., 2011). Overall adherence to therapies is below 50% for children with CF, and adherence to medications ranged from 27% to 46%, indicating poor adherence to CF therapies (Modi et al., 2006). Research has shown that adherence to the prescribed daily care regimen for CF is essential for optimizing health and results in better lung function, fewer exacerbations, and fewer hospitalizations (CFF, 2022). Conversely, poor adherence results in disease exacerbation that leads to physical, emotional, mental, and financial costs for the individual and family as well as increased use of limited healthcare resources (Rubin et al., 2017).

The self-efficacy construct of Bandura's Social Cognitive Theory (Bandura, 1977) states that an individual's personal (self) efficacy is the factor that determines whether an individual can manage a situation. This theory posits that mastery of tasks can improve self-efficacy (Bandura, 1977). In this model, self-efficacy develops from four main areas: mastery experiences, vicarious experiences, verbal persuasion, and physiological states (Bandura, 1977). Self-efficacy has a key role in personal change in this model (Bandura, 2004). Self-efficacy has been shown to be associated with improved outcomes in chronic disease (Faint et al., 2017).

Self-efficacy has been shown to be positively correlated to adherence to therapies in other chronic illnesses such as asthma, Parkinson's disease, congestive heart failure, arthritis, (Marks et al., 2005) and thalassemia major (Borimnejad et al., 2018). Health self-efficacy predicts engagement in both treatment adherence and health promoting behaviors (Roncoroni et al., 2019). Sustained clinical improvements have been linked to improved self-efficacy in individuals with arthritis (Marks et al., 2005). Self-efficacy has been shown to be a significant outcome predictor for women with heart disease (Clark & Dodge, 1999). Similarly, Mishali et al. (2011) demonstrated that self-efficacy impacts adherence to treatments in patients with diabetes resulting in improved nutrition and physical exercise measures. Self-efficacy is required to establish and maintain CF care (Bandura, 1977; Bartholomew et al., 1993). This topic has not, however, been well established in CF research, revealing a gap in the current literature, and presents the overarching research question: What is known about self-efficacy among those with CF? This integrative review aims to examine the state of the science related to self-efficacy, defined as an individual's confidence in their ability to complete a task (Bandura, 1997), in individuals with CF.

Methods

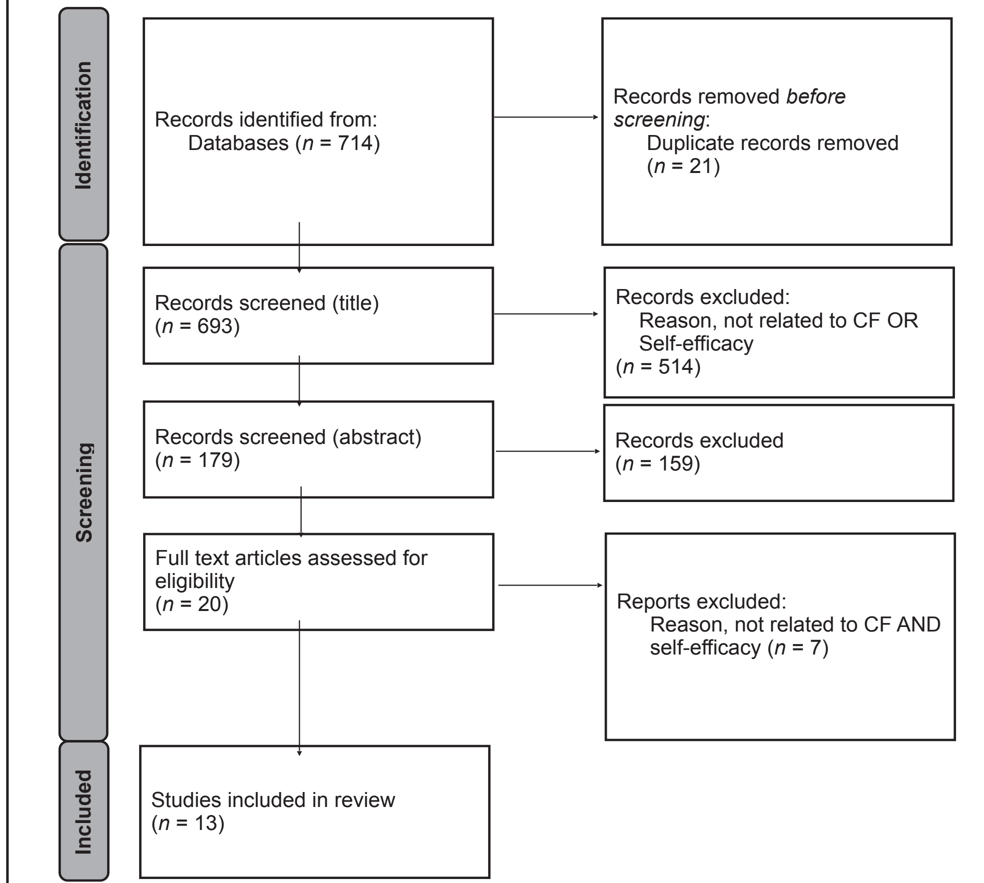
A database search was conducted using CINAHL, PubMed, Scopus, and PsycINFO. Truncated key terms used in various combinations included: cystic fibrosis AND self-efficacy OR confidence OR self-esteem. The initial search yielded 714 articles that were screened by title yielding 179 articles that were subsequently screened by abstract. Screening of the 179 articles resulted in 20 full text articles related to topic that were further evaluated. Articles were excluded that did not include both self-efficacy and CF, yielding 13 full-text articles written in English that were included in this integrative review. Articles were included if they: 1) were available in full text; 2) were available in the English language; and 3) included self-efficacy in CF. See Figure 1 for PRISMA diagram of literature search. The range of publications dates was not limited due to the scarcity of articles related to the topic.

Results

The studies (n = 13) included in this review used quantitative (n = 11), qualitative (n = 1) and both quantitative and qualitative methods (n = 1), in the study design. More specifically, one study was a randomized single control trial, one used a quasi-experimental pretest-posttest design, one was qualitative utilizing semi-structured interviews, one utilized both quantitative and qualitative measures (interviews and surveys), and the rest were comparison, correlation, or observational studies. Publication dates ranged from 1993 to 2019. The oldest study (Bartholomew et al., 1993) reported the development of a scale to measure self-efficacy. The studies were conducted in Australia (Faint et al., 2017; Moen et al., 2011), Netherlands (Cramm et al., 2013), Norway (Wahl et al., 2005), Turkey (Torun et al., 2021) and the United States (Bartholomew et al., 1993; Bartholomew et al., 1997; Cheng et al., 2015; Grossoehme et al., 2015; Mickley et al., 2013; Parcel et al., 1994; 2015; Sherman et al., 2019). Study samples included adults (Sherman et al., 2019; Wahl et al., 2005), children with CF and their parents (Grossoehme et al., 2015; McDonald et al., 2013; Parcel et al., 1994), adolescents with CF and their parents (Bartholomew et al., 1993; Cramm et al., 2013; Faint et al., 2016), adults and adolescents with CF (Moen et al., 2011), parents of children with

Figure 1

Steps in the Review of Literature Adapted from "*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*: The PRISMA Statement" (Moher et al., 2009)



CF, children with CF (Mickley et al., 2013), and adolescents with CF (Bartholomew et al., 1997; Cheng et al., 2015; Torun et al., 2021). Half of the studies were small with sample sizes ranging from 20 to 39, and the other studies had sample sizes ranging from 86-199. Four different instruments were used to measure self-efficacy across the studies. Table 2 is the data matrix that displays studies by design, independent and dependent variables, type of measure(s) used, data analysis, intervention, and findings.

Intervention Studies and Self-efficacy

Interventions were incorporated into five of the studies and included a mobile phone self-monitoring application (Moen et al., 2011), parent website and Facebook page (McDonald et al., 2013), a self-paced print curriculum focused on social cognitive theory, behavioral ability, and self-efficacy (Bartholomew et al., 1997), a chaplain intervention including cognitive interviews (Cheng et al., 2015), and an educational intervention (Parcel et al., 1994).

Non-Intervention Studies

Eight of the studies did not include an intervention. These studies assessed correlations between general self-efficacy and quality of life and evaluated quality of life predictors (Cramm et al., 2013; Torun et al., 2021), evaluated disease knowledge and self-efficacy related to adherence measured by pharmacy refill records (Faint et al., 2017), reported psychometrics related to the development of Self-efficacy for Parents or Caretakers measure (Bartholomew et al., 1993), evaluated self-efficacy via a survey in an observational study (Grossoehme et al., 2015), assessed adherence to airway clearance therapy (Sherman et al., 2019), reviewed self-efficacy and chronic illness (Mickley et al., 2013), and assessed perceived self-efficacy via a survey using the Generalized Self-Efficacy Scale (Wahl et al., 2005).

Qualitative Studies

Out of the 13 studies, one used a qualitative approach (Cheng et al., 2015), and another used both a qualitative and quantitative methods approach (McDonald et al., 2013). The study using both qualitative and quantitative methods was not, however, a mixed methods study, as findings were not integrated (Plano Clark & Ivankova, 2016). Semi-structured interviews were utilized to evaluate a chaplain intervention program (Cheng et al., 2015), and informal interviews were used to evaluate parent-driven educational strategies (McDonald et al., 2013).

Comparison of Measures

Self-efficacy was measured with: 1) Self-efficacy for Measuring Chronic Disease 6-item Scale (SEMCD6) (Moen et al., 2011); 2) General Self-efficacy Scale (Cramm et al., 2013; Faint et al., 2017; Wahl et al., 2005); 3) Self-efficacy Scale developed by the author in one study (Bartholomew et al., 1997); 4) Self-efficacy Scale designed from Bandura's Guidelines (Grossoehme et al., 2015); 5) Self-Efficacy Questionnaire for Children (Torun et al., 2021); and 6)

Table 2

Articles Included in the Integrative Review

Study Author(s) & Description	Design	Sample	Major Variables & Definitions	Measurement	Data Analysis	Intervention	Findings
Bartholomew et al., 1993 Development and evaluation of psychometrics of an instrument to measure self-efficacy in CF	Instrument Development Piloted with 96 parents of children with CF from the CF Center at Baylor College of Medicine & Texas Children's Hospital	*n* = 199	none	Caretaker and adolescent self-efficacy instrument	Factor Analysis	none	Caretaker and adolescent self-efficacy instruments are internally consistent measures of self-efficacy in CF Strengths: High α-coefficients (Cronbach's α-coefficients .73-.85) demonstrate internal consistency of instrument Limitations: Findings may not be replicable
Bartholomew et al., 1997 Study tested the efficacy of the CF Family Education Program	Quantitative Quasi-experimental pre/post test Non-equivalent comparison group	*n* = 104 *n* = 95 Non-equivalent control group	Dependent variable = self-efficacy Independent variable = education intervention	Self-efficacy scale developed by the author	ANCOVA	CF Self-Management Program	Significant differences between intervention and control group for caregiver and child self-efficacy Strengths: Based on Social Cognitive Theory Limitations: Short follow-up intervals, quasi-experimental study rather than RCT, Type I error possible due to no control for comparisons
Cheng et al., 2015 Chaplain intervention designed to promote adherence to therapy for adolescents with CF	Qualitative Semi-structured Interviews Pilot study	*n* = 24	Not reported	Not reported	Not reported	Chaplain Intervention (not described or named)	Intervention was acceptable to 11-19-year-old adolescents with CF Strengths: Based on Theory of Reasoned Action Limitations: Intervention is not described, convenience sample was used, sample included mostly adolescents with mild disease and *mild* disease was not defined

Study Author(s) & Description	Design	Sample	Major Variables & Definitions	Measurement	Data Analysis	Intervention	Findings
Cramm et al., 2013 Evaluated the effect of general self-efficacy perceived by adolescents with chronic illness on quality of life	Quantitative Cross-sectional Surveys	*n* = 24	Dependent variable = quality of life Independent variable = self-efficacy	10-item General Self-Efficacy Scale DISABKIDS instrument	Multiple Regression	none	General self-efficacy of adolescents may affect quality of life Strengths: Used validated scale Limitations: Cross-sectional, causal relationships cannot be inferred, one measurement point, did not look at whether interventions improved quality of life
Faint et al., 2017 Disease knowledge & self-efficacy were assessed	Quantitative Survey	*n* = 39	Dependent variable = Chronic Disease Outcomes measured by lung function (FEV1) Independent variable = self-efficacy measured by the General Self-Efficacy Scale	10-item General Self-Efficacy Scale Knowledge of Disease Management-CF	t-test	none	Self-efficacy is not associated with adherence to therapies in adolescents with CF Strengths: Used a validated scale, treatments for CF are widely used worldwide, used objective measure for adherence (pharmacy refill records) Limitations: Small sample size; underpowered. Knowledge of Disease Management-CF did not include questions about study medications
Grossoehme et al., 2015 Adherence and Self-efficacy were evaluated in parents of children younger than 13 years of age	Quantitative multi-site, prospective, observational study	*n* = 160 Site 1 *n* = 175 Site 2	Dependent variable = Self-efficacy Independent variable = adherence	Self-efficacy Scale designed from Bandura's guidelines	Wilcoxon signed-rank test Mean Standard Deviation Interquartile Range	none	Self-efficacy was the only theoretical adherence determinant that was significant among the groups Future study and interventions related to self-efficacy are needed Strengths: Based on the theory of reasoned action Limitations: Cross-sectional design does not allow causality, adherence measures may not be accurate

Study Author(s) & Description	Design	Sample	Major Variables & Definitions	Measurement	Data Analysis	Intervention	Findings
McDonald et al., 2013 Family centered continuous quality improvement project. Website and Facebook pages were developed with parental feedback via surveys.	Qualitative & Qualitative QI project using a convenience sample Pre/post intervention surveys Interviews	*n* = 30	Dependent variable = self-confidence in managing child's CF Independent variable = Parent nutrition knowledge	Mountain West CF Consortium Questionnaire (MWCGCQ)	Mean Standard Deviation	CF parent website Email newsletters Facebook page	Parents reported increased confidence in self-management skills Strengths: Used a validated survey (Mountain West CF Consortium Questionnaire (MWCGCQ) Limitations: QI project, used a convenience Sample, small sample size
Mickley et al., 2013 Review paper discussing chronic illness (includes CF) and self-efficacy in school-age children	Review Discussed effects of chronic illness on school age children, self-management, and self-efficacy						Self-management behaviors are necessary to control symptoms of a chronic condition Strategies that encourage self-efficacy are essential to disease management
Moen et al., 2011 Evaluated two strategies designed to improve self-efficacy using mentoring and self-monitoring using a mobile phone application	Quantitative Randomized single control trial	*n* = 20	Dependent Variable = Mobile phone mentorship intervention Independent variable = Self-efficacy	Self-efficacy measures chronic disease 6 (SEMCD6)	% SEMCD 6 scores	Intervention 1 = self-efficacy program with mentor Intervention 2 = same self-efficacy program + mobile phone Control = normal CF care	Self-efficacy increased in both intervention groups as compared to control Strengths: RCT, included a control group Limitations: small sample size
Parcel et al., 1994 Study to evaluate the efficacy of an education program to improve self-management of CF	Quantitative Knowledge surveys Cross-sectional	*n* = 199	Dependent variable = education Program Independent variable = self-efficacy	Self-efficacy measure for caretakers	Factor analysis	Health education program	Self-efficacy was best predictor of self-management Strengths: Based on Social Cognitive Theory Limitations: Cross-sectional, may be benefits of self-management not tested in model

Study Author(s) & Description	**Design**	**Sample**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Intervention**	**Findings**
Sherman et al., 2019 Longitudinal study to evaluate persistent adherence to airway clearance therapy in adults.	Quantitative Surveys	*n* = 66	Dependent variable = persistence Independent variable =self-efficacy	Cystic Fibrosis Treatment Questionnaire (CFTQ) Medication Adherence Report Scale (MARS) Self-Efficacy for Airway Clearance Beliefs about Medications Questionnaire-Specific (BMQ-Specific) Marlowe-Crowne Social Desirability Scale Hospital Anxiety and Depression Scale (HADS)	Bivariate analyses	none	Self-efficacy predicted persistence in adhering to airway clearance therapy (ACT)
Torun et al., 2020	Descriptive, cross-sectional	*n* = 50	Dependent variable = transition readiness Independent variable = Self-efficacy, Perceived social support, Health Related Quality of Life (HRQoL)	Self-Efficacy Questionnaire for Children	Pearson's correlations	none	Self-efficacy was found to have a significant positive correlation with the level of readiness to transition to adult care
Wahl et al., 2005 Study examined self-efficacy as a modifier of the relationship of perceived health status and global quality of life in adults with CF	Quantitative Surveys	*n* = 86	Dependent variable = pulmonary function, health status & global quality of life Independent variable = age, gender, marital status, self-efficacy	General self -efficacy measure (GSS) Quality of Life Scale (QOLS)	Pearson's correlations Multiple linear regressions	none	Self-efficacy is a factor in explaining health status and global quality of life Strengths: Used a validated scale to measure Self-efficacy and reported Cronbach's alpha 0.88 Limitations: cross-sectional, no control group

Self-efficacy Measure for Caretakers (Parcel et al., 1994). Of these, only two studies reported psychometrics for their selected measure (Caretaker and Adolescent Self-Efficacy Instrument and General Self-Efficacy (GSE) Scale). Of note, Cronbach alphas of 0.73-0.88 were reported by Bartholomew et al. (1993) while the GSE used by Cramm et al. (2013) and Wahl et al. (2005) reported Cronbach alphas ranging from 0.88-0.94, indicating internal reliability of the instrument.

Strengths and Limitations

Strengths of the reviewed articles included studies that: 1) used a validated instrument (Bartholomew et al., 1993; Cramm et al., 2013; Wahl et al., 2005); 2) included a control group (Bartholomew et al., 1997); 3) were based on a theoretical framework (Bartholomew et al., 1997; Cheng et al., 2015; Grossoehme et al., 2015; Parcel et al., 1994); 4) used an objective measure for the variables (Faint et al., 2017); and 5) were randomized and used a control group (Moen et al., 2011).

Limitations of the reviewed articles included studies that: 1) used a convenience sample which limits generalizability (Cheng et al., 2015; McDonald et al., 2013); 2) had a small sample size (Cheng et al., 2015; Cramm et al., 2013; Faint et al., 2017; McDonald et al., 2013; Moen, et al., 2011) which limits the power of the study and increases the possibility of a Type II error (Polit & Back, 2017); and 3) used a cross-sectional design (Cramm et al.,2013; Grossoehme et al., 2015; Parcel et al., 1994; Wahl et al., 2005) which impacts conclusions regarding causality.

Themes

Analysis and synthesis of the 13 articles revealed the following two major themes: (a) Self-efficacy is related to CF outcomes (Cramm et al., 2013; Grossoehme et al., 2015; Parcel et al., 1994; Wahl et al., 2005) and (b) Interventions have been shown to improve self-efficacy (Bartholomew et al., 1997; McDonald et al., 2013; Moen et al., 2011). Conversely, one study did not find an association between self-efficacy and adherence to therapies in adolescents with CF (Faint et al., 2017).

Self-Efficacy Related to CF Outcomes

A finding prevalent across seven of the studies is that self-efficacy is related to a variety of important CF outcomes. Self-efficacy was related to quality of life (Wahl et al., 2005), self-management of CF, including the ability to access care, solve problems, and beliefs about an individual's ability to manage their care (Bartholomew et al., 1997; Cramm et al., 2013; McDonald et al., 2013; Parcel et al., 1994; Wahl, et al., 2005), and adherence to therapies (Grossoehme et al., 2015; Sherman, 2019) across study designs (with and without interventions) and participant ages.

In a study without an intervention, Wahl et. al (2005) noted a relationship between self-efficacy and CF global quality of life and health status. Using Bandura's (1986) definition of self-efficacy as confidence in one's ability to complete a task, Wahl et al. proposed that self-efficacy is essential for the appropriate management of a chronic disease and can be elevated to improve outcomes. Multiple linear regression analyses revealed that self-efficacy is significantly related to global quality of life. These results indicate that patients with higher levels of self-efficacy report higher health status with a lower impact of the disease upon their life.

In a second study without an intervention, Cramm et al. (2013) examined the influence of general self-efficacy perceived by adolescents with chronic illness and their parents upon quality of life. Survey data confirmed that general self-efficacy as perceived by adolescents is related to their physical, emotional, and social quality of life, and highlights the potential importance of future interventions that aim to improve self-efficacy among adolescents with chronic illnesses. Based on their findings, they suggest that interventions to improve self-efficacy which benefit quality of life should therefore be included in CF care.

A multisite, prospective, observational study conducted by Grossoehme et al. (2015) evaluated adherence to CF therapies and care and found that parents with low adherence to CF therapies for their children reported significantly lower self-efficacy for completing their child's airway clearance treatments (ACT) than parents with medium, high, or super high adherence scores. This study found that self-efficacy was the only theoretical adherence determinant that differed significantly across the adherence groups, suggesting self-efficacy as a target for future interventions to impact overall CF outcomes. Lastly, a recent study (Sherman et al., 2019) examined persistent adherence to ACT over 12 months. This study noted social cognitive variables (self-confidence) predicted self-reported persistence with ACT therapy, supporting the theme of self-efficacy as related to CF outcomes.

Using a structural model to examine the complex process of self-management, Parcel et al. (1994) demonstrated that outcome expectations were highly correlated with self-efficacy, supporting the hypothesis that higher self-efficacy will lead to better management of CF and may impact outcomes. This study intervention utilized modeling, goal setting, skill training, self-monitoring, and positive reinforcement to assist in the development of self-management skills. Based on their findings, they recommend that programs of care include both behavioral and educational interventions designed to improve self-efficacy with the aim of improvement in self-management and subsequent clinical outcomes.

Each of these studies demonstrate the relationship of self-efficacy and CF outcomes, including adherence to thera-

pies, self-management of CF, problem solving, and quality of life. Self-efficacy is a predictor of behavior (Sherman et al., 2019), and interventions have been shown to improve self-efficacy (Bartholomew et al., 1997). These studies establish the importance of self-efficacy and the association between self-efficacy and CF outcomes. This association and the demonstrated improvement in quality of life, (Wahl et al., 2005) adherence to therapies, (Sherman et al., 2019) and self-management of chronic disease (Bartholomew et al., 1997; Cramm et al., 2013; McDonald et al., 2013; Parcel et al., 1994; Wahl et al., 2005) presents opportunity for future research exploring targeted interventions designed to improve self-efficacy.

Interventions Improve Self-Efficacy

The second major theme revealed by the integrative review was that interventions improve self-efficacy. This finding was supported by five studies which examined interventions to improve self-efficacy in individuals with CF. Although the interventions and ages of the participants differed across the five studies, interventions improved self-efficacy. Educational interventions (Bartholomew et al., 1997; McDonald et al., 2013; Parcel et al., 1994), mentoring (Moen et al., 2011), a mobile phone application (Moen et al., 2011), and a chaplaincy intervention related to cognitive interviewing (Cheng et al., 2015) all demonstrated the effect of improving self-efficacy on aspects of CF self-management, including adherence to therapies.

Bartholomew et al. (1997), for example, found increased self-efficacy in the intervention group enrolled in the Cystic Fibrosis Family Education Program. Their study demonstrated that skill training practice and success experiences were effective interventions to increase self-efficacy and were more effective than education alone. Further, self-management improved in the intervention group, as well as a small, but statistically significant improvement in health status measured by the Brasfield X-ray score that evaluates lung status and disease severity (Bartholomew et al., 1997).

Parents in a local CF Parent Advisory Council developed and implemented educational materials designed to promote increased self-efficacy and empower parents of children with CF (McDonald et al., 2013). Educational materials were distributed via email, a CF parent website developed for this center, and a CF site Facebook page. This study was based on the premise that parental self-management is necessary for effective care and management of children with CF. Parental self-efficacy, or the parents' ability to manage the tasks of CF care for their child, is essential for self-management. Pre- and post-intervention surveys of this quality improvement project revealed that parents who received the educational intervention had increased self-efficacy in CF care for their child.

A randomized, single control trial by Moen (2011) used a mobile phone application designed to monitor self-management behaviors and mentorship to improve self-efficacy. The mobile phone application provided reports on participant diary entries related to self-management and the mentor provided telephone support and assistance to the participant with revision of their action plan and goal setting. Participants were randomized to a control, mentor-only, or a mentor plus mobile phone application group. Self-efficacy was increased in both intervention groups. This improvement was sustained even after 12 months post-intervention. This study demonstrates the use of an intervention to improve self-efficacy.

The above studies strongly suggest that educational and behavioral interventions, with and without mentoring, can improve self-efficacy. These improvements in self-efficacy are associated with improvements in CF outcomes including improvements in health status, quality of life, adherence to therapies, and better self-management.

Implications for Research

This review examined the state of the science of self-efficacy in CF and demonstrated that although adherence to therapies is associated with improved outcomes, only a few studies have implemented and evaluated interventions designed to increase self-efficacy toward therapies in CF. This review highlights the need to design, test and evaluate interventions that improve self-efficacy specifically focused on CF therapies. The scarcity of research in CF-specific self-efficacy indicates that more research is needed.

Implications for Practice

Findings from this review may be used to develop care protocols to incorporate interventions designed to increase self-efficacy toward CF therapies. With a focus on patient-centered care, interventions could be tailored to the needs of a specific patient and family. Carefully developed care protocols could enhance adherence to CF therapies resulting in improved health status and quality of life. Screening for self-efficacy during routine clinic visits may provide a way to identify patients most at risk for non-adherence to therapies. Utilizing the review findings indicating that higher self-efficacy is related to better adherence to therapies and that interventions can improve self-efficacy, all members of the CF health care team can incorporate methods well established by Bandura (1977), such as guiding the patient toward success by reviewing areas of care in which they are successful (mastery experiences), sharing the experiences of others (vicarious experiences), providing the patient with encouragement related to their difficult areas of care (verbal persuasion), and explain laboratory and diagnostic findings (physiological states) (Bandura, 1977). Self-efficacy has a key role in personal change (Bandura, 2004) and can be incorporated into the routine manner of communication and

focus of communication with the patient by all members of the interdisciplinary healthcare team.

Conclusions

This integrative review revealed that self-efficacy is related to CF outcomes, and self-efficacy can be improved through targeted interventions and is applicable across the life span as all age categories are represented in the review. Further research is necessary to gain an understanding of the factors related to the acquisition of self-efficacy among adults with CF in order to develop research driven interventions. Such interventions have the potential to increase self-efficacy toward therapies in individuals with CF that could improve adherence and therefore improve clinical outcomes.

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JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Understanding the Relationship of Perceived Managerial Support and Practice Environment among Staff Nurses

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Abstract

Background: Managerial support and practice environment in the nursing workplace are scientifically argued as interdependent determinants of staff retention, job satisfaction, and turnover rates, which influence overall patient and hospital outcomes.

Objectives: The purpose of this study was to examine the relationship between perceived managerial support and the practice environment of staff nurses.

Methods: This study used a descriptive correlational design to explore perceived managerial support and its relation to the practice environment of staff nurses. Survey methods, utilizing two validated instruments, the Supervisory Support Scale (SSS) tool and Healthy Work Environment (HWE) Assessment Tool, were used to collect data from a total of 519 eligible nurse-respondents from a government-owned and controlled corporate (GOCC) tertiary healthcare facility in the Philippines.

Results: Use of Pearson correlations revealed that the staff nurses scored high perceived levels of managerial support and reported having positive practice environments. This study highlighted that while SSS domains mostly show significant correlations on HWE essential standards, the HWE *effective decision-making* essential standard found no significant correlation with SSS being a *reliable domain*, $r(517) = .063$; $p > .152$, whereas the HWE *authentic leadership* essential standard showed non-significant relationships with both SSS domains, namely *respects uniqueness*, $r(517) = .005$, $p > .990$; and *being reliable*, $r(517) = -.054$, $p > .220$.

Conclusion: Creating practice environments where nurses are empowered by managerial support should be a priority for healthcare leaders as it is considered a critical factor in the provision of quality patient care, organizational success, and nursing workforce improvement.

Keywords: *managerial support, supportive leadership, practice environment, work environment*

Background

Major issues that nursing leaders work to tackle in today's era include advocacy for better working conditions and the staffing of the nursing workforce. The World Health Organization (WHO, 2020) reported that there would be a shortfall of 4.6 million nurses in all nations by the year 2030. The global issue about the nursing shortage was even magnified significantly by the COVID-19 pandemic. The unprecedented pandemic exposed the poor nursing work conditions such as personal protective equipment shortages and lack of support from management that caused some nurses to leave the profession, straining the nursing workforce further (Arnetz et al., 2020; Samee Ali, 2020). The number of shortfalls in professional nursing personnel is expected to increase up to almost 7 million, and it is suggested that the nursing shortage will be concentrated nearly in low- and middle-income countries (Buchan et al., 2022). To foster nurse retention at a time of a pandemic, good managerial support from unit managers is considered an essential key determinant that establishes positive practice environment, increases job satisfaction, and reduces job stress, affecting turnover intention in the nursing profession (Castro-Palaganas et al., 2017; Labrague et al., 2018; Rodriguez et al., 2022). It is vital for nursing leaders and administrators in healthcare to foster positive practice environments through supportive leadership as this effort will strengthen and drive the nursing workforce in a certain country. Therefore, the purpose of this study was to explore the relationship between staff nurses' perceived level of managerial support and practice environment in a government-owned and controlled corporate (GOCC) tertiary care hospital in the Philippines.

Literature Review

Managerial support in nursing practice is essential in creating a strong professional practice environment. Multiple studies (Chamanga et al., 2020; Khan et al., 2018) focused on how supportive leadership influences nurses' practice environments, which improves patient safety, hospital outcomes, and staff retention. Efforts should be made by nursing leaders in creating a positive practice environment as it plays a pivotal role in addressing the nursing shortage, thereby improving the global healthcare systems. During the peak of the COVID-19 pandemic, nurses reported that they experienced stressful situations during the pandemic such as increased volume workload and lack of support from their management by not prioritizing their safety (Arnetz et al., 2020; Rodriguez et al., 2022). Such issues about workplace safety and support in the nursing workforce become more imminent.

Bonito et al. (2019) provided the current profile of the Philippine nursing profession and presented the key issues affecting the country's nursing workforce. Outmigration and poor working conditions characterized by lack of nursing leadership and poor managerial support, incidence of workplace violence and safety, inadequate number of available registered nurses causing inappropriate staffing, unjust compensation or noncompetitive salary, as well as geographic maldistribution or split employment between the public and private hospitals were considered as human resources for health (HRH) issues that need to be addressed specifically in the professional nursing practice in the Philippines (Bonito et al., 2019; WHO, 2013). High turnover intention in relation to poor employment satisfaction, work-related stress and burnout were also seen evident among Filipino nurses, wherein about 50% to 75% of them planned to leave the nursing profession (Labrague et al., 2020).

Several international academic works have been done in the past to examine the link of effective nursing leadership styles in improving patient outcomes as well as in creating a healthy work environment (Al-Hamdan et al., 2018; AONE, 2015; Falguera et al., 2021; Labrague et al., 2018). Ducharme et al. (2017) found that when nurse leaders perceived themselves more influential and present, their respective staff nurses tend to have more positive perceptions in staffing adequacy. Their findings also suggested that nurse leaders are integral influencers in creating positive practice environments. Nursing leaders in the middle-tier management are the primary personnel responsible for the gaps in the nursing profession related to working conditions. In Canada, nursing researchers employed a validated tool called Supportive Supervisory Scale (SSS). The findings led them to the conclusion that leaders must possess the essential skill of supportive supervision, characterized by dependability and respect for individuality, to foster positive relationships with colleagues. This, in turn, contributes to a supportive practice environment, resulting in enhanced job satisfaction, increased staff retention, and improved patient care outcomes (McGilton, 2010). Having a good understanding as to the reasons nurses prefer to leave the profession will enable nurse managers to address this issue and help find a solution for nurse retention.

It is imperative for nursing leaders to maintain a positive and supportive practice environment within any healthcare system, as it greatly enhances the quality of institutional care and overall patient outcomes. The American Organization for Nursing Leadership (AONL), formerly known as American Organization of Nurse Executives (AONE) established the Nurse Managers Competencies Framework to guide the development and evaluation of nursing leaders in healthcare organizations. This comprehensive framework provided three domains of nursing leadership, namely the science of leadership, the art of leadership, and the leader within, in which nurse managers must have to become effective front-runners in establishing and maintaining a healthy practice environment (AONE, 2015). By following this framework, nurse managers can acquire the necessary skills, knowledge, and attitudes required to lead effectively,

and foster a culture of professionalism and engagement, in which all contribute to positive practice environments.

The American Association of Critical-Care Nurses (AACN) is dedicated to establishing and promoting the concept of healthy work environments (HWEs), which are instrumental in fostering excellence in critical-care nursing practice, thereby ensuring patient safety and optimal outcomes. These HWEs are governed by six essential standard practice domains: skilled communication, true collaboration, effective decision making, appropriate staffing, meaningful recognition, and authentic leadership. These domains serve as a guiding framework for healthcare providers in delivering optimal quality patient care and achieving outstanding nursing, and hospital outcomes (AACN, 2005).

The association between managerial support and practice environment as a predictor of nurse retention, patient and nursing outcomes has been examined and currently understood in other international nursing research (Al-Hamdan et al., 2018; Baxter & Warshawsky, 2014; Chamanga et al., 2020; Laschinger et al., 2012). In a systematic review to assess nurse work environments in the United States, nursing leadership that promotes staff engagement and nurse empowerment was found to be rudimental in achieving healthy work environments (Wei et al., 2018). The same study also found that fostering healthier work environment is a continuous effort that nurse leadership should prioritize to promote higher quality of patient care resulting to improve healthcare organization's financial viability. Similarly, Khan et al. (2018) reported that nurses experienced higher structural empowerment when they perceived their nurse managers' leadership behaviors as transformative. This in turn increased staff nurse satisfaction, decreased turnover intention, and burnout syndrome.

While public and private healthcare agencies are currently examining various strategies with regards to job working condition improvements and efficient nursing workforce sustenance, there is a limited body of studies in the Philippines dedicated comprehensively understanding the dynamics and impact of practice environments and level of managerial support available to Filipino nurses. A notable literature gap particularly around practice environment and managerial support in the context of Philippine nursing workforce still exists. This gap represents an opportunity for future development to delve into the intricacies of managerial support and practice environment of registered nurses working in both public and private healthcare institutions in the Philippines. Such factors must be considered by our healthcare leaders because they will help inform the direction of this nation's effective delivery of health care, health system sustenance, and overall condition of the nursing workforce and practice.

Methods

This study employed a cross-sectional, descriptive correlational design to determine nurses' perceived level of managerial support and its relation to their practice environment.

Sample

A type of non-probability, purposive sampling technique called total population or complete enumeration procedure was used and gathered a total of 519 participants ($N = 519$). This study recruited registered nurses, voluntarily participated, with ages ranging from 21 to 59 y/o, currently employed in the government-owned and controlled corporate (GOCC) tertiary healthcare facility in the Philippines with at least six months of institutional experience that involved direct bedside patient care. Nurses working in administrative roles and ancillary departments were excluded.

Data Collection

Ethical clearance and approval from the institutional ethics review board (IERB) of the research setting was secured prior to this study's implementation. The investigator requested for the waiver of informed consent since the risk to the participant's privacy was minimal and no sensitive information was obtained. A cover letter was attached to the survey questionnaires to ensure voluntary participation and to provide adequate information about the study purposes, as well as possible risks, discomforts and benefits related to the research process.

Data for this study were gathered by using two validated research instruments, namely Supportive Supervisory Scale (SSS) Tool and American Association for Critical-Care Nurse's Healthy Work Environment Assessment Tool (HWEAT). Permission was obtained from the original authors to use such assessment tools. The questionnaire was divided into three sections. The first part described the demographic profile of nurses in terms of age in years, gender identity, marital status, area of assignment, highest educational attainment, and years of institutional service in the nursing practice. The second part of the questionnaire used the standardized tool SSS that measures the perceived level of managerial support of the target participants. The tool has a total 15-items statements (10 items for respects uniqueness, and 5 items for *being reliable*) that are rated based on the participants' response ranging from 1 indicating "never" to 5 indicating "always." The last part of the questionnaire used another standardized tool HWEAT by AACN, which has an 18-items checklist that analyzes the practice environment of study participants based on six essential standards, namely *skilled communication, true collaboration, effective decision-making, appropriate staffing, meaningful recognition, and authentic leadership.*

Before disseminating the survey forms to the participants, approval from the IERB of the study site was initially secured.

Participation in the study was voluntary and all potential identifiers were removed to protect participant's anonymity. It was clarified to research participants that they have the right to withdraw at any time from the study and their withdrawal or participation would not affect their employment status. The research team disseminated the physical questionnaires secured in a folder. A secured collection box was placed in each nursing unit's breakroom, which was found to be a strategic location for return of the physical survey forms and assurance of confidentiality. The questionnaires were collected by the research team, then collated each individual data entered in the data collection forms with no identifiers utilized. All data gathered from the paper-based survey forms were recorded and kept in a storage device with at least 256 bits key size advanced encryption standard (AES-256) for the next three years, in which no one except the lead investigator has access to it. The lead investigator observed and practiced the application of Republic Act no. 10173, also known as Philippines' "Data Privacy Act" all throughout the research process. Data were collected through survey methodology conducted between September 2022 and October 2022.

Data Analysis

Applied descriptive statistics such as means with standard deviations were facilitated for all scalar variables to initially describe the basic features of the collated data in the study. For the inferential statistics, the investigator used Pearson correlation coefficient to examine the associations between the given relevant study variables. The level of significance was set at $p < 0.05$. Microsoft Excel 2022 was used to encode data and Statistical Package for the Social Sciences (SPSS) tool version 28.0 was used for data analysis.

Results

Demographic Profile of Staff Nurses

As seen in table 1, the age in years of nurse-respondents ($N = 519$) were obtained with a higher percentage of staff nurses being 30-39 years old 45.7% (n = 237). The ranges of ages found were 21-29 years 35.1% (n = 182); 40-49 years 15.0% (n = 78); and 50-59 years 4.2% (n = 22). Majority of the respondents were 70.7% female (n = 367) and 63.8% were not married (n = 188). The findings also presented that 34.5% (n = 179) of staff nurses had 3 to 5 institutional years of experience while 22.5% (n = 117) had 1 to 3 institutional years of experience; 85.2% had bachelor's degree (n = 442),

Table 1

Demographic Profile of Nurse-respondents

Demographic Variables	Frequency	(%)
Age		
21- to 29-year-old	182	35.1%
30- to 39-year-old	237	45.7%
40- to 49-year-old	78	15.0%
50- to 59-year-old	22	4.2%
	519	**100%**
Gender		
Male	152	29.3%
Female	367	70.7%
	519	**100%**
Marital Status		
Not Married	331	63.8%
Married	188	36.2%
	519	**100%**
Institutional Years of Experience		
Less than 1 year	73	14.1%
1 to 3 years	117	22.5%
3 to 5 years	179	34.5%
More than 5 years	150	28.9%
	519	**100%**
Area of Assignment		
Intensive care complex	110	21.2%
Emergency department	49	9.4%
Medical-surgical department	91	17.5%
Adult general ward	88	17.0%
Operating room complex	94	18.1%
Pediatric general ward	87	16.8%
	519	**100%**
Educational Attainment		
Bachelor's degree	442	85.2%
Master's degree	71	3.7%
Doctorate degree	6	1.2%
	519	**100%**

13.7% with master's degree (*n* = 71), and 1.2% have doctorate degree (*n* = 6). The highest number of respondents were working at intensive care unit 21.2% (*n* = 110), operating room complex 18.1% (*n* = 94), medical-surgical department 17.5% (*n* = 91), and adult general ward 17.0% (*n* = 88), while other respondents were assigned on pediatric general ward with 16.8% (*n* = 87) and emergency department with 9.4% (*n* = 49).

Perceived Level Managerial Support of Staff Nurses

Table 2 depicts the mean and standard deviation on the items (statements 1 to 5 and 11 to 15) of supervisory support scale in terms of respecting staff nurses' uniqueness. The results revealed that a high managerial support was found on statement four with the highest mean score of 4.26 (*SD* = 0.28) while both statements five and fourteen had a scalar interpretation of moderate managerial support with mean scores of 3.06 (*SD* = 0.25) and 3.18 (*SD* = 0.32), respectively. Having minimal variations with a mean of one third, the findings indicated a "high" perceived level of managerial support in terms of respect to uniqueness among nurse-respondents with a mean score of 3.87 (*SD* = 0.30).

Table 3 shows that most of the respondents had high levels of perceived managerial support in terms of being reliable with a total mean value of 3.42 (*SD* = 0.27), in which statements nine and eight had the highest mean scores of 4.30 (*SD* = 0.15) and 3.42 (*SD* = 0.19), respectively. However, statements six, seven, and ten had interpretation of moderate levels of perceived managerial support with mean values of 3.29 (*SD* = 0.47), 3.04 (*SD* = 0.30), and 3.03 (*SD* = 0.24), as follows. Minimal variations were observed for each mean score, suggesting that nurse-respondents occasionally perceived a moderate to high level of support towards their nurse managers for being consistent and reliable.

Staff Nurse's Practice Environment

As shown in Table 4, the essential standards of a healthy work environment corresponding to skilled communication and authentic leadership had high mean scores at 3.22 (*SD* = 0.39) and 2.95 (*SD* = 0.12), respectively. Clusters corresponding to appropriate staffing, meaningful recognition, and effective decision making had mean scores of 2.61 (*SD* = 0.36), 2.89 (*SD* = 0.24), and 2.46 (*SD* = 0.35) accordingly. Despite the study findings depicting an overall positive practice environment among nurse-respondents where most data are clustered around the overall mean score (*M* = 2.68, *SD* = 0.30), such findings also highlighted how nurse-respondents described the true collaboration domain and scored the least mean value indicating a negative practice environment (*M* = 1.92, *SD* = 0.32).

Table 2

Distribution of Responses on Perceived Managerial Support According to Respect to Uniqueness among Staff Nurses (N=519)

Items: Respect to Uniqueness	Mean	Standard Deviation
1. My supervisor recognizes my ability to deliver quality care.	4.18	0.23
2. My supervisor tries to meet my needs.	3.58	0.36
3. My supervisor knows me well enough to know when I have concerns about patient care.	4.05	0.32
4. My supervisor tries to understand my point of view when I speak to them.	4.26	0.28
5. My supervisor tries to meet my needs in such ways as informing me of what is expected of me when working with my patients.	3.06	0.25
11. My supervisor encourages me even in difficult situations.	4.13	0.31
12. My supervisor makes a point of expressing appreciation when I do a good job.	4.18	0.23
13. My supervisor respects me as a person.	4.05	0.26
14. My supervisor makes time to listen to me.	3.18	0.32
15. My supervisor recognizes my strengths and areas or improvement.	4.07	0.25
Overall	***3.87***	***0.30***

Scale:
3.4 - 5.00 = High
1.7 – 3.3 = Moderate
1.0 - 1.6 = Low

Table 3
Distribution of Responses on Perceived Managerial Support According to Being Reliable among Staff Nurses (N=519)

Items: Being Reliable	Mean	Standard Deviation
6. I can rely on my supervisor when I ask for help, for example, if things are not going well between myself and my co-workers or between myself and patients and/ or their families.	3.29	0.47
7. My supervisor keeps me informed of any major changes in the work environment or organization.	3.04	0.30
8. I can rely on my supervisor to be open to any remarks I may make to him/ her.	3.42	0.19
9. My supervisor keeps me informed of any decisions that were made about my patients.	4.30	0.15
10. My supervisor strikes a balance between clients/families' concerns and mine.	3.03	0.24
Overall	***3.42***	***0.27***

Scale:
3.4 - 5.00 = High
1.7 – 3.3 = Moderate
1.0 - 1.6 = Low

Table 4
Distribution of Responses on Practice Environment According to Essential Standards among Staff Nurses (N=519)

Variables	Mean	Standard Deviation
Skilled Communication		
1. Administrators, nurse managers, physicians, nurses, and other staff maintain frequent communication to prevent each other from being surprised or caught off guard by decisions.	3.50	0.43
6. Administrators, nurse managers, physicians, nurses, and other staff make sure their actions match their words; they "walk their talk."	3.10	0.34
14. Administrators, nurse managers, physicians, nurses, and other staff have zero-tolerance for disrespect and abuse. If they see or hear someone being disrespectful, they hold them accountable regardless of the person's role or position.	3.05	0.40
Total Mean and SD for Skilled Communication	**3.22**	**0.39**
True Collaboration		
2. Administrators, nurse managers, and physicians involve nurses and other staff to an appropriate degree when making important decisions.	1.71	0.15
10. Nurses and other staff feel able to influence the policies, procedures, and bureaucracy around them.	2.06	0.32
15. When administrators, nurse managers, and physicians speak with nurses and other staff, it's not one-way communication or order giving. Instead, they seek input and use it to shape decisions.	1.99	0.49
Total Mean and SD for True Collaboration	**1.92**	**0.32**
Effective Decision Making		
7. Administrators, nurse managers, physicians, nurses, and other staff are consistent in their use of data-driven, logical decision-making processes to make sure their decisions are the highest quality.	1.95	0.33
11. The right departments, professions, and groups are involved in important decisions.	3.04	0.31
16. Administrators, nurse managers, physicians, nurses, and other staff are careful to consider the patient's and family's perspectives whenever they are making important decisions.	2.38	0.42
Total Mean and SD for Effective Decision Making	**2.46**	**0.35**

Variables	Mean	Standard Deviation
Appropriate Staffing		
3. Administrators and nurse managers work with nurses and other staff to make sure there are enough staff to maintain patient safety.	2.32	0.42
8. Administrators and nurse managers make sure there is the right mix of nurses and other staff to ensure optimal outcomes.	3.05	0.31
12. Support services are provided at a level that allows nurses and other staff to spend their time on the priorities and requirements of patient and family care.	2.47	0.34
Total Mean and SD for Appropriate Staffing	**2.61**	**0.36**
Meaningful Recognition		
4. The formal reward and recognition systems work to make nurses and other staff feel valued.	3.19	0.24
9. Administrators, nurse managers, physicians, nurses, and other staff members speak up and let people know when they've done a good job.	3.42	0.25
17. There are motivating opportunities for personal growth, development, and advancement.	2.06	0.22
Total Mean and SD for Meaningful Recognition	**2.89**	**0.24**
Authentic Leadership		
5. Most nurses and other staff here have a positive relationship with their nurse leaders (managers, directors, advanced practice nurses,etc.).	2.19	0.12
13. Nurse leaders (managers, directors, advanced practice nurses, etc.) demonstrate an understanding of the requirements and dynamics at the point of care and use this knowledge to work for a healthy work environment.	3.42	0.11
18. Nurse leaders (managers, directors, advanced practice nurses, etc.) are given the access and authority required to play a role inmaking key decisions.	3.23	0.13
Total Mean and SD for Authentic Leadership	**2.95**	**0.12**
Overall Mean and SD for HWE Essential Standards	**2.68**	**0.30**

Scale:
2.1 – 4.0 = Positive
1.0 – 2.0 = Negative

Acknowledgment to the original source: American Association of Critical-Care Nurses. Healthy Work Environment Assessment Tool. Aliso Viejo, CA: American Association of Critical-Care Nurses. ©AACN. All rights reserved. Used with permission.

Table 5

Correlation Between Perceived Managerial Support Domains and Practice Environment Essential Standards (N=519)

Variables	Computed *r*	Degree of Relationship	*P* value
*Practice Environment of Nurses Variables to **Respects Uniqueness***			
1. Skilled Communication	- .168**	Negligible negative correlation	.000
2. True Collaboration	.514**	Moderate positive correlation	.000
3. Effective Decision Making	- .310**	Low negative correlation	.000
4. Appropriate Staffing	- .590**	Moderate negative correlation	.000
5. Meaningful Recognition	.315**	Low positive correlation	.000
6. Authentic Leadership	.005	No statistically significant correlation	.990
*Practice Environment of Nurses Variables to **Being Reliable***			
1. Skilled Communication	.160**	Negligible positive correlation	.000
2. True Collaboration	- .596**	Moderate negative correlation	.000
3. Effective Decision Making	.063	No statistically significant correlation	.152
4. Appropriate Staffing	.559**	Moderate positive correlation	.000
5. Meaningful Recognition	.193**	Negligible positive correlation	.000
6. Authentic Leadership	- .054	No statistically significant correlation	.220

*** Correlation is significant at the 0.05 level (2-tailed).*

The Relationship of Perceived Managerial Support and Practice Environment

Table 5 displays the correlational analysis between the perceived level of managerial support and practice environment of staff nurses. Using Pearson correlation coefficient, findings showed that practice environment's essential standards namely: skilled communication, $r(517) = -.168$, $p < .05$; true collaboration, $r(517) = .514$, $p < .05$; effective decision making, $r(517) = -.310$, $p < .05$; appropriate staffing, $r(517) = -.590$, $p < .05$; and meaningful recognition, $r(517) = .315$, $p < .05$, have significant correlations with SSS "respects uniqueness" domain. On the other hand, nurse-respondents' level of perception in terms of being reliable as a domain of managerial support have significant correlations to skilled communication, $r(517) = .160$, $p < .05$; true collaboration, $r(517) = -.596$. $p < .05$; appropriate staffing, $r(517) = .559$, $p < .05$; and meaningful recognition, $r(517) = .193$, $p < .05$; whereas the effective decision-making essential standard demonstrated non-significant correlation with the being reliable domain, $r(517) = .063$, $p > .152$. In addition, findings also showed that authentic leadership as an essential standard of a healthy work environment has no significant correlation on both managerial support domains, namely respects uniqueness, $r(517) = .005$, $p > .990$; and being reliable, $r(517) = -.054$, $p > .220$ (see Table 5).

Discussion

Nurse-respondents had a high level of perception towards managerial support. In terms of respecting staff nurse's uniqueness, this study showed that nurse managers try to understand the point-of-view of their subordinates. This creates open communication between the middle-tier level management and staff nurses. Proper communication channels help nurse managers relay information about organizational and clinical updates to their staff nurses. Such study findings support that nurse manager's communication and collaboration skills are vital in supporting positive practice environments and influencing retention rates in the profession (Buffington et al., 2012; Hartung & Miller, 2013). Additionally, staff nurses felt the respect, genuine care, and appreciative attitude of their nurse managers through meaningful recognition of their overall nursing job performance. For staff nurses, being appreciated and valued by their respective nurse manager's effect their intention to stay or leave the nursing profession (Chamanga et al., 2020). This finding reiterates the importance of nurse managers and leaders' supportive role in terms of reliability and respecting their subordinate's uniqueness toward fostering positive practice environments. Findings from this study are consistent with previous literature that explore the impact of supportive leadership, such as managerial support as a vital factor in fostering positive practice environments and work outcomes (AONE, 2015; Bonito et al., 2019; Ducharme et al., 2017; Falguera et al., 2021; Labrague et al., 2018). Multiple studies (Buffington et al., 2012; Chamanga et al., 2020) also suggest that being appreciative, respectful, and fair nurse managers, staff nurses tend to stay in the profession, thus increasing retention rate and decreasing turnover rates. Furthermore, the supportive and relational leadership skills of nurse managers may support the establishment of positive practice environments within any healthcare system, which supports the overall organizational success (Khan et al., 2018).

However, findings from this study also highlighted how nurse-respondents perceived the true collaboration domain of a healthy work environment. The descriptive analysis of participant's practice environment indicated that the poor engagement of staff nurses in decision making regarding collaborative clinical care and policy making impede the establishment of positive practice environments. Such findings support that poor workplace relationship, nurse involvement, and engagement within a practice environment may predispose to decrease work satisfaction and increase nurses' intent-to-leave (Blake, 2016; Galleta et al., 2016; Labrague et al., 2018). Ensuring effective communication and team collaboration are vital determinants in establishing positive practice environments that may also contribute to staff retention, turnover rates, job satisfaction and empowerment, which are critical in overall hospital and patient outcomes (Blake, 2016; Hartung & Miller, 2013; JCI, 2017). On the other hand, working conditions related to adequate staffing ratios and flexible work shifting should also be considered by nurse managers as these variables are significantly associated to turnover rates, nurse retention, job satisfaction as well as patient outcomes, which predicts perceived practice environments (Bonito et al., 2019, Ulrich et al., 2019). Nursing leaders and managers should find strategies that foster good collaborative professional relationships, meaningful recognition, and autonomy among nurses' clinical practice, as well as other work-related factors such as staffing ratios and workplace recognition as these variables greatly affect nursing outcomes that attribute to positive practice environments (AACN, 2005; Barnes & Lefton, 2013; Bonito et al., 2019; Ulrich et al., 2019).

The study findings confirm that there is a significant correlation between perceived managerial support and practice environment. The data suggested that having a moderate to high level of perceived managerial support from nursing managers and leaders can assure positive work environments for their staff nurses. Such findings are congruent with various international research that recommend that an authentic professional relationship between staff nurses and managers is related and considered as a distinguishable trait of positive practice environments. Such variables are mutually interdependent and considered as substantial factors of nurses' retention, work satisfaction, quality patient care, and hospital outcomes (Al-Hamdan et al., 2018; Falguera et al., 2021; Khan et al., 2018; Laschinger et al., 2012; McGilton, 2010). Creating and promoting positive

practice environments through supportive leadership such as managerial support greatly affects staff nurses' overall health and their intention to remain in or leave the profession. This finding support previous research that suggested organizational factors such as managerial support influence turnover and retention rates, which will stabilize a concrete nursing workforce (Baxter & Warshawsky 2014; Buffington et al., 2012; Chamanga et al., 2020; Galleta et al., 2016; Wei et al., 2018).

Conversely, findings from the study reveal that effective decision making as an essential standard of a healthy work environment does not show any significant correlation with the SSS "being reliable" domain. This may indicate that staff nurses' perception with regards to effective decision-making in relation to managerial support is not associated with having or fostering positive practice environments. Effective decision-making interplay with true collaboration as these concepts reiterate the importance of staff nurse engagement and involvement in clinical and non-clinical decision making, systems thinking, and overall organizational performance improvement (AACN, 2005; Galletta et al., 2016; Ulrich et al., 2019). It is a common practice in the Philippine healthcare setting that physicians are the leaders in healthcare decisions and less autonomy is given to registered nurses. Nurse-respondents feel less involved in policy making and procedural decision making for patient care management. Also, staff nurses experience a one-way communication whenever physicians, healthcare administrators, and nursing managers speak with them. Such challenges in healthcare team collaboration inhibit the development of positive practice environments for Filipino nurses (Bonito et al., 2019; Galletta et al., 2016; Laschinger et al., 2012).

Furthermore, study findings also indicated that authentic leadership as an essential standard of a healthy work environment has no significant correlation to SSS domains. Authentic leadership may be affected by other variables such as nurse manager's competencies in terms organizational and personal skills, nurse's job satisfaction, and patient satisfaction, which were not included as variables in this study (Blake et al., 2013; & Ulrich et al. 2019). Moreover, shared-governance, problem-solving centered healthcare teams that support workforce recognition, and empowerment are also considered as other attributes that influence in building a positive practice environment (Labrague et al., 2018). Additional studies that specifically explore managerial support and authentic leadership as well as the effective decision-making essential standards are important to identify the causal relationship and significance between these study variables.

Limitations

This research was done in one specific GOCC healthcare facility in the Philippines. Therefore, this study's findings should be taken with caution, as it cannot be generalizable to other healthcare facilities (public or private). Second, the data from the respondents were self-reported and so may not directly reflect the actual practice environment. In addition, the assessment tools used in this study were originally developed in Western countries. Thus, generalizability to other healthcare settings cannot be made. Specific validated local research tools must be generated to consider the socio-cultural aspect of nurse-respondents and practice environment within any healthcare institutions. Third, the descriptive correlational study only shows the relationship between the study variables, not the causality. There are also various important factors to consider apart from managerial support and its relationship in creating positive practice environments, which can be explored in future studies Therefore, more longitudinal, and experimental study are needed to explore such study variables.

Implications

The findings of this study have several implications and recommendations for future healthcare practice, research, education, and policy making. First, a holistic approach must be employed to support the nursing workforce. Healthcare providers, physicians, and hospital management in any healthcare system should encourage and promote nurse engagement and involvement in clinical decision-making process. Areas in collaborative clinical management such as patient care planning, interdisciplinary rounds, staff scheduling, mentorship and preceptorship will help provide clinical and non-clinical healthcare personnel with a better understanding and knowledge on how best to promote positive nursing practice environments. Having a structured process in doing clinical rounds and patient reports that give nurses an opportunity to express their opinions and insights in clinical patient management is a good practice example that may promote inclusivity and autonomy in the nursing profession. Nurse managers should also promote engagement of their staff nurses by providing schedule flexibility, advocating for organizational collaboration to make nurse-driven hospital protocols, and creating genuine inter-professional relationships. Healthcare administration and management should be proactive and responsive to staff nurses' job-related concerns and issues, such as appropriate salary, safe workload ratios, and flexible scheduling. These variables will make their staff nurses feel empowered and respected. These attributes of nursing leadership culture and practices may improve the nurse's practice environments and have the potential to increase retention rates, job satisfaction, and nursing outcomes.

To recruit and retain staff nurses in the context of Philippine healthcare system, further professional development programs, staff nurse ladder promotion and continuous leadership training, such as awareness in supportive leadership should be considered and provided to enhance nurses'

professional practice environment. Investing in these developmental programs that reinforce the nursing workforce, especially in promoting positive practice environments and supportive leadership, may contribute to the overall nation's health status and economy.

Lastly, further scientific nursing research related to supportive nursing leadership must be done in both public and private healthcare organizations. Findings from this study may provide an underpinning for future research exploring the implications of supportive leadership in creating positive practice environments in a certain locality. This would presumably enhance the depth of exploration about such supportive leadership skills in relation to fostering healthy positive practice environments and its impact on the overall professional nursing practice and workforce.

Conclusions

The research findings validate the significance of comprehending the characteristics of a positive practice environment and providing authentic managerial support to staff nurses. These are fundamental variables that healthcare leaders at both national and international levels must focus on and invest in, as they may influence the best clinical and non-clinical outcomes that support the success of any healthcare organization. Nursing managers and leaders cannot claim to be inspiring and effective healthcare champions if there is consistent nurse turnover and a failing retention rate within their respective healthcare system. It is evident that nursing outcomes such as work satisfaction, turnover and retention rates are significantly correlated to management and administration. Therefore, supportive leadership from nurse managers that is acknowledged and respected by staff nurses is vital in fostering positive practice environments, which strengthens the overall nursing practice and workforce.

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JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Turnover Intention and Grit among Filipino Nurses

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Abstract

Background: Filipino nurses are going to foreign land en masse, leaving the Philippines with a smaller and disproportionate number of nurses for its population. This situation creates a need to understand the nature and extent of the factors associated with nurses' turnover intention.

Objectives: The purpose of this study was to gain a better understanding of the factors that may contribute to turnover intention among Filipino nurses. Specifically, the objectives of this study were to (1) determine the level of turnover intention among Filipino nurses; (2) determine the predictive value of turnover intention among Filipino nurses based on age, employment status, institution type, and exposure to a positive COVID-19 patient in the last six (6) months; (3) determine the level of grit among Filipino nurses; and (4) determine the association between grit and turnover intention among Filipino nurses.

Methods: A descriptive-correlational research design was employed in this study. Quota sampling was used to secure respondents from three (3) accessible private and public hospitals in Northern Philippines. A total of 325 nurses returned the questionnaire via electronic and paper-based modalities. Data was analyzed using Jamovi® software. Descriptive and inferential statistics were performed to address the research objectives.

Results: The variables age, gender, type of institution, the status of employment, and exposure to COVID-19 the last six months statistically intercept turnover intention ($p = < .001$) but only explain the 2-3% of the variance ($t = 34.832$, $r2 = < 0.05$). The level of grit among nurses ($M = 3.60$) falls in the 40th-50th percentile. The results show that nurses belong in the 70th-80th percentile, reporting they are diligent ($M = 3.14$), they finish whatever they begin ($M = 3.13$), and are hardworking ($M = 4.05$). Lastly, a moderate correlation exists between grit and turnover intention ($rs = 0.022$, $p = > 0.05$).

Conclusions: Personal and work-related factors influence turnover intention among nurses. Multiple factors, including grit, age, and employment status in the Philippines may help to explain Filipino nurses' migration.

Keywords: *turnover intention, grit, Filipino nurses, migration*

Background

Turnover intention is defined by Tett and Meyer (1993) as the conscious and deliberate willfulness to leave the organization. Unfortunately, it is a rising healthcare issue. Garcia-Dia (2022) called the end effect of turnover intention in the health industry as the "great resignation." The assumption in this study is that when turnover intention was turned into action, nurses physically leave their jobs and work elsewhere. The extent and causes in developing countries of these resignations are consequential. Kaddourah et al. (2018) found that nurse turnover has a detrimental impact on the capacity to satisfy patient demands and deliver high-quality care. The fast nurse turnover may result in poor patient outcomes such as higher patient mortality, infection, and accident rates, resulting in more significant burdens for other personnel, especially in developing countries (Marufu et al., 2021).

The Philippines is unique in this situation. Choy (2003) chronicled that Filipino nurses were consistently drawn to work abroad over the last century. Nazareno et al. (2021) reported that one in 20 nurses in the United States were trained in the Philippines. In the State of California, 20% of nurses are Filipino (Wright, 2023). Abrigo and Ortiz (2019) reported that the ratio number of nurses per year is 54.8, 253.5, and 351.1 for every 1000 population, in 1990, 2010, 2015, respectively. In addition, the Philippine Nurses Association estimated that 60% of the Filipino nurses will work abroad (Malig, 2020). These statistics create a huge vacuum in the Philippine health system because many Filipino nurses are attracted to work abroad. The International Council of Nurses (as cited in Buchan et al., 2022) reported that 4% of the global nursing workforce would leave due to the COVID-19 pandemic, which resulted in a global nurse shortage of up to seven million. The projection is closer to the World Health Organization (2020) estimation of a 5.7 million global shortage of nurses by the year 2030. According to Gebregziabher et al. (2020), turnover intention is influenced by work-related features such as job prospects, personal characteristics, and institutional variables. The Commission on Graduates of Foreign Nursing Schools or CGFNS (2023) reported that the top three reasons for nurse migration in the US are: familial (31%), professional (30%), and economic (25%). These are essential factors associated with nurses' turnover intention. However, these variables are not fully explained in scientific literature.

Age was found in previous studies to be a factor in turnover intention. Martin et al. (2021) found age to be associated with the employee's organizational attachment and turnover intention. In addition, Kim et al. (2020) reported that nurses' turnover intentions fluctuated depending on their employment status. Staff nurses had more significant intentions to leave than charge nurses possibly due to security of tenure or higher wages. Nurses with rotational shift work had a higher intention to leave than those with full-time employment. To the researchers' knowledge, there are limited and inconsistent results on the association of employment status to the nurse's turnover intention in various health settings. More research is needed to help understand this phenomenon. Therefore, this study investigated the associations between age, employment status, and turnover intention.

In terms of the type of institution, private hospitals are owned and operated by a single person or group. Conversely, public hospitals are managed and funded by the government. The owners of private hospitals are responsible for assuring compliance, operating funds, personnel resources, and hospital equipment, while the government runs the public hospitals. Due to the distinction of these parameters, relationships may differ depending on whether the medical institution is private or public. According to Mengstie (2020), public and private hospital employees had high turnover intentions, however, the differences were not statistically significant. Although the difference was not significant and extensive, the turnover score of the respondents from public hospitals was slightly higher than those from private hospitals. Kakemam et al. (2018) indicated that nurses in private hospitals had significantly lower turnover intentions than their counterparts in public hospitals.

Another factor found to be associated with turnover intention is the rise in the number of cases of COVID-19 patients due to increased workload for healthcare workers. Most nurses treating COVID-19 patients in underdeveloped countries are at high risk of getting COVID-19 due to a lack of personal protective equipment, increasing the nurses' intention to quit (Menon & Padhy, 2020). The continuous threat of becoming exposed and infected with COVID-19 increased the nurses' anxiety and fear; these negative emotions may have led to high turnover intentions (Barnett et al., 2020).

The present research highlights the need to consider the dispositional factors of working attitudes, including the personal trait of grit. Duckworth and Quinn (2009) characterize grit as a persevering and passionate drive to achieve long-term goals. Grit is frequently related to success and is an excellent psychological trait. Grit is a term used to describe nurses with the ability and power to consistently work toward their goals, despite difficulties, adversity, and slumps (Meriac et al., 2023). Grit also alludes to a willingness to move in the direction of hardship, putting forth effort and enthusiasm over time despite setbacks. According to Oh et al. (2019), people with high grit have a sense of efficacy that can rise again even when experiencing complex tasks or challenging situations. Some research has investigated grit as a predictor of work outcomes, such as teacher effectiveness, retention, and intention to leave (Jeong et al., 2019). The researchers were prompted to study grit and turnover intention for these reasons.

Objective

The objectives of this study were to answer the following

research questions:

1. What is the level of turnover intention among nurses?
2. What is the predictive level of turnover intention among nurses based on: (i) age, (ii) status of employment, (iii) type of institution, and (iv) exposure to a positive COVID-19 patient for the last six (6) months?
3. What is the level of grit among nurses?
4. What is the degree of association between grit and nurse turnover intention?

Methods

Research Design

A descriptive-correlational and cross-sectional research design was used in this study.

Setting and Population

The population of interest in this study were nurses working in three selected hospitals around Baguio City and La Trinidad, Benguet, Philippines. These hospitals have been operating for decades. The inclusion criteria to participate in this study included the following: (1) a registered nurse; (2) officially employed in a public or private hospital in the three hospitals; and (3) working experience as nurse for at least one year. Exclusion criteria for this study were nurses who work indirectly with patients.

Sampling

Quota Sampling was used in this study and led to the sample of three private and public hospitals in Baguio City and Benguet Province, Northern Philippines. A total of 325 nurses returned questionnaires via electronic and paper-based modalities.

Data Collection

After ethical clearances to conduct the study were obtained, a letter was sent to respective gatekeepers at these facilities requesting permission to conduct the study. Upon request, the Chief Nurse's Office provided the researchers with email addresses to recruit potential nurse participants. The researchers obtained informed consent virtually (via Google meet to reduce human contact) or face-to-face (if necessary). When circumstances allowed face-to-face, researchers followed IATF protocols such as wearing K95 face masks and face shields and observing social distancing. The researchers sent a Google form to the institutional email of the prospective respondents to reduce the risk of getting infected with the COVID-19 virus. The timestamp in the email addresses was noted.

The researchers strictly followed the ethical considerations: Autonomy, Anonymity, Confidentiality, Respect, and the Right to self-determination. Respondents voluntarily consented to participate in this study without influence, threat, or coercion from the researchers and were free to withdraw from participation at any time.

Instruments

The tools used in the study were divided into three sections to include questions around participant demographics, grit, and turnover intention. In this study, the Turnover Intention Scale (TIS) was the instrument used to measure the turnover intentions of individuals (Bothma & Roodt, 2013). This scale was based on Tett and Meyer's (1993) definition of turnover intention as the conscious and deliberate willfulness to leave the organization. The TIS has six (6) items with a 5-point Likert scale, providing response options: 1 = Never, 2 = Seldom, 3 = Sometimes, 4 = Frequently, 5 = Always for questions 1, 3, 4, and 6. For question 2, the response options included 1 = To no extent, 2 = To a small extent, 3 = To some extent, 4 = To a large extent, 5 = To a very large extent. For question 5, the response options included 1 = High unlikely, 2 = Unlikely, 3= Neutral, 4 = Likely, 5 = Highly likely. A higher score indicates increased chances of turnover intentions (Taboli, 2015). Roodt (2004) developed the turnover intention scale in an unpublished document, and Jacobs and Roodt (2008) later published the instrument in their literature. In Jacob and Roodt's (2008a) study, Cronbach's alpha coefficient of the survey was 0.913, which was a high and acceptable reliability rating. Martin and Roodt (2008) also reported a high-reliability rating of 0.93 in their research. Therefore, this questionnaire was found to be both reliable and valid.

A Chinese version of TIS was developed by Su (2021) which was used in Mainland China. This Chinese version was created, translated, and back translated for cultural adaptation. The C-TIS-6 Confirmatory Factor Analysis result revealed adequate goodness-of-fit with X2 (14 10.49, df 14 9, p > 0.05, CFI 14 0.98, TLI 14 0.97, RMSEA 14 0.03, and SRMR 14 0.05. The factor loadings of most C-TIS-6 items were moderate, ranging from 0.46 to 0.78. Items 3 and 8 had comparatively low factor loadings of 0.22 and 0.24, respectively. Cronbach's alpha coefficient was 0.70. In the Chinese setting, the C-TIS-6 was found to be a reliable and credible measurement scale of turnover intention (Su, 2021).

In this study, the Short Grit Scale (Grit-S) questionnaire (Duckworth et al., 2007) was used to measure the participant's grit level. This tool is a 5-point Likert scale with response options: 5 = Very much like me, 4 = Mostly like me, 3 = Somewhat like me, 2 = Not much like me, 1 = Not like me at all for questions 2, 4, 7, and 8. For questions 1, 3, 5, and 6, response options included 1 = Very much like me, 2 = Mostly like me, 3 = Somewhat like me, 4 = Not much like me, and 5 = Not like me. This scale measured how individuals maintain focus and interest and persevere in obtaining long-term goals. After excluding two items from each subscale in the Short Grit Scale (Duckworth & Quinn, 2009), the resulting eight-item GRIT–S displayed acceptable internal consistency, with alpha ranging from 0.73 to 0.83 across four samples. The validity for this tool was found to be 0.96

(Duckworth & Quinn, 2009). Therefore, this questionnaire was also found to be both reliable and valid.

The researchers conducted an administrability test to identify the respondents' difficulties in answering the questionnaire. Thirty-four (34) randomly sampled respondents participated in the trial. According to some respondents, the items in the questionnaire were challenging to understand. The researchers discussed these items to develop a standard definition—creating partitions in the questionnaire to address the length of time issue. Provisions of colors and animation on the questionnaire were also added to the questionnaire to facilitate timely completion.

Data Analysis

To interpret the means, the following arbitrary scores were used: 4.21-5 was interpreted as always thinking of leaving the job, or present 90%-100% of the time; 3.41-4.2 was interpreted as frequently thinking of leaving the job, or present 75%-89% of the time; 2.61-3.4 was interpreted as sometimes thinking of leaving the job, or is present 50%-74% of the time; and 1.81-3.4 interpreted as seldom thinking of leaving the job, or is present < 49% of the time.

Simple linear regression was used to determine the degree of predictive variables of the selected variables and the level of turnover intention among nurses. In determining the level of grit, percentile or measure of positionality was used. The researchers reversed the negatively worded questions in the Grit Scale. The individual grit score of the respondents were averaged and compared to a large sample of American adults based on the percentile chart (Duckworth, 2016). Moreover, the scales were ordinal; thus, Spearman's Rho was used to examine these relationships. The data collected in this study were analyzed using the statistical software, Jamovi®.

Results

Table 1 shows the level of turnover intention among nurses. Nurses frequently think of leaving their job, which means this is present 75%-89% of the time. Most nurses who participated in this study frequently do not look forward to going to work (M = 3.40). This can be attributed to the high level of stress experienced by nurses during the COVID-19 pandemic. Murat et al. (2021) found that nurses experienced high levels of stress, burnout, and moderate depression at the height of the pandemic. Being exposed to a deadly virus and the threat that family members could also be exposed due to their work exposure may have contributed to the high levels of stress among nurses. In addition, there is a high nurse-patient ratio in the Philippines. Acuin (2011) found out that the nurse-patient ratio is around 1:38. This high ratio has barely changed after a decade of health reforms. In a recent Muir (2020) review, the nurse-patient ratio could be as high as 1:50-80. Nurses will eventually be exhausted and look for work abroad. However, the findings contradict the study by Legaspi (2019), saying that no significant difference has been found in general work satisfaction whether working locally or abroad.

The second item on the TIS about personal satisfaction brought on by the job had the second highest mean (M = 3.33) interpreted as frequently thinking of leaving the job. Many factors could explain the findings, such as limited work-life balance, work satisfaction, and other related factors. Corollary to the findings is that nurses frequently look for another job. Ortiga and Macabasag (2021) found that in developing countries, most nurses' ultimate career plans are to work abroad. This aspiration may be due to higher job salaries offered in developed countries, better working conditions, and a bright future for the family. The lowest means included items around looking for a job with the same compensation (M = 3.17), frustration on growth (M = 3.01), and considering leaving the job (M = 2.94), as demonstrated in Table 1. These nursing problems existed even prior to the pandemic: high nurse-patient ratios, low salaries, and a problematic workplace. When the pandemic hit, these problems were magnified.

Table 2 shows the prediction of age, gender, type of institution, the status of employment, and exposure to COVID-19 for the past six (6) months and nurse turnover intention. The model fits are $R2$ = 0.0285, X2 (2, 324) = 0420, p < 0.001 suggesting that the variables only explain 2% of the variance with a fit measure of around 42%. The intercept is statistically significant (p = <.001) with an estimate of 3.13 (t = 34.832, SE = 0.0899). The significance of intercept in regression is showing the variance of the variable that predicted the independent variable. Therefore, manipulating the selected variables could change the dependent variable. Therefore, intervening on the age, gender, type of institution, the status of employment, and degree of exposure to the virus could significantly change the intention of the nurses to leave the workforce.

Notably, nurses working in the private sector are more likely to want to leave the workforce (t = 0.288, p = > 0.05). The benefits and tenure for nurses in this sector are more unstable compared to that of their public nurse counterparts. In the Philippines, the salary standardization law (Republic Act 11466) is in full effect among public hospitals. In the private sector, the salary is inconsistent and largely depends on the organizational policy. Critical results, as shown in Table 2, indicate that casual employees (those with benefits but have a six-month contract) are more likely to leave the job than the job order or those without tenure or benefits (t = -1.026, p = > 0.05). The researchers would like to highlight that those belonging to the 41-50 years old age bracket are more likely to leave than the 21-30 years old (t = -0.866, p = > 0.05). This finding may be attributed to novice nurses lacking clinical experience while middle-aged nurses are

Table 1

Level of Turnover Intention among Nurses

	Level of Turnover Intention among Nurses	Mean	Interpretation
1.	I don't look forward to my work.	3.40	Frequently
2.	My job is inadequate to satisfy my basic needs.	3.33	Frequently
3.	I am looking for another job because I need to.	3.31	Frequently
4.	I need a better compensation.	3.17	Frequently
5.	My work does not satisfy my career goals.	3.01	Frequently
6.	I am thinking of looking for another job.	2.94	Frequently
	Total level of turnover intention	**3.19**	**Frequently**

Note. Legend: 4.21-5- Always; 3.41-4.2- Frequently; 2.61-3.4- Sometimes; 1.81-2.6- Seldom; 1-1.81- Not at all

Table 2

Prediction of the Selected Variables to Nurses Turnover Intention

Predictors	Estimate	SE	t	p
Intercept [a]	3.1329	0.0899	34.838	< .001
Age				
31-40 – 21-30 years old	0.0331	0.0537	0.616	0.538
41-50 – 21-30 years old	-0.0672	0.0776	-0.866	0.387
51-60 – 21-30 years old	0.0298	0.1310	0.228	0.820
60+ – 21-30 years old	-0.5255	0.4291	-1.224	0.222
Gender				
Female – Male	0.0150	0.0521	0.288	0.774
Type of Institution				
Private – Public	0.0957	0.0579	1.653	0.099
Status of Employment				
Casual / Probationary – Job Order	-0.1695	0.1652	-1.026	0.306
Permanent – Job Order	0.0443	0.0783	0.565	0.572
Exposure to COVID for the past six months				
No – Yes	-0.0962	0.0681	-1.414	

Table 3

Level of Grit among Nurses

Level of Grit	Mean	Percentile
I am conscientious in my work.	4.14	70th-80th
I see to it that my work is done.	4.13	70th-80th
I am industrious .	4.05	70th-80th
I am focused on long-term goals.	3.42	30th-40th
I keep my interest on a project burning.	3.35	30th-40th
I get things done.	3.30	30th-40th
I am not discouraged easily.	3.22	20th-30th
I am focused on what I have set to do.	3.18	20th-30th
Total grit score among nurses	3.60	40th-50th

Legend: 10% Percentile- Mean 2.5; 20% Percentile- Mean 3.0; 30% Percentile- Mean 3.3; 40% Percentile- Mean 3.5; 50% Percentile- Mean 3.8; 60% Percentile- Mean 3.9; 70% Percentile- Mean 4.1; 80% Percentile- Mean 4.3; 90% Percentile- Mean 45; 95% Percentile- Mean 4.6; 99% Percentile- Mean 4.9.

more stable and have proficient to advanced competency. The middle-aged nurses are more equipped to work abroad, which is why their intention to leave is more intensified.

As shown in Table 3, the total level of grit among nurses falls in the 40th-50th percentile (M = 3.60). The findings imply that most nurses are in the middle of the grit level compared to high-functioning individuals in business and other essential industries. The items with the highest mean were around diligence (M = 4.14) and finishing what nurses started (M = 4.13), interpreted as a 70th-80th percentile. This finding can be attributed to the cultural importance of persistence and getting the work done. The items with the lowest means were around trying to institute change (M = 3.18) and not letting setbacks discourage them (M = 3.22), both interpreted as falling in the 20th - 30th percentile of the other high-functioning individuals. These findings are important because nurses need to be "gritty" to create a legacy in the workplace. Also, grit can be learned with proper reinforcements and structures. The areas that can also be enhanced include pursuing and finishing goals (M = 3.30), and maintaining focus on projects (3.42), both interpreted as the 30th-40th percentile.

Seguin (2019) found that grit was significantly associated with self-actualization among nurse leaders. To some degree, higher grit leads to longer life and lower stress level. Possibly because "gritty" nurses tend to enjoy their job due to a deep sense of commitment. This finding appeared to be true among Filipino nurses. Cuevas et al. (2021) reported that Filipino migrants are diligent and hard workers. They dedicate their lives to their work and families. Often, when they start an endeavor, they intend to finish due to a deep sense of commitment to their work and community. Perhaps this work ethic can be attributed to the collectivistic and long-term orientation of Asians in their work (Erman & Medeiros, 2021).

Lastly, the study shows the degree of association between grit and turnover intention among nurses. There is a positive but moderate association (rs = (324) 0.022, $p > 0.05$). The degree of association is moderate because the researchers posit that aside from personal factors, external factors must be in place to retain nurses in the health industry. As the grit goes up, the turnover intention also goes up. Grit is passion and perseverance (Duckworth et al., 2007).

Discussion

For over a century, turnover intentions have been problematic in developing countries such as the Philippines. The findings in this study reveal that nurses went to the workforce frequently, thinking of leaving the job. Many factors may help explain these results. Drennan and Ross (2019) discussed that developed countries offer luring benefits to nurses, such as high compensation, better prospects for the family, and a more stable environment (politically and professionally). As a result, high nurse turnover drains the supplying country of vital human resources (Dzinamarira & Musuka, 2021). This phenomemon is the classic supply and demand theory in economics. Developing countries have the ulterior motive to retain these nurses. Experienced nurses are trained and have the capabilities to render excellent nursing care. Neophyte nurses are more likely to commit mistakes and may need a pool of resources to get them to the advanced level of proficiency (Murray et al., 2020). The intention to leave nurses' jobs in the Philippines can be drawn from the findings.

Nurses in private institutions have monthly salaries ranging from PhP 10,000-13,500 (USD 181-233), which is inadequate to meet the needs of the nurses and their families (Divina, 2022). This income remains inadequate to meet personal and familial needs. Expatistan (2023) estimated that the average monthly cost of living in the Philippines for a family of four is PhP 134,966 (USD 2,454), while for a single individual, PhP 65,149 (USD 1,815). Comparing the salary of the nurse and the cost of living, nurses struggle to make both ends meet. The constant lack of financial stability could be one of the major reasons for Filipino nurses intending to leave their job. This less than optimal living wage has become a challenge for nurse executives and hospital administrators in developing countries, including the Philippines.

Grit has become a popular concept in relation to work in the last few years (Nazari et al., 2021). Despite the importance of grit to professional success, it appeared to moderately affect turnover intention. The relatively moderate relationship could be attributed to multiple factors. One factor could be that most hospitals are only slowly adopting a grit- and merit-based approach to hiring and retaining nurses. By and large, many hospitals are still practicing patronage and nepotistic policies (Hechanova et al., 2020; Teehankee & Calimbahin, 2022). Second is that grit may be lacking emphasis both in universities and hospital settings. There is also a general expectation that healthcare workers cannot make mistakes (Ramos & Calidgid, 2018), and performance is based on outdated modalities (Ong et al., 2012). These tendencies are the antithesis to grit (Calo et al., 2019). In grit, people are allowed to grow, and it is grounded on the idea of growth mindset. Dweck (2016) defined the characteristics of a person with a growth mindset namely: continuous learning, deep sense of meaning towards one's life, seeking feedback, and constantly polishing skills and knowledge.

The findings are important because nurses' migration can be and should be studied from different lenses such as personal factors (need for adventure, search for a better life conditions), workplace environment and safety, and societal

factors such as political and economic conditions, (DeParle, 2019). A multifaceted explanation is the only way to understand what contributes to or influences Filipino nurses' turnover intention and grit.

Study Limitations

The study's sample and setting were limited to three hospitals located in Northern Philippines. Therefore, the study's findings may not be generalizable to the Filipino nursing population. In addition, the researchers' use of a descriptive design using correlational analysis only allowed examination of associations among the variables, rather than causation; hence no causal inferences could be made.

The researchers encountered challenges collecting data online. Out of 445 nurses, 120 declined to participate. Only 325 nurses voluntarily completed the questionnaire. Therefore, the attrition rate was 26.97%. Many respondents were unavailable or reluctant to respond to the questionnaire.

Conclusions

The study findings are essential in understanding turnover intention since many nurses are frequently thinking of leaving their present job. Nurse managers and hospital administrators are encouraged to create responsive and relevant interventions to increase nurses' retention and to minimize the "great resignation" as described by Garcia-Dia (2022). This recommendation may mean identifying factors contributing to the turnover intention, such as the lack of grit. Enhancing grit among nurses may keep them working in the institution to reflect their reasons for choosing nursing at the outset of their professional career. Developing programs that enhance their grit such as providing a supportive, nurturing, and positive working environment may also help retain nurses. Integrating nurses' interests and instilling hope in the workplace could help in improving grit as well.

The study findings suggest that turnover intention among nurses cannot be traced to a single cause. Rather, it is affected by multiple factors such as age, gender, type of institution, status of employment, and recent events such as exposure to COVID-19. Therefore, a multifactorial and multifaceted approach to help retain nurses is needed.

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JOURNAL OF NURSING PRACTICE APPLICATIONS & REVIEWS OF RESEARCH

Addressing COVID-19 Vaccine Hesitancy among Filipinos and Filipino-Americans in a Metropolitan Area

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Abstract

Background: With the development of the COVID-19 vaccine, certain populations including Filipinos are known to be more at risk for COVID-19 while also more vaccine hesitant. A literature review revealed strategies to reduce vaccine hesitancy and promote vaccine uptake including increasing trust, tailored health messaging, and professional advice.

Objective: This project aimed to address COVID-19 vaccine hesitancy among Filipinos and Filipino-Americans in a metropolitan area. More specifically to address concerns about the COVID-19 vaccine that prevent vaccination with aims to increase vaccination rates among this population.

Methods: Using a quality improvement framework, a scaffolded intervention was conducted. Initially, a population focused needs assessment was conducted, followed by an educational intervention integrating strategies to reduce vaccine hesitancy, promote vaccine uptake, and provide referrals to vaccination appointments. Knowledge was assessed both before and after the educational intervention.

Results: Thirty-two participants ($n = 32$) participated in the needs assessment and common themes identified for vaccine hesitancy among the population included: lack of knowledge regarding side effects of the vaccine, limited confidence in safety and efficacy of the vaccine, and mistrust. Twenty participants engaged in the educational intervention. Following the education intervention, all participants showed improvement in all knowledge and confidence areas. There was a slight improvement for those unvaccinated.

Conclusion: This scaffolded approach was successful in conducting a thorough needs assessment to determine areas of vaccine hesitancy in turn facilitating the development of a tailored mass education intervention using strategies to gain trust from the participants and incorporating methods to promote vaccine uptake. These strategies can be used across populations.

Keywords: *COVID-19; COVID-19 vaccines; vaccination hesitancy; Filipinos*

Background

Vaccine hesitancy, the delay in acceptance or receipt of vaccination despite availability (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015), is not a new phenomenon in the United States. In the United States, there have been many instances where marginalized populations have been mistreated and experimented on by the medical community which has caused a mistrust in western medicine (Hostetter & Klein, 2021). In recent years, there has been an increasing number of people concerned about vaccine safety causing vaccine hesitancy leading to either delayed or missed immunizations (Schoeppe et al., 2017). In the United States, measles was eradicated in the year 2000, but because of parental concerns in the safety of the vaccines, vaccination decreased bringing back measles as endemic outbreaks in various communities throughout the United States (Quinn et al., 2020).

The COVID-19 pandemic significantly impacted the global population. Less than a year after first observation of the disease, vaccination for COVID-19 was developed and approved for use in the United States through emergency use authorization by the U.S. Food and Drug Administration (Food and Drug Administration, 2022). Use of the vaccine was first indicated for healthcare workers, those who are immunocompromised, elderly, and then followed by the general adult population. The COVID-19 vaccine is a novel vaccine for all individuals eligible to receive it and it is part of the solution to the pandemic. Many populations expressed concerns and reluctance to receiving the COVID-19 vaccine (Troiano & Nardi, 2021). COVID-19 vaccine hesitancy is related to different factors including COVID-19 vaccine safety and efficacy, unethical medical practices on people of color, and structural inequities that exist for marginalized populations. For people of color, only 18% of Black Americans and 40% of Latinx Americans trust that the COVID-19 vaccine is effective and less trust that it is safe (Opel et al., 2021). Vaccine hesitancy related to the new COVID-19 vaccine is a challenge that the medical community must address and overcome.

There is a lack of data specific to COVID-19 vaccine hesitancy among the Asian population and even more so specific to Filipinos and Filipino-Americans. During the time of this project, information was lacking among the databases due to how novel this disease was. In August 2020, the Centers for Disease Control as reported in the CDC Morbidity and Mortality Weekly Report, added Asians as a population group disproportionately affected by COVID-19 and at the same time mentioned that even so, few studies have assessed COVID-19 disparities among this population (Moore et al., 2020). In addition, it was mentioned that analysis of the subgroup populations within the Asian populations could provide additional insight (Moore et al., 2020). Filipino nurses make up 4% of the US nursing workforce, yet 31.5% of the COVID-19 nurse deaths were Filipino nurses (National Nurses United, 2021). While there are other variables that could be related to the COVID-19 deaths among the general Filipino and Filipino American population including health disparities related to including immigration status, lack of health insurance, and economic instability (Constante, 2020), it is important to address COVID-19 vaccine hesitancy among Filipino and Filipino-Americans to prevent COVID-19 morbidity and mortality.

Vaccine hesitancy among Filipinos and Filipino-Americans leads to members of the community not being vaccinated which leads to the continued spread of COVID-19. According to a May 2020 Associated Press poll, only 50% of Americans reported they would receive a vaccine, 30% weren't sure, and 20% refused to be vaccinated (Coustasse et al., 2020). When looking into available polls, there was a lack of data specifying the Asian category into different subgroup populations such as Filipinos. According to the Press Ganey (2021) poll, out of a sample size of 948 Asians and 54,341 White people, 65.5% and 64.1%, respectively, responded they were likely to accept the vaccine.

Objective

The aim of this quality improvement project was to address COVID-19 vaccine hesitancy and vaccine uptake among Filipinos and Filipino-Americans in a Midwest, suburban and urban community through use of an educational intervention following a population-specific needs assessment. Authors also sought to better understand Filipino and Filipino-American perspectives on perceived susceptibility and severity of COVID-19 and benefits and barriers of COVID-19 vaccination.

Literature Review

Search Strategy

A literature review was performed to retrieve evidence on the problem and strategies regarding COVID-19 vaccine promotion, acceptance, and uptake. Databases used included CINAHL, PubMed, and PsycINFO. The search terms used in these databases included COVID-19 vaccine promotion, vaccine uptake, vaccine acceptance, vaccination, immunization, and Coronavirus. To help broaden the search, different combinations of the search terms were used using the Boolean operators AND such as coronavirus AND vaccine uptake and vaccine promotion.

Due to the limitations of current evidence-based articles available on COVID-19 with a narrow focus, the search was broadened to ensure the retrieval of relevant articles. CINAHL and PubMed were part of the search strategy due to the nursing science and medical science articles in these databases. PsycINFO was part of the search strategy due to the psychological components in this topic. Eighteen (18) articles were retrieved. Following an abstract review, eight

articles were critically appraised. The Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal Tool was used to evaluate the articles included in the literature review.

Briefly, the following is a summary of the eight articles included in the literature appraised using the Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal Tool. The level and quality of evidence ranges from III-A to V-B. Most of the literature were expert opinion articles. Calna and Douglass (2020) provided an expert opinion piece that discussed findings that add to the evidence that trust is a key factor in vaccination update with support from professionals in messaging to populations. Chou and Budenz (2020) provided an expert opinion piece that discussed findings that add to the evidence towards the project for strategies effective in vaccine promotion. Cordero (2021) provided an expert opinion piece that discussed the cultural perspective of strategies used in the Philippines promoting vaccine uptake including door-to-door campaigns by doctors and for public officials to be role models to the Filipino populations. Fisher (2020) conducted a nonexperimental study with 1000 adults. The purpose of this study was to determine attitudes towards the SARS-CoV-2 vaccine which at the time was not available yet for public distribution and the observable measure of this study was the intent to be vaccinated against COVID-19. Among the attitudes of the surveyed adults included themes to not be vaccinated which included concerns about the vaccine, needing additional information about the vaccine, antivaccine attitudes, and a general lack of trust. Fisk (2021) provided an expert opinion piece that discussed common barriers to vaccination including perception of risk, mistrust, misinformation, as well as cost, convenience, and supply chain issues. Gopez (2021) provided an expert opinion piece that discussed how religion was used to promote vaccines in the Philippines. Gosti and Salmon (2020) provided an expert opinion piece that discussed the use of mass communication and messaging in vaccine promotion campaigns. Lastly, Laine et al. (2021) article was also an expert opinion piece that discussed recommendations to promote vaccine acceptance related to the novel COVID-19 vaccine including the use of media campaigns by trusted messengers, using health and public health professionals as part of the campaign and to address safety concerns.

When considering the components of the Health Belief Model (Rosenstock, 1974, 1988), characteristics found in the articles such as cultural factors of the Filipino population is related to the sociodemographic factors in the framework. Regarding the perceived benefits and barriers, many of the articles discussed strategies in vaccine uptake related to the benefit or barrier to receiving a vaccine. Regarding the perceived susceptibility and severity related to COVID-19 vaccines, the articles discussed attitudes related to vaccination. Lastly, many of the articles discussed potential strategies related to cues to action that could lead to the behavior of vaccine uptake.

Common themes that emerged from the literature review included trust, tailored health messaging, and professional advice.

Trust

The theme of trust related to vaccine promotion and vaccine uptake was common among the literature found. Calnan and Douglass (2020) discussed that trust is a key concept in vaccine uptake behaviors for vaccine hesitant populations. Fisher (2020) discussed that lack of trust was the second most common reason for having no intention to be vaccinated against COVID-19. There are misconceptions about the vaccine including conspiracy theories that have led to mistrust about the vaccine. It is important to gain trust from individuals who are more skeptical about vaccines. Laine et al. (2021) emphasized having trusted messengers that reflect the population when disseminating information to those that are vaccine hesitant. Gopez (2021) discussed the issue of mistrust with vaccinations of Filipinos. In February 2018, there was a new vaccine, Dengvaxia, distributed to vaccinate against dengue fever in the Philippines. This vaccine led to over 100 deaths which most likely has led to mistrust with novel vaccines among Filipinos. Gopez (2021) suggested using churches and faith leaders to establish and regain trust by Filipinos towards vaccinations. Codero (2021) discussed the importance of trust in Filipino culture. Filipinos highly trust healthcare professionals including doctors and find transparency by public health officials very important. This church-based approach will help create a culture of openness and trust. Fisk (2021) states that issues around trust will likely affect COVID-19 vaccine uptake and that the key to success will be rebuilding trust.

Tailored Health Messaging

The theme of tailored health messages as part of a vaccine promotion program was common among the literature found. Ostin and Salmon (2020) discussed that communication about vaccinations should be evidence-based and focused on the overall benefits to everyone, the community and individual responsibility, misconceptions about the vaccine, and the health risks of the disease and benefits of vaccination. Health messages should be tailored to specific populations to promote vaccine acceptance among vaccine hesitant populations. Laine et al. (2021) emphasized the need to provide “aggressive” factual and accurate information to defeat misconceptions about the COVID-19 vaccine, to acknowledge concerns about the vaccine, and address expectations about the vaccine during the tailored health messaging. Chou and Budenz (2020) recommended tailoring health messages to the different audiences by using positive emotions, acknowledge the presence of negative emotions

while reiterating the safety and efficacy of the vaccines, and the overall positive community benefit of vaccination.

Professional Advice

The theme of professional advice as part of a vaccine promotion program was common among the literature found. Laine et al. (2021) discussed that health professionals including internists and clinicians should be prepared to help with promoting vaccine acceptance among the vaccine hesitant populations. Codero (2021) recommended in the Philippines for "house-to-house" mass information about the importance of vaccination and the possible side effects to be disseminated by local health professionals including doctors, nurses, and social workers. Specifically, doctors need to be involved in boots on the ground messaging campaign because in the Filipino culture, doctors are highly regarded, respected, and trusted. Fisk (2021) recommended having community leaders promote the vaccine among vaccine hesitant groups, foster widespread support among all political parties at all levels (local, state, and national), and potentially use social media influencers and celebrities to promote vaccination uptake.

Theoretical Framework

The theoretical framework used to guide this project was the Health Belief Model. The Health Belief Model considers an individual's perception for their perceived susceptibility to developing a disease, the perceived severity of the disease, the perceived benefits of taking action, the perceived barriers to taking action, and cues to action, and self-efficacy (Rosenstock, 1974, 1988). See Figure 1. The revised Health Belief Model guided this project by assessing the participant's sociodemographic factors such as race, ethnicity, age, and cultural background, determining the aggregate's perceived susceptibility and perceived severity to COVID-19, determining the aggregate's perceived benefit of action minus the perceived barriers and perceived self-efficacy to receiving the COVID-19 vaccine, implementing the cues to action such as media and personal and cultural influences, and evaluating if all of these components resulted in increasing COVID-19 vaccine knowledge and confidence in the safety and efficacy, thus increasing COVID-19 vaccine uptake among Filipino-Americans in the Chicago and surrounding community.

Methods

There were four main parts of this quality improvement project: A needs assessment survey, development of an education intervention based on the needs assessment findings, implementation of the education intervention, and evaluation of the education intervention comparing the pre- and post- test surveys from the education intervention.

The project lead culturally identifies with being Filipino. This identity is significant to set the stage for the project because of the authenticity and the meaning of the project to her. Additionally, in order to reach out to the Filipino population in the Midwest, suburban and urban community, the project lead reached out to collaborate with a state-wide Filipino nursing organization.

Setting and Participants

Eligibility to participate in the needs assessment survey and educational intervention was determined by the project lead based on the following inclusion and exclusion criteria: participants identified as Filipino or Filipino-American nationality and were 18 years of age or older. Participants not identifying as Filipino or Filipino-American and under 18 years of age were excluded. The needs assessment survey was distributed through flyers, social media (Facebook), and emails in collaboration with this state-wide Filipino nursing organization. The survey was distributed and available for 15 days to be completed. Based on this inclusion/exclusion criteria a total of 29 participant responses were included in the needs assessment survey findings.

Data Collection

The tools used in this project included a needs assessment survey to collect baseline information about the needs of the population to help inform the educational intervention provided and a pre-posttest survey distributed with the educational intervention. These novel tools were developed and used since there is no established standardized instrument to collect the data needed for this project.

Needs Assessment Survey

The needs assessment survey was an electronic, 29-item survey, developed by the project lead, a registered nurse (RN) in collaboration with two other RNs who are the co-authors of this manuscript. The format of the survey included a mix of 5-point Likert scale, yes-no, select all that apply, and open-ended type questions. The questions were not piloted prior to distribution. The survey was administered using Google Forms via a variety of online platforms mentioned previously. No personal identifiable information was collected. The needs assessment survey took approximately less than five minutes for respondents to complete.

The survey included questions were developed to collect information pertaining to the thoughts about the COVID-19 vaccine among the Filipino and Filipino-American population in a Midwest, suburban and urban community. It was shared with the respondents that from the information collected via the survey, the goal was to develop a tailored educational intervention to address any needs or gaps for the population.

The needs assessment survey collected the following information: demographics including if the respondent identifies with being Filipino or Filipino American, age, gender, place

of residence, highest educational level attained, occupational area, COVID-19 vaccination status, knowledge about COVID-19 vaccines, confidence in COVID-19 vaccines, access to COVID-19 vaccines, beliefs, and values about COVID-19 vaccines, and recommendations and suggestions about COVID-19 vaccines.

Pre-Test and Post-Test Surveys

The pre-and post-test surveys were implemented before and after the one-time educational intervention. The pre and post-test survey, developed by the RN project leader in collaboration with the two RN co-authors, was a 9-item survey using a mix of 5-point Likert scale and open-ended questions. This pre-post survey assessed participant knowledge about COVID-19 vaccines, knowledge about the development of COVID-19 vaccines, confidence in the overall safety and effectiveness of the COVID-19 vaccine, knowledge about the COVID-19 vaccine recommendations and safety according to different population groups (i.e. adults, older adults, children, pregnant and child-bearing age women), likelihood to recommend the vaccine to family and friends, likelihood to make an appointment for a COVID-19 vaccine if unvaccinated or partially vaccinated, and open-ended questions for comments, suggestions and information to share. The questions were not piloted prior to distribution.

Participants completed the survey electronically through Google Forms or via paper format if an electronic device was not available. The pre-test was completed prior to the educational intervention and the post-test survey was completed immediately after participating in the educational intervention. The pre and post-test surveys took approximately one minute to complete.

Intervention

A multifaceted evidence-based approach with three components was developed and implemented for this intervention. The project began in May 2021 with administering a population focused needs assessment of Filipinos and Filipino-Americans in the Midwest, suburban and urban community including members of the statewide Filipino nursing organization and community members. Participants were recruited through flyers, social media (Facebook), and emails from the statewide Filipino nursing organization to complete the needs assessment survey. The deadline to complete the needs assessment survey was set for July 2, 2021. After analysis of the needs assessment, the mass educational intervention was developed and tailored to include information about the COVID-19 vaccine to meet the specific needs of Filipinos and Filipino-Americans in the Midwest, suburban and urban community.

The educational intervention was developed and delivered by the project leader who was also an experienced registered nurse who identified with being Filipino. The education included information about the COVID-19 vaccine development, recommendations, safety for the COVID-19 vaccine by sub-population groups, side effects, misinformation, and breakthrough infections. To address potential access issues, discussing ways to schedule an appointment, providing a handout with information, and providing on-site vaccine scheduling assistance was incorporated. This educational intervention was implemented in conjunction with a statewide Filipino nursing organization community event in August 2021. This community event was open to the public with the nursing organization members and their families. The education intervention was only a portion of this event where it was implemented. After the education intervention, participants were connected with resources and informed that if they wanted to schedule a COVID-19 vaccination appointment, that they could receive assistance if needed.

Data Analysis

Data was collected using a nine-question pre-post survey and analyzed using descriptive statistics (mean, median, mode), percentage change, and qualitative content analysis from verbal comments and written comments to open-ended questions made on surveys. Regarding the content analysis, it was made up of reviewing and comparing the comments provided in the surveys. Results from the pre- and post-implementation surveys from the mass education intervention were analyzed using descriptive statistics.

The data collected from the needs assessment survey provided information used to form the focus of the mass education intervention. This content development was done by reviewing the needs assessment survey answers and looking for common themes surrounding perceived beliefs and values about COVID-19 vaccines including knowledge gaps about COVID-19 vaccines, confidence issues in COVID-19 vaccines, and access issues to receiving COVID-19 vaccines. The data measured in the education intervention was the amount of change in the participants COVID-19 vaccine knowledge and confidence in the safety and efficacy of the COVID-19 vaccine, and the number of COVID-19 vaccines scheduled following implementation. Data analysis was completed and the percentage change was calculated in the overall knowledge about COVID-19 vaccines, knowledge about the development of the COVID-19 vaccine, confidence in the overall safety and effectiveness, knowledge about vaccine recommendations and safety by population groups, likelihood to recommend the COVID-19 vaccine to family and friends, and likelihood to schedule a COVID-19 vaccine appointment for themselves if not already vaccinated or partially vaccinated.

Results

Needs Assessment Results

There was a total of 32 respondents, but only 29 were considered due to the inclusion criteria. The respondents were

at least age 30 and older, the majority of respondents were female (82.8%, $n = 24$), a little more than half were born outside of the U.S. (55.2%, $n = 16$), the majority of respondents had an educational level higher than a high school diploma/GED (96.6%, $n = 28$), and many of the respondents worked in the healthcare, nursing, and medical field (69%, $n = 20$). See Table 1.

COVID-19 Vaccination Status

For COVID-19 full vaccination status (defined as two doses of Pfizer or Moderna or a single dose of Johnson and Johnson), 86.2% ($n = 25$) respondents were fully vaccinated. The respondents who were not fully vaccinated selected the following reasons for not being fully vaccinated: 13.8% ($n = 4$) not confident in the safety of the vaccine,

Table 1

Needs Assessment: Demographic Characteristics

Variable	*n*	Percent
Age		
under 18	0	0%
ages 18-29	0	0%
ages 30-39	7	24.1%
ages 40-49	6	20.7%
ages 50-59	6	20.7%
ages 60 and older	10	34.5%
Gender		
Female	24	82.8%
Male	5	17.2%
LGBTQIA+		
do not identify with being a member of the LGBTQIA+ community.	24	82.8%
identify with being a member of the LGBTQIA+ community	2	6.9%
preferred not to answer	3	10.3%
Primary Place of Living		
Chicago (city proper)	8	27.6%
suburban Cook County	16	55.2%
surrounding counties of Cook County including Dupage, Will, and Lake County	5	17.2%
Place of Birth		
born in the U.S.	13	44.8%
not born in the U.S. (born in the Philippines)	16	55.2%
Highest Level of Education		
an education level higher than a high school diploma/GED	28	96.6%
Master's degree	13	44.8%
Bachelor's degree	11	37.9%
Doctoral degree	1	3.4%
Professional degree (e.g., DNP, MD, JD)	1	3.4%
some college	1	3.4%
Associate degree	1	3.4%
High School degree/GED	1	3.4%
Occupation Area		
Healthcare, Nursing, and Medicine	20	69%
Arts, Culture and Entertainment	2	6.9
Education/Teaching	1	3.4%
Business, Management, and Administration	1	3.4%
Real Estate	1	3.4%
Security	1	3.4%
Unemployed/Looking for work	1	3.4%
Retired	2	6.9%
COVID-19 Full Vaccination Status		
fully vaccinated with the COVID-19 vaccine	25	86.2%
Unvaccinated or Not Fully Vaccinated Status		
Have not decided/Unsure	2	6.9%
Not confident in the safety of the vaccine	4	13.8%
I have a medical condition that prevents me from getting the vaccine at the moment	2	6.9%
Do not believe in vaccination	1	3.4%

6.9% (*n* =2) undecided, 6.9% (*n* = 2) had a medical condition that prevented them from getting the vaccine, and 3.4% (*n* =1) did not believe in vaccination. See Table 1.

Knowledge about COVID-19 Vaccines

Most respondents (82.7%, *n* = 24) felt they were knowledgeable about the different COVID-19 vaccines, knowledgeable about the safety and effectiveness of the COVID-19 vaccines (82.7%, *n* = 24), knowledgeable about the potential side effects of the COVID-19 vaccines (79.3%, *n* = 23), and knowledgeable about the current recommendations for the COVID-19 vaccines (82.7%, *n* = 24). See Table 2.

Confidence in COVID-19 Vaccines

Many respondents (72.4%, *n* = 21) felt confident in the safety and effectiveness of the COVID-19 vaccines and either already received the COVID-19 vaccine or had plans to receive it (82.8%, *n* = 24). For respondents who were not confident (27.6%, *n* = 8), some qualitative findings related to reasons included having concerns that the vaccine is experimental and unaware how the vaccine was developed and concern about side effects and uncertainty with how it affects certain populations. For respondents who had no plans or were undecided about receiving the vaccine, some qualitative findings included related to concern about side effects,

Table 2

Needs Assessment: Perceived Knowledge, Confidence, Beliefs and Values, and Recommendations

Variable	*n*	Percent
Knowledge about COVID-19 Vaccines		
Being knowledgeable about the COVID-19 Vaccine in general (mRNA vaccines Pfizer/Moderna and adenovirus vaccine Johnson and Johnson)		
Strongly agree or agree	24	82.7%
Neutral	5	17.2%
Strongly disagree or disagree	0	0%
Being knowledgeable about the safety and effectiveness of the COVID-19 Vaccine (mRNA vaccines Pfizer/Moderna and adenovirus vaccine Johnson and Johnson)		
Strongly agree or agree	24	82.7%
Neutral	5	17.2%
Strongly disagree or disagree	0	0%
Being knowledgeable about the potential side effects of the COVID-19 Vaccine (mRNA vaccines Pfizer/Moderna and adenovirus vaccine Johnson and Johnson)		
Strongly agree or agree	23	79.3%
Neutral	3	10.3%
Strongly disagree or disagree	3	10.3%
Being knowledgeable about the current recommendations for the COVID-19 Vaccine including who is eligible for the vaccine (mRNA vaccines Pfizer/Moderna and adenovirus vaccine Johnson and Johnson)		
Strongly agree or agree	24	82.7%
Neutral	5	17.2%
Strongly disagree or disagree	0	0%
Confidence in COVID-19 Vaccines		
Being confident in the safety and effectiveness of the COVID-19 Vaccine (mRNA vaccines Pfizer/Moderna and adenovirus vaccine Johnson and Johnson)		
Strongly agree or agree	21	72.4%
Neutral	8	27.6%
Strongly disagree or disagree	0	0%
Open Ended Questions for those respondents who are not confident:		
Its experimental, not FCA [FDA] approved		
We do not know the future effect on the childbearing population		
Not enough studies that confirms its effectivity to any given population		
Unsure about vaccine creation procedure, testing results. Worried about side effects		
I think NOT enough time has passed to really know side effects or if there would be any in the future”		
There’s news about having covid despite being vaccinated, although in that news they said their symptoms are not worse that they have to be hospitalized		
Have plans to receive the COVID-19 Vaccine or have already received the COVID-19 Vaccine (mRNA vaccines Pfizer/Moderna (both doses) and adenovirus vaccine Johnson & Johnson (single dose)		
Yes	24	82.8%
No	4	13.8%
Unsure	1	3.4%

Variable	n	Percent
For those not planning to receive the vaccine or unsure:		
There needs to be more research	4	13.8%
I am worried about adverse reactions such as a severe allergic reaction	4	13.8%
I am worried about long-term side effects”	3	10.3%
I believe there is a microchip in the vaccine	2	6.9%
I believe there is a conspiracy theory about the COVID-19 vaccine	2	6.9%
I believe in freedom of choice to not receive the vaccine due to personal reasons	2	6.9%
For health reasons, my doctors recommend I not get any vaccine right now.	2	6.9%
I am not worried about getting the COVID-19 infection	1	3.4%
I am not worried about passing the COVID-19 infection to someone else even if I have no symptoms	1	3.4%
I don’t believe in the COVID-19 vaccine	1	3.4%
I am concern for the young and childbearing age group	1	3.4%
Access to COVID-19 Vaccines		
Not difficult or had no difficulty scheduling an appointment for the COVID-19 Vaccine	26	89.7%
Difficult or had difficulty scheduling an appointment for the COVID-19 Vaccine	3	10.3%
For those that had difficulty scheduling an appointment for the COVID-19 vaccine		
Don’t have time to find a location and schedule an appointment	1	3.4%
Difficult to navigate/confusing on how to schedule an appointment	3	10.3%
Signed up for all the notifications and haven’t heard back	4	13.8%
If they could schedule an appointment today for the COVID-19 vaccine or be able to receive it as a walk in, would they	3	10.3%
Already received the vaccine	22	75.9%
Would not schedule an appointment	4	13.8%
Beliefs and Values about COVID-19 Vaccines		
I believe that the COVID-19 Vaccine…		
Will help prevent hospitalization and death from COVID-19	25	86.2%
Is safe for adults 18-64 years old	19	65.5%
Is safe for older adults 65 years old and older	19	65.5%
Is safe for me and my eligible family members	16	55.2%
Is safe for adolescents 12 through 17 years old (Pfizer only at this time)	16	55.2%
Will help prevent occurrence or re-occurrence from being infected by COVID-19	15	51.7%
Is safe for pregnant women and breastfeeding women	9	31%
Uncertain if the COVID vaccination may further impair life threatening conditions	2	6.9%
Safe for nonchildbearing group	1	3.4%
None of these	1	3.4%

Note. The total number of respondents is 29.

concern about not enough research, beliefs in misinformation about the vaccine such as a microchip being in the vaccine or other conspiracy theory, and not being worried about getting infected with COVID-19. See Table 2.

Access to COVID-19 Vaccines

Most respondents (89.7%, *n* = 26) did not have difficulty scheduling an appointment for the COVID-19 vaccine. For respondents who did have difficulty scheduling an appointment (10.3%, *n* = 3), some qualitative findings reasons included that they had signed up for the email notifications, but haven’t heard back, difficulty navigating on how to schedule an appointment, and not having time to find a location to schedule an appointment. See Table 2.

Beliefs and Values about COVID-19 Vaccines

Most respondents (86.2%, *n* = 25) believed that the COVID-19 vaccine will help prevent hospitalization and death from COVID-19. About two-thirds of respondents (65.5%, *n* = 19) believed that the COVID-19 vaccine is safe for adults ages 18 to 64 and older adults ages 65 and older. Around half of respondents (55.2%, *n* = 16) believed that the COVID-19 vaccine was safe for all family members, (55.2%, *n* = 16) safe for adolescents ages 12 to 17, and (51.7%, *n* = 15) will help prevent occurrence and/or recurrence from being infected by COVID-19. A third of respondents (31%, *n* = 9) believed that the COVID-19 vaccine was safe for pregnant women and breastfeeding women. See Table 2.

Recommendations and Suggestions about COVID-19 Vaccines

There were many recommendations and suggestions from respondents about ideas to provide education and connect people to COVID-19 vaccine appointments. Three common themes emerged among the qualitative findings including outreach, organizations, and incentives. For outreach, suggestions included use of social media, press release in Filipino newspapers, email, word of mouth, and community events. For organizations, suggestions included local Filipino organizations, churches, Asian grocery stores, Filipino restaurants, and healthcare centers. For incentives, suggestions included incorporating benefits, gifts, and coupons. See Table 2.

Data from the needs assessment was used to create a tailored education intervention addressing identified areas of concern regarding the COVID-19 vaccine specific to the population surveyed.

Education Intervention Results

At the education intervention, there were multiple presentations related to the COVID-19 vaccine in a two-hour time frame given to small groups of people. A total of 20 people attended. Prior to the education intervention, participants were asked to complete the pre-test survey. Following the educational intervention, participants were asked to complete the post-test survey. For the pre-education survey, there were 20 responses and for the post-implementation survey, there were 16 responses.

Quantitative Findings

In the post-test survey, participant knowledge improved for all knowledge questions, including COVID-19 vaccine general information (21% increase), vaccine development (58% increase), safety and effectiveness (30% increase), and recommendations specific to population sub-groups: adults, older adults, children, and pregnant/child-bearing women (36% increase). Subsequently, the likelihood to recommend the COVID-19 vaccine to family and friends schedule a COVID-19 vaccine appointment for themselves improved. See Table 3.

For all questions in the post-implementation survey, greater than 80% of the participants responded in the highest Likert scale. The most improvement was in the knowledge about the development of the COVID-19 vaccine with + 58% increase in change when comparing the pre- and post-test results. See Table 4.

At the mass education intervention, one COVID-19 vaccine appointment was scheduled with a participant with all other participants receiving a

Table 3

Descriptive Statistics: Pre-Post Survey Means

	Pre-Survey (n = 20)	Post-Survey (n = 16)
Overall knowledge about COVID-19 vaccines	**4.4**	**4.8**
Knowledge about the development of the COVID-19 vaccine	**3.6**	**4.8**
Confidence in the overall safety and effectiveness	**4.2**	**4.7**
Knowledge about the vaccine recommendations and safety	**4.1**	**4.8**
Likely to recommend the COVID-19 vaccine to family/friends	**4.3**	**4.8**
Likely to schedule a COVID vaccine appointment for themselves	**4.6**	**4.9**

Note. Respondents were asked to indicate their response on a 5-point scale. There was a discrepancy in the number of responses from the pre-survey and post-survey.

Table 4

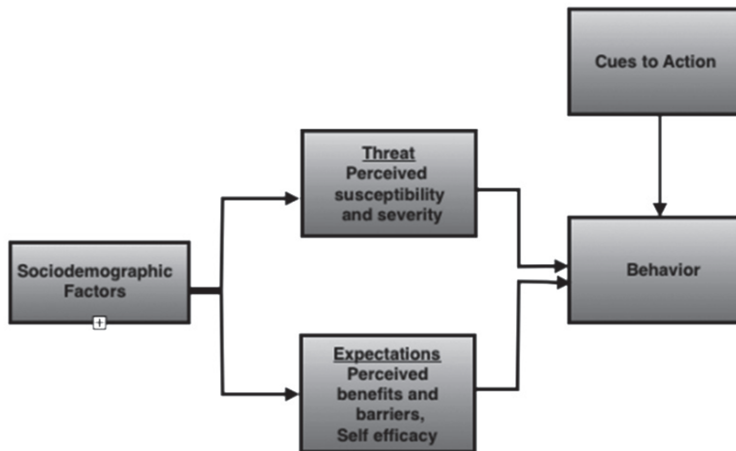
Percentage of Very Knowledgeable/Very Confident/Very Likely: Change Between Pre-Survey and Post- Survey

	Pre-Survey (n = 20)	Post-Survey (n = 16)	Change
Overall knowledge about COVID-19 vaccines	60%	81%	21%
Knowledge about the development of the COVID-19 vaccine	30%	88%	58%
Confidence in the overall safety and effectiveness	45%	75%	30%
Knowledge about the vaccine recommendations and safety	45%	81%	36%
Likely to recommend the COVID-19 vaccine to family/friends	60%	81%	21%
Likely to schedule a COVID vaccine appointment for themselves	82%	91%	9%

Note. There was a discrepancy in the number of responses from the pre-survey and post-survey.

handout on where and how to schedule an appointment. The appointment was scheduled by the participant after receiving information from the project leader regarding local resources on how to easily schedule a COVID-19 vaccine appointment. The participant went to the local resource's website and scheduled an appointment on the spot for a future day.

Figure 1
Health Belief Model- Revised Diagram



Note. Image is adapted from the Health Belief Model-Revised (Rosenstock et al., 1988) Image sourced from:
Women's Bone Health. (n.d.). Health Belief Model-Revised [Online image]. https://womensbonehealthblog.wordpress.com/health-belief-model-revised/

Qualitative Findings

From the needs assessment survey, there were options to select a reason or write comments depending on the question and answer by respondents. Themes that came from the needs assessment survey findings that informed the education intervention included responses that indicated a lack of confidence in the safety of the COVID-19 vaccine, responses that indicate misinformation or inaccuracy in facts related to the COVID-19 vaccine, response specific to population groups such as women and immunocompromised populations, and responses that indicate worry and misalignment of beliefs.

Based on the qualitative data indicated, from the post-test survey after the education intervention, most of the comments either indicated that respondents had no comments or suggestions. One comment written was "Great presentation. Very informative." Two comments shared that indicates feelings or statements respondents wanted to share include "Hopefully there will be a cure and less COVID" and "I had zero side-effects from the Pfizer vaccine.". One open-ended responses from respondents that indicates continued hesitancy after the education intervention includes the following comment: "Like most people, I'm still concerned with the long-term effect of the vaccine. That will take time to determine."

Through informal conversations that were taken after the education intervention, people came up to the project leader and shared personal stories which were not recorded. It was also through these informal conversations that a couple hesitancy remarks were made despite gaining more knowledge and confidence in the COVID-19 vaccine as a result of the education intervention.

Discussion

When the novel Coronavirus pandemic was declared, there were so many unknowns about the virus. When the novel vaccine was developed, there was finally a medical treatment that could prevent the spread of the virus, but because it was so new, there was general uncertainties about the vaccine. The lead author is Filipina and was inspired to conduct this project at a time of so many unknowns to do something in this fight against Coronavirus.

When considering the Health Belief Model and the different components of this project, the needs assessment portion of the project was used to assess the population's background that could factor into the individuals' perceptions of COVID-19 including educational background, occupational area, current COVID-19 full vaccination status as well as their knowledge, confidence, and beliefs and values related to COVID-19 vaccines and Coronavirus. All of these can impact their perceived susceptibility and perceived severity for Coronavirus. In the results of the needs assessment, the least amount of knowledge was shown in the knowledge about the potential side effects of the COVID-19 vaccine (79.3%, n = 23). The rest of the other needs assessment questions related to the knowledge about the different COVID-19 vaccines available, knowledge about the safety and effectiveness of the COVID-19 vaccine, and knowledge about the current recommendations for COVID-19 vaccines, resulted in 82.7% of the respondents being knowledgeable in those areas (n=24). Regarding the concept of confidence, for the 27.6% (n = 8) respondents who were not confident in the safety and effectiveness of the vaccine, written comments in the survey as to reasons for poor confidence included concerns about side effects, the effects on certain populations including childbearing females and children, and beliefs in misinformation about the vaccine such as a microchip. Lastly, some respondents were either not planning to receive the vaccine due to personal reasons for freedom of choice (6.9%, n = 2) and one respondent (3.4%) was also not worried about the

potential to be infected with Coronavirus despite a global public health emergency.

These areas assessed in the needs assessment connect to the different components of the Health Belief Model including the individual's perception for their perceived susceptibility to developing Coronavirus, the perceived severity of Coronavirus, the perceived benefits of taking action to prevent Coronavirus, and the perceived barriers to taking action to prevent Coronavirus, which led to understanding the priorities for tailoring the education intervention for the Filipino population living in a Midwest, suburban and urban community about COVID-19 vaccines.

Next was the incorporation of the findings from the literature review that went into the planning the education intervention. The three common themes from the literature review included gaining trust related to vaccine promotion and vaccine uptake, tailored health messaging as part of a vaccine promotion program, and professional advice as part of a vaccine promotion program. Because trust is important in the Filipino culture (Cordero, 2021), this factor was integrated into the education intervention by having a health professional who identified with being Filipino as the project leader and the one to present the health information in the education intervention. This approach would also fulfill the professional advice component as the project leader was an experienced registered nurse. Lastly, tailored health messaging was achieved by incorporating the specifics of what the education intervention would provide information from the results of the needs assessment survey related to the needs of the Filipino population surveyed.

The education intervention presented information about the COVID-19 vaccine development, recommendations, and safety for the COVID-19 by population groups focusing on older adults, pregnancy, and breastfeeding, planning for pregnancy, children, and adolescents, and those with underlying medical conditions, addressing COVID-19 vaccine access issues and addressing COVID-19 vaccine concerns.

The education intervention is a cue to action for this population and by gaining knowledge in COVID-19 vaccines, gaining confidence in the COVID-19 vaccine, and learning accurate information to dispel misinformation, the aim educational intervention was able to address the barriers related to COVID-19 vaccines and promote vaccine uptake among the Filipinos. This strategy speaks to the importance of finding out what the needs are of your patients and being able to deliver information that is relevant to their needs.

Specific to this project, the mode of delivery for the needs assessment and education intervention was done in conjunction with a statewide Filipino nursing organization. This cultural tie was an anchor in the project. Connecting with a cultural organization assisted with different ways to reach out to the Filipino population in the Midwestern, suburban and urban community for distribution of the needs assessment survey needed to obtain information on the specific knowledge gaps and concerns related to COVID-19 vaccines as well as using an established community event to conduct the educational intervention with the pre- and post-test survey to determine the effectiveness of the one-time intervention. This multi-dimensional approach ties back the themes of trust, professional advice, and tailored health messaging discussed in the literature review.

Implications

This project has clinical implications for practice across settings and populations. This project can and should be continued and expanded with additional needs assessments, continued tailored mass education interventions based on the needs assessment results, and continuation of active referrals to vaccination appointments. Due to the changing nature of COVID-19 vaccine approvals, eligibility, and updates regarding vaccine boosters, it will be important to continue reaching out to Filipino communities to ensure health messaging has been received and acted upon. Since the initial mass education intervention, additional approvals, eligibility, and recommendations have been made regarding COVID-19 vaccine boosters, mixing, and matching of mRNA and vector COVID vaccines, and approval of COVID-19 vaccines for the pediatric population.

When reviewing the CDC national dataset regarding COVID-19 vaccination data, it was evident that there are gaps in this national dataset regarding race and ethnicity because it is not always known, or data is not required to be collected. To date, the CDC does not report state-level data of vaccinations by race/ethnicity, vaccinations in children under 18 years, and the booster data collected for people ages 65 years and older (Kaiser Family Foundation, 2022). Clearly this data gap is important to consider and that more work needs to be done on a systems level ensuring accurate vaccination status data is available to determine accurate needs for communities.

Current data demonstrates that there are still gaps in the Chicago Asian population with 83.1% of the Asian Non-Latinx population have received at least one dose and 76.1% Asian Non-Latinx population have completed the vaccine series (City of Chicago, 2022) compared to the Suburban Cook County Asian population with 88% of the Non-Hispanic Asian population have received at least one vaccine dose and 64.5% of the Non-Hispanic Asian population have completed the vaccine series (Cook County Department of Public Health, 2022). This report demonstrates there is still a need for the Asian population in the Chicago area to be vaccinated against COVID-19. In general, additional information and collection of race/ethnicity information is needed to be able

to accurately assess the vaccination status of the race/ethnicity populations within the United States. There should be accurate collection of booster dose information and vaccination status of people under 18 years of age. In further examination of the current datasets available, there needs to be a collection of race/ethnicity data with the various nationalities and ethnicities considered in part of the Asian race/ethnicity category including Filipinos. This effort will be vital to fully assess the needs of COVID-19 vaccination among specific Asian subgroup populations within the United States.

Limitations

The project limitations include a small participant size for the needs assessment and pre- and post- implementation surveys. Needs assessment participants comprised of members of the Philippine Nurses Association of Illinois, participants who saw the flyers from social media, community events, or thorough word of mouth. The pre- and post- implementation survey participants were a convenience sample from participants made up of both nurses and community members at a statewide Filipino nursing association community event. The results of this project should be interpreted within the context of these limitations.

Conclusions

This project focused on COVID-19 vaccine hesitancy among Filipino and Filipino-Americans in a Midwest, suburban and urban community with aims to address concerns about the vaccine that prevent them from being vaccinated and increase vaccine uptake.

This project showed that after the mass vaccination education intervention, there were increases in perceived knowledge, confidence, and positive behavior change (likelihood to recommend the COVID-19 vaccine to family and friends or to schedule an appointment for themselves if not currently vaccinated). By completing a needs assessment of a Filipino population including the sociodemographic factors of race, ethnicity, age, education, and industry of work, as current knowledge and perceived barriers that could affect their likelihood to get a COVID-19 vaccine, this project demonstrates that by tailoring the mass education intervention to address all these factors, it was successful with the population.

The success of this project can be attributed to the fact that this intervention incorporated the use of trusted messengers with a healthcare professional with the same cultural background leading the project and collaboration with a professional nursing organization with the same cultural background as the population. This integrated approach is significant as Filipinos value trust highly and trust healthcare professionals (Cordero, 2021).

Lastly, in the development of the mass education intervention, the use of tailored health messages was vital to the success of the intervention. When addressing vaccine hesitancy, it was important to ensure that all the information provided to the participants were factual, evidence-based, and address concerns about the vaccine (Chou & Budenz, 2020; Gostin & Salmon., 2020; Laine et al., 2021). The delivery of the information was done in a non-judgmental way and also being sensitive to people's beliefs and values. References were available and the project leader spent time afterwards discussing questions and concerns with individual participants.

The results demonstrated that this multifaceted approach of administering a needs assessment, implementing a tailored mass education intervention based on the results of the needs assessment, and integrating a method to actively refer people to COVID-19 vaccine appointments was successful with the Filipino community in this project. Due to the limitations of this project, results should be interpreted with caution. In the United States, as of February 11, 2022, there have been a total of 910, 373 deaths and 80.6% of the general population 5 years and older have received at least one COVID-19 vaccination (Centers for Disease Control and Prevention, 2022). Due to the continued deaths of people in the US, this shows that COVID-19 is still a public health concern across the country. Therefore, this project should be expanded with Filipino population in different communities and replicated with other populations and communities affected by COVID-19 vaccine hesitancy.

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Aggression in the Acute Care Setting

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Abstract

Background: Among healthcare professionals, nurses are at highest risk for workplace aggression (WPA), which ranges in type and severity. If not appropriately addressed, WPA impacts patient care and outcomes, and nurses' psychological wellbeing, job satisfaction, and retention.

Objective: The objective of this project was to improve the care of patients with verbal and manipulative behaviors through a multicomponent, interprofessional aggression-care program.

Methods: Using one-group, pre/post design, 15 medical-surgical telemetry nurses at a metropolitan hospital volunteered to participate in this change project. The intervention included the development of an aggression nursing care guideline, the provision of training workshops, ongoing leadership support, debriefing sessions, and two-weeks-in-advance primary care assignments of aggressive patients to trained nurses. Outcomes were measured using a Likert-scale type questionnaire with response options ranging from 1 = Strongly Disagree to 4 = Strongly Agree.

Results: Post intervention, nurses reported improvement in their attitude, confidence, and preparation to care for patients with verbally abusive behavior; whereas improvement was mainly observed in their preparation to care for patients exhibiting manipulative behavior. When caring for patients with verbally abusive behavior, and in contrary to patients with manipulative behavior, nurses were less likely to request different patient assignments on subsequent shifts. Post-intervention, more nurses reported positive feelings, especially calmness and clear mindedness, but more felt unappreciated with patients who exhibited both behaviors.

Conclusions: Findings from this project show that a multicomponent interprofessional intervention is effective in the care of acutely ill patients with aggressive behaviors, especially verbal abuse. This project provides support for nurse leaders to improve workplace conditions through similar care programs that improve nurses' preparation and emotional wellbeing when caring for patients that demonstrate aggressive behavior. Special attention is needed with manipulative patients, seemingly more challenging to nurses.

Keywords: *aggression, acute care, verbal abuse, manipulative behavior*

Background

Healthcare workplace aggression (WPA) has grown to be a serious public health problem (Spelten et al., 2020), leading to the Joint Commission's publication of the 2022 New Workplace Violence Prevention Requirements (Joint Commission, n.d.) and the passing of the H.R.1195 bill requiring employers to establish effective programs on prevention, management, training, and reporting of violence against healthcare providers (Congressional Research Service [CRS], 2021) The Joint Commission defines workplace violence as "An act or threat occurring at the workplace that can include any of the following: verbal, nonverbal, written, or physical aggression; threatening, intimidating, harassing, or humiliating words or actions; bullying; sabotage; sexual harassment; physical assaults; or other behaviors of concern involving staff, licensed practitioners, patients, or visitors" (Joint Commission, n.d.).

Aggression towards healthcare providers is multifactorial and can result from distress, frustration, poor communication, and medications (Vento et al., 2020). Compared to other healthcare providers, nurses are at higher risk for all types of aggression regardless of their setting or specialty (Vincent-Höper et al., 2020). Patients represent the primary perpetrators followed by visitors (Spelten et al., 2020) with verbal abuse being the most common form of WPA (Liu, Gan, et al., 2019). It is suggested that the prevalence of WPA is underestimated and not reflective of the real clinical workplace picture. Nurses tend to underreport episodes of aggression due to low confidence in their leadership to address the problem, and fear of retaliation. Furthermore, nurses may not seek organizational support because aggression is perceived as part of their job, or they may feel professionally incompetent asking for support. Perceived lack of support from administrators may be the result of inadequate staffing, ignored concerns, insufficient education and training, and lack of support in the aftermath of episodes of aggression (Vento et al., 2020).

Aggression is disruptive and impacts nurses, patients, and healthcare facilities. It is associated with impaired quality of patient care and outcomes, job performance, emotional support to patients, increased falls, and medication errors. Furthermore, aggression towards healthcare providers leads to stress, anger, decreased morale, depression, anxiety, physical symptoms, burnout, and post-traumatic stress disorder (PTSD) leading to absenteeism, decreased job satisfaction, attrition, and increased cost of healthcare (Joint Commission, n.d.; Liu, Zheng, et al., 2019; Pérez-Fuentes et al., 2020).

The deleterious consequences of WPA have provoked an interest in identifying interventions to effectively address this serious problem. The majority of literature focuses primarily on training programs that are either stand-alone (e.g. increasing awareness workshops) or structured (e.g. communication skills and role-playing scenarios) which vary in duration and modality (face-to-face and virtual) (Geoffrion et al., 2020) as a strategy to prevent and mitigate the impact of WPA in the healthcare setting (Somani et al., 2021). Training has shown to improve stress, confidence (de la Fuente et al., 2019), coping (Baig et al., 2018), knowledge, skills, and attitude towards aggressive patients (Somani et al., 2021). Consistent with results showing the positive impact of training, organizational measures such as policies and supportive programs are deemed as important to improve episodes of aggression and their consequences (Spelten et al., 2020).

Objective

The baseline observations by the unit clinical nurse specialist (CNS) and concerns shared by nurses during staff meetings revealed high psychological distress and absenteeism rates among nurses after caring for patients with aggressive behaviors. Nurses reported feeling challenged, abused, and lacking in effective interventions to manage behaviors of these patients. Nurses also reported seeking their peers and families for support, asking the charge nurse to change their assignment, and having to call out sick because of burn out and to avoid their reassignment to patients who most commonly exhibited verbal abuse and/or manipulation. Additionally, nursing care guidelines for aggressive patients were lacking. Thus, it was essential to implement a multicomponent, interprofessional change project to improve the care of patients with aggressive behaviors. Therefore, the objectives of this project were to: (a) increase nurses' preparedness and confidence through training; b) develop a standardized aggression care guideline; and (c) improve nurses' attitude and emotional well-being when caring for patients who were verbally abusive and manipulative.

This project was guided by the Prosci ADKAR ® change model, which focuses on the processes and individuals as key players in the implementation and sustainability of change within an organization. Change can successfully be established when employees understand the importance of change and are engaged by leaders throughout the five stages of the model (Prosci, n.d.). (Figure 1).

Methods

Design and Sample

Using a one-group, pre/post design, this change project was implemented on a medical-surgical stepdown unit at a large tertiary hospital. Recruitment through flyers posted on the unit and staff meeting announcements resulted in 15 nurses consenting to volunteer and provide primary care to aggressive patients during the project. The project was determined to be exempt from review by the Institutional Review Board.

Figure 1

The PROSCI ADKAR Change Model

A: Awareness - Of the need for change

D: Desire - To participate and support the change

K: Knowledge - On how to change

A: Ability - To implement desired skills & behaviors

R: Reinforcement - To sustain the change

Source: https://www.prosci.com/methodology/adkar

Intervention

The Aggressive Care Program was multicomponent, interprofessional and consisted of the (a) development of an aggression nursing care guideline created by the CNSs that outlined the interventions, procedures, and resources for nurses to follow when caring for aggressive patients; (b) training and ongoing support to participating nurses; and (c) pre-planned primary care assignment of aggressive patients to trained nurses.

Aggression Care Guideline Development

Based on the relevant literature, consultation with the psychiatric and ethics clinical nurse specialists (CNSs), and feedback from RNs, the unit CNS developed a standardized Aggression Care Guideline to guide participating nurses in their care of aggressive patients. The CNS also developed a pre-populated care plan template for nurses to document and communicate their assessment, patient's response, and interventions they used throughout their shift to the oncoming nurses. The CNS monitored these processes daily to ensure consistency and collected the completed care plan template after a patient's discharge for data analyses.

Training and Ongoing Support to Nurses

After baseline data were collected, participating nurses received four, two-hour structured face-to-face interprofessional training sessions led by the unit social worker and the psychiatric, ethics, and unit CNSs. The training was interactive and included didactics, discussions, roleplay, video vignettes, and case studies with special emphasis on verbally abusive and manipulative behaviors. A key element of the training revolved around modulating nurses' attitude, identifying the type of behavior, effective communication and problem-solving skills, strategies to effectively prevent, identify, and manage behavior, and promote safety (Somani et al., 2021). Throughout the project, the four team members, the social worker, and psychiatric, ethics, and unit CNS provided continuous support to participating nurses through one-to-one coaching and group debriefing meetings after the patient's discharge.

Primary Care Patient Assignments

In collaboration with the trained nurses and charge nurses, patient assignments were planned two weeks in advance. Pre-planning of patient assignments allowed consistency of care and even distribution of patients among participating nurses, and timely planning of any unexpected disruption in the pre-scheduled assignments of trained nurses to aggressive patients.

Data Collection

A self-administered questionnaire was developed by the unit CNS to assess the nurses' emotions, attitudes, preparedness, and confidence to care for verbally abusive and manipulative patients at baseline and two months after the completion of the project. Participants were asked "How likely do you agree with following statement?" which they answered on a four-point Likert scale (1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Somewhat Agree, and 4 = Strongly Agree). Face and content validity of the questionnaire were determined by the three project subject matter experts (ethics and psychiatric CNSs, and social worker) with 90% agreement on their reviews. To determine feasibility and utility, the questionnaire was piloted among five non-participating unit nurses before it was used in the project.

Nurses' emotional states were evaluated via their responses to "When I am caring for a verbally abusive or manipulative patient, I feel . . ." to which they choose to respond either positively with calm, satisfied, clear-minded, or hopeful or negatively with angry, distressed, worthless, or unappreciated. At the conclusion of the project, a debriefing group meeting was held and led by the project team to collect additional feedback from the participants on their experiences during the project.

Data Analysis

Data collected from the project questionnaires were analyzed. Percentages were used to describe the participants' demographics and changes in their emotional state (number of nurses reporting positive and negative emotions) at baseline and after the completion of the project. Means were used to determine the changes in the nurses' levels of preparedness, confidence, and attitude.

Results

Demographics

Participants were mostly females (93%), 18-25 years of age (60%), and rotated through day and night shifts (73%). The majority had 1-5 years nursing experience (73%) and worked on the medical-surgical unit for 1-5 years (60%).

Nurses' Preparedness, Attitude, and Confidence

Post-implementation, nurses showed an improvement in the mean scores of their perceived overall confidence (2.6

vs. 3.0). Table 1 shows improvement in attitude related to their ability to manage the patient's behavior (3.0 vs. 2.6), requesting new patient assignment (2.6 vs. 2.2) and the unit's effective approach (2.7 vs. 3.3); improvement was also observed in nurses' preparedness by knowing effective interventions (2.8 vs. 3.2) and having less difficulty in managing verbally abusive patients.

For manipulative patients, improvement was mainly noted in the nurses' preparedness by knowing effective interventions (2.4 vs. 3.2), having difficulty in managing patients (3.1 vs. 2.1), feeling prepared to care for the patient (2.8 vs. 3.1) and knowing effective interventions (2.4 vs. 3.2). However, nurses were found to have a decrease in their confidence (2.6 vs. 2.1), and that their unit has an effective approach to manage the patient's behavior (2.6 vs. 2.4), and improve the care (3.8 vs 3.2) of these patients. Nurses also were more likely to request a different assignment on the next shift for manipulative patients (2.3 vs. 3.5) compared to the verbally abusive ones (2.6 vs. 2.2) (Table 1).

Nurses' Emotional State

At the completion of the project, more nurses notably reported positive feelings when caring for verbally abusive (33.3% vs. 53.3%) and manipulative patients (26.6% vs. 46.6%), however, more of them admitted to feeling angry (46.6% vs. 73.3%), and unappreciated (60% vs. 73.3%). Similarly, more nurses felt clear-minded (6.6% vs. 40.0%) and calm (6.6% vs. 26.6%), but less angry (73.3 % vs. 53.3%) and unappreciated (33.3% vs. 60.0%) when they cared for manipulative patients.

Observational Findings

In response to open-ended questions during the post-implementation debriefing session, and consistent with findings from the questionnaire, nurses reported less difficulty and more satisfaction with a more consistent unit approach to care for verbally abusive, but not as much for manipulative patients. Nurses expressed an appreciation of having a standardized care guideline and care-plan template to use with these patients as it served like a trigger to remember interventions that they learned during the training. Nurses also reported feeling less frustrated, better prepared, and more inclined to care for the verbally abusive patients on subsequent shifts. These reports were congruent with observations made by the unit's CNS who noticed an improvement in patients' behaviors when cared for by the trained nurses compared to the nurses who were not trained.

Discussion

A stress-free healthcare environment is crucial for the provision of quality patient care. In this change project, the implementation of an interprofessional, multicomponent Aggression Care Program showed to be beneficial to nurses caring for aggressive patients in several ways. A care program that included structured training, creation of supportive structures, establishing a collaborative care approach, and employing a primary care assignment system for aggressive patients was effective in achieving the project's outcomes, particularly for the verbally abusive ones. Post-intervention, nurses reported improved attitude, confidence, and preparation to care for verbally abusive patients. These findings, however, were different from those of manipulative patients. Although nurses felt to be better prepared to care for these patients, their attitude and confidence in their ability to care and manage the patient's behavior did not improve and were more likely to request a different assignment as compared to verbally abusive patients. Feeling more challenged by manipulative patients can be explained by the complexity of this behavior and presence of a patient's possible underlying personality disorder that requires management by a specialist. Early identification

Table 1

Pre- & Post-Implementation Comparison of Mean Scores of Nurses' Attitude, Perceived Confidence, and Preparedness in Care of Verbally Abusive and Manipulative Patients

	Confidence	**Attitude**	**Attitude**	**Attitude**	**Preparedness**	**Preparedness**	**Preparedness**
	I feel confident to care for patients	Unit has effective approach	I can improve care of my patients	Request new patient assignment	I have difficulty managing patients	I feel prepared to care for patients	I know effective interventions
Verbal Abuse Pre/Post	2.6/3.0	2.7/3.3	3.5/3.5	2.6/2.2	3.0/2.6	2.6/3.0	2.8/3.2
Manipulation Pre/Post	2.6/2.1	2.6/2.4	3.8/3.2	2.3/3.5	3.1/2.1	2.8/3.1	2.4/3.2

Table 2
Nurses' Emotions: Number of Nurses Reporting Positive & Negative Feelings for Verbally Abusive and Manipulative Patients

	Verbally Abusive (*N/%*)		**Manipulative (*N/%*)**	
	Positive	Negative	Positive	Negative
Pre-Implementation	5/33.3%	14/93.3%	4/26.6%	13/86.6%
Post-Implementation	8/53.3%	14/93.3%	7/46.6%	13/86.6%

of these patients upon admission is essential to identify appropriate strategies and referrals to manage these behaviors and reduce their emotional impact on nurses.

Findings from this project also provide direction for nursing leaders to expand their interventions beyond training through structured educational programs to include additional strategies that have shown to be effective in improving the working conditions of nurses engaging in aggressive patient encounters (Somani et al., 2021). Reducing barriers to organizational resources and organizational post-incidence support through follow-up counseling have been proposed as additional effective strategies to help combat the adverse psychological adversities of aggression on healthcare providers. This strategy is especially important with verbal abuse, which is perceived by nurses as a mild form of aggression leading to underreporting of these events and underutilization of available resources (Vincent-Höper et al., 2020).

The Aggression Care Program helped improve the nurses' emotional state by increasing their positive feelings. Reports of negative feelings with both verbally abusive and manipulative patients at the end of the project have not changed but have not increased either. The short duration of the project may not have allowed enough time for nurses to care for more aggressive patients and reflect on their experiences. These findings may also indicate that the nurses were being more in touch with and aware of their feelings, which is a precursor to effectively dealing with them (Vincent-Höper et al., 2020). Lack of trust in administrators prevents nurses from seeking help; instead they confide in peers or family, and most commonly ignore the incident. Inadequate support and care after an aggression incidence may lead to a reduction in nurses' proficiency, which then has negative implications on their psychological state and on patient care (Liu, Zheng, et al., 2019b). In this project, establishing a safety network, and individual and group support structures provided by the interprofessional team during patients' admission and after their discharge offered participating nurses a safe outlet to share their experiences and validate their feelings with peers and supervisors. The construction of extensive safety networks in clinical settings, including support groups, debriefing, individual psychological counseling, preceptorship, and mentorship are beneficial and are clearly needed to support nurses (Vincent-Höper et al., 2020). Integrating such support services into the workplace improves nurses' trust in their leadership and reporting rates of these events (Vento et al., 2020). They also benefit patients and families because nurses are then more willing to engage in emotion-laden interactions and use more effective methods of communication (Jeong & Lee, 2020). Offering tools for optimizing stressful clinical conditions allows the opportunity to improve job satisfaction, burnout, and patient care and outcomes. This is particularly important for less seasoned nurses who are at higher risk for aggression (Yang et al., 2018). According to Benner et al. (1997), "… through sharing their experiences, nurses could feel heard and supported. Newer nurses could learn from more experienced nurses about effective strategies and responses for handling difficult communications" (Benner et al., 1997). Furthermore, challenging behaviors should be considered and managed in the same manner as any other health-related condition necessitating collaborative, interprofessional efforts. Through consultation and collaboration, nurse leaders can establish effective interventions that are based on collective expertise leading to favorable and sustainable care outcomes.

Conclusions

This change project addressed a common challenge that nurses frequently face in their workplace, regardless of their clinical setting or level of experience. Implementing a multicomponent, collaborative intervention that is based on evidence, clinical expertise, and staff input has shown to be effective in empowering nurses clinically and emotionally to care for aggressive patients. This intervention has implications for clinical and administrator leaders to address these challenges and implement policies and strategies that improve the working conditions of nurses exposed to aggression.

Some limitations to this project are to be addressed. The design of the project intervention was based on the best scientific evidence and a unit's needs. Thus, results may be most applicable to similar care settings. The two-month duration of the project limited the assessment of whether the interventions were effective in improving the patients' behavior, especially on subsequent admissions. Additionally, while every attempt was made to assign trained nurses to aggressive patients, this approach was not feasible on some shifts because of the unit's staffing needs, thus interrupting the consistency of care provided. This inconsistency might have resulted in patients retesting a "new" nurse with an "old behavior"; thus, masking some of the project's results. Brief orientation for these nurses could have been beneficial for both the patient and the nurse. Furthermore, the small sample size and use of self-reported questionnaire were additional limitations to this project.

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