ABSTRACT

BENEFITS OF COLLABORATIVE EFFORTS BASED ON NURSE-LED CLINIC EDUCATION

Effective communication is one of a competent nurse's core skills. Quality and safety education competencies form the foundation on which practice is based and knowledge is built. Communication between members of an interdisciplinary team results in better patient care planning, more cost-effective ideas for multifocal care, improved planning for complex patients, and a more efficient healthcare system with fewer preventable errors (Mackenzie et al., 2011). Effective communication is a skill that is learned with time and practice. The clinical setting of the BSN program allows students to develop practical skills with members of other disciplines as well as with their patients. Early clinical practicums can be utilized as an opportunity for focused education on communication as a basis of care. This project is focused on analyzing the utilization of a university Mobile Unit, and asks the question: "Are there benefits of early access to nurse-led Mobile Units specifically in regard to education received in skills such as communication?" From this, future research can be focused specifically on curriculum development for education on these Units, based on team structure, communication, leadership, situation monitoring, and mutual support (Schentrup, Black, Blue, & Whalen, 2019).

Madelyn R. Broach
May 2021

BENEFITS OF COLLABORATIVE EFFORTS BASED ON NURSE-LED CLINIC EDUCATION

by

Madelyn R. Broach

A project
submitted in partial
fulfillment of the requirements for the degree of
Doctor of Nursing Practice
California State University, Fresno
Doctor of Nursing Practice
May 2021

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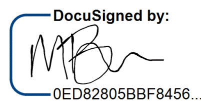

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ACKNOWLEDGMENTS

To my family. You've seen me through it all. From penny loafers and ruffled socks, to prom queen crowns, to doctoral hoods. This one is for you.

To my friends. Thank you for reminding me daily that I am astonishing.

To my project chair, Dr. Carrie Holschuh, and committee members Shauna Miller and Melisa Rotondi: I am so appreciative you have been able to see me through this project.

To Dr. Kathi Rindahl: you have believed in me and coached me since I was a bright-eyed BSN student eight years ago. Thank you for inspiring me to see my worth and change the world.

I am grateful to the entirety of the Fresno State Nursing Program staff, from my undergraduate studies through doctorate career – a ten-year journey. I have taken pearls from every single one of you and hope to be the best I can be because of you. I would like to extend special gratitude for the undergraduate nursing students and educators who let me talk with passion about my project.

Thank you for all your encouragement, love, and support.

I would not be standing here today without you.

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CHAPTER 1: INTRODUCTION

The Fresno State School of Nursing Mobile Health Unit is a community project, staffed and supported by grant funding and the School of Nursing. The Mobile Unit offers free screenings to underserved members of the Fresno community. Services offered by the unit and provided by the Bachelor of Science (BSN) registered nurse (RN) students include blood pressure checks, blood glucose and A1C screenings, and cholesterol screenings. Other services include testing for asthma, flu shot administration, and full physical assessments offered by the Family Nurse Practitioner (FNP) students. The Mobile Unit provides an ideal opportunity for novice RN students to practice not only communication and safely managing patient care with the supervision of an instructor, but also effective collaboration skills with practitioners of additional disciplines such as social work and nutrition present at the Mobile Unit (Community Health Mobile Unit, 2019).

Background of the Problem

Collaborative efforts such as using effective means of communication, even at a primary care stage, can significantly help streamline patient care, particularly for those patients with limited or no healthcare access (Deveugele, 2015). Primary questions for consideration include contributing factors of education readiness and how to best prepare a novice nurse for practice. Situated undergraduate clinical sites such as university-based clinicals provide a benefit that will “enable the participants to establish themselves within the ward and organizational culture” (Watt & Pascoe, 2013).

It is essential to promote a positive experience during the first clinical placement, as this can be a critical factor in future clinical practicums. A major

issue reported in Yousef Alshahrani's study on undergraduate nursing students coping with clinical placement was the anxiety over their novice nursing skills and knowledge, and the fear they would not meet expectations. Another challenge included the lack of empathy or trust of the novice student because of limited experience. "The power of talking" was identified as the leading strategy that promoted confidence in the first clinical placements of nursing students (Alshahrini et al., 2018). When first semester students are placed in an environment controlled by Fresno State School of Nursing, they have the opportunity to gain confidence in clinical skills and communication so they can feel more comfortable and be more competent with patients in future unfamiliar settings.

Problem Statement

Building a foundation on core competencies could help enrich the educational experience, resulting in better collaborative practice. Sharing responsibility for the well-being of the patient also helps promote a more individualized care plan. It has been shown that novice BSN students, along with members of other healthcare disciplines, have benefited in nurse-led clinics that have curriculum based on team structure, communication, leadership, situation monitoring, and mutual support (Schentrup et al., 2019). The Mobile Unit could provide opportunities for focused practicum time starting in the first semester of nursing school rather than later semesters in a program, building student confidence, increasing communication skills, and making it more likely they will implement collaborative team measures to promote patient care. However, since individuals learn differently, it is possible that some may not obtain the same benefit from learning through the core competencies of the Unit as others.

The goal of this project was to assess the clinical practice on the Mobile Unit, and how specific skills can potentially develop during the program to benefit the BSN provider. More specifically, the goals of this project included: 1) assessment of how BSN students may have benefited from the education provided by participation with the Mobile Unit at Fresno State; 2) assessment of what changes could be made to further improve the education received (such as implementing an earlier clinical rotation schedule specifically for Mobile Unit rotation); and 3) assessment of how well communication was utilized, as this will be a key factor in future communication skills for the BSN provider.

Significance of Study

Perfecting personal and professional communication skills has many benefits for new graduates as they progress with their education and transition into their new RN roles. Innovative care delivery systems, such as nurse-led clinics, have proven to be positive learning environments for the basics of collaboration and communication through multi-disciplinary areas. The Mobile Unit at Fresno State has served many patients in the community and has been a valued resource not only for BSN and FNP students, but for a variety of associated health and wellness programs as well. By learning the importance of collaboration early in their education, new RNs are more confident in utilizing resources at their practices and communicating patient needs to respective providers (Mackenzie et al., 2011). Nursing staff is at the front of the movement to redesign healthcare to better utilize resources in appropriate ways for patients, including more timely access to care and crisis intervention (Prasad et al., 2014).

The Mobile Unit offers primary care, which helps encourage patients to be proactive in addressing their healthcare needs. Managing health-related problems

early on can prevent potential future hospitalization resulting from chronic conditions. A 2015 study on the vulnerable geriatric population in the Appalachian region (Hoogland et al., 2015) showed that susceptible populations often experience "suboptimal health behaviors" until an influential change is made. Cultural acceptance and understanding can help the provider better care for these individuals, so that they can improve their understanding as to the "why" of certain actions and beliefs when it comes to healthcare. Focusing on "community-based" cultural intervention can improve individualized care tailored to a specific population. Older adults may have a harder time with adjustment, especially if they have had few healthcare-related issues, or if religious or cultural beliefs have prevented them from seeking care. These factors might make it more difficult for them to accept treatment or follow through with outlined plans (Hoogland et al., 2015).

A response from certain Community Partnership Programs allows for such initiatives to "catch up" with the needs of the community, especially those in underserved or rural areas. Programs focused on training health professionals to reevaluate their approach should focus on key elements including: 1) integrate teaching and research in a community based setting, 2) community participation and involvement, 3) education and interaction with interdisciplinary health teams, and 4) special consideration for meeting health needs of underserved populations. These adapted programs focus on communication, health assessment, and health promotion for the individual (Olive et al., 1998).

The Institute of Medicine's report Health Professions Education raises the bar for educational institutions and nursing professionals. The overall goal combines respected current education approaches with newly developed programs that deliver patient-centered care, engage in the interdisciplinary team approach,

deliver evidence-based practice, and apply quality improvement efforts (Long, 2003). Schools are encouraged to produce healthcare professionals who are ready to deliver patient-centered care as a member of an interdisciplinary team. The focus is on evidence-based practice, quality improvement, and informatics. Quality and Safety Education for Nurses (QSEN) became a national initiative emphasizing the knowledge, skills, and attitudes (KSA) nurses need to improve patient care and quality. This reshaping of the nursing school curriculum allows programs to address expectations of students' success in the clinical setting, which is often partnered with the traditional lecture experience (Disch, 2012).

With QSEN, the goal is to equip future nurses with skills in quality and safety in the healthcare system. QSEN asks faculty to focus on the Institute of Medicine's competencies and define targeted areas for curricular development to support appropriate transition to practice. These areas include patient-centered care, teamwork and collaboration, Evidence-Based Practice (EBP), quality improvement, safety, and informatics. With patient-centered care, communication is focused on informing and educating a patient regarding their care, as well as communicating patient values and preferences to the interdisciplinary team. Teamwork and collaboration focus on fostering open communication and strategically analyzing communication styles prior to contacting a patient or team member. Safety requires open communication and organization in reporting in order to prevent errors or potential hazards (Cronenwett et al., 2007).

Additionally, students and even entry-level nurses, have problems finding the right way to communicate plan of care needs to the patient most effectively, which can be challenging. Treatment adherence is optimized with patient-centered communication. This is a learned skill that improves with time and practice. Addressing barriers such as differing patient characteristics, language, culture, and

understanding may impact the choices made by patients and how well they adhere to treatment plans (Hartley & Repede, 2011). That is why the model of care team planning and effective interdisciplinary communication through the Mobile Unit are key factors in optimizing individualized patient care.

Purpose of the Study

Providers are often stressed by lack of confidence when it comes to making clear, evidence-based decisions for their patients. Early education on the basics of communication and collaborative teamwork can improve self-assurance in the clinical workspace, just as early investment in learning strategies and utilizing resources can foster positive team performance in the future (McCray et al., 2016).

In order to develop reflective and competent nurses, there needs to be more opportunities to apply clinical and communication skills. Students often function as ensemble members rather than taking leading roles in patient care. A lack of familiarity with healthcare culture can lead to inadequate preparation and simply not knowing who or when to ask for help in interdisciplinary situations (Watt & Pascoe, 2013). A strong provider-patient relationship starts with good communication, which leads to stricter adherence to education and treatment methods, especially in the primary care setting. Although most communication skills are considered innate and not learned, the concept of practiced communication helps students develop the confidence to recognize differences in patients' communication needs (Ruiz-Moral et al., 2019).

Definitions

Catalytic: to be reflective; to draw out through the use of questions, reflections (Klakovich & Dela Cruz, 2006).

Cathartic: to enable the release of emotion through tears, angry sounds (Klakovich & Dela Cruz, 2006).

Confronting: to challenge restrictive or compulsive verbal or nonverbal behavior (Klakovich & Dela Cruz, 2006).

Evidence-Based Practice: Integrate best current evidence with clinical expertise and patient/family preferences and values for delivery of optimal healthcare (Cronenwett et al., 2007).

Informatics: Use information and technology to communicate, manage knowledge, mitigate error, and support decision making (Cronenwett et al., 2007).

Informative: to give information, instruct, impart knowledge (Klakovich & Dela Cruz, 2006).

Listening: attending to others; recalling and understanding others' messages (Klakovich & Dela Cruz, 2006).

Nonverbal: using appropriate body language and correctly interpreting body language in others (Klakovich & Dela Cruz, 2006).

Patient-centered care: Recognize the patient or designee as the source of control and a full partner in providing compassionate and coordinated care based on respect for patient's preferences, values, and needs (Cronenwett et al., 2007).

Prescriptive: to offer advice, make suggestions (Klakovich & Dela Cruz, 2006).

Quality improvement: Use data to monitor the outcomes of care processes and use improvement methods to design and test changes to continuously improve the quality and safety of healthcare systems (Cronenwett et al., 2007).

Safety: Minimizes risk of harm to patients and providers through both system effectiveness and individual performance (Cronenwett et al., 2007).

Supportive: to offer support; to be validating, confirming (Klakovich & Dela Cruz, 2006).

Teamwork and collaboration: Function effectively within nursing and inter-professional teams, fostering open communication, mutual respect, and shared decision-making to achieve quality patient care (Cronenwett et al., 2007).

Theoretical Framework

Betty Neuman's Systems Model is a systems model based on flexibility of interventions. Introduced in 1974 and published in 1982, the framework suggests that a model could be based on stress theory and prevention theory, meaning a "total person approach to patient problems" (Petiprin, 2016). A patient's environment is affected by different stressors and the positive or negative effects of primary, secondary, and tertiary team interventions, resulting in the need to develop a model that bases modern medical emphasis on collaborative efforts on stress relief. All these interventions influence a patient's general state of wellness. The use of holistic and systemic views helps illuminate the individual needs and stressors, as well as models a more balanced collaborative framework for planning care (Wang et al., 2019).

Related to the Systems Model, a coherent interdisciplinary team is essential for primary intervention. Physicians, nurse practitioners, nurses, and members from pharmacy, social work, and other departments all have a role to play when it comes to keeping the patient's plan of care in check. Neuman's theory shows that individuals are "multidimensional beings" with each layer requiring the multidisciplinary team to fully appreciate the subsystems. All members of the team can understand the physiological, psychological, socio-cultural, spiritual, and developmental layers that influence the individual patient. Utilizing all aspects of

team expertise is necessary when it comes to being involved in a patient’s plan of care. This is valid not only in an urban setting, but also in the rural setting of the Mobile Unit (Nursing Theory, 2016). Neuman says that the creation of healthy communities comes from using the concepts of leadership, collaboration, and trends of holism and prevention (Neuman & Fawcett, 2012).

The Fresno State Department of Nursing identified a deficit in the care of underserved populations and found a solution in the expansion of the nurse-led clinic, which allows nursing students to offer free healthcare and screenings to Fresno County’s underserved population while learning the basics of nursing care, including interdisciplinary collaboration. The creation of the Mobile Unit is possible thanks to donations from St. Agnes Medical Center, as well as grants from local corporations. Primary care, desperately needed especially in rural areas, is then provided to the community at no cost (Community Health Mobile Unit, 2019). The basic primary care offered assists in the development of an ongoing plan of care for these patients and helps students build effective communication and collaboration.

The Newman Systems Model was developed to help illustrate the complexity of the type of clients with whom nurses interact. The exchange of moving parts allows the shift to update the original Neuman model to the more complex Neuman Systems Model Perspective of Nurse-Led Interprofessional Collaborative Practice. Analysis of this developing model allows further evaluation of the interprofessional collaborative practice approach in nursing care. The standards of Neuman’s model help frame a holistic view of clients in relationship with their health, environment, and other factors in their plan of care. As Anna-Rae Montano, RN, PhD points out in her meta-analysis of the theory, “the main questions the theory attempts to address include: 1) How do the clients

interact with, adjust to, and react to stress? and 2) How can nurses organize the knowledge and information needed to deal with complex client situations?" (Montano, 2021). She states that these central questions can be modified to better understand the nurse-led community clinic model. Understanding how the Systems Model relates to stress on the patient as a unit, as well as stress on the nurse and the provider, can lead to healthy coping strategies for both.

CHAPTER 2: LITERATURE REVIEW

The goal of the review and synthesis of literature is to examine components related to core competencies in collaborative practice, especially focused on student communication efficacy in relation to patient care. Identifying gaps in education or pre-set curriculum can help promote change in standardized skills training on sites such as the Mobile Unit. The literature search was conducted through article searches using the Fresno State Henry Madden Library. Additional material was sourced from PubMed and PsycTests databases. Terms searched included: "benefits of communication," "rural healthcare," "nurse-led mobile unit," "university mobile unit," "self-efficacy related to interdisciplinary care," and "perception of nursing skills during clinical." Articles were vetted for peer review and year of publication, and certain articles were excluded if published before 2000. Initially, the search for research material was limited to articles from 2015 to present, however the search was expanded to improve research results. The older material was reviewed for relevance and limitations in light of more recent research.

Benefits of Communication

The article "Communication Training: Skills and Beyond" by Myriam Deveugele defines the objective as finding research on the benefits of effective communication (2015). Effective communication is a central part of any meeting in the healthcare setting. Deveugele recognizes that patients are not only the end result, but an essential element in the partnership of care. Providers expect compliance and any disconnect in communication can lead to failed efforts in achieving the end goal of optimal health. Her findings indicated that most programs worldwide emphasize the importance of communication, but ideal

curriculum is lacking. This synthesis of evidence is beneficial as it points out that research and education on health issues go hand in hand. Giving providers the proper tools for success helps close the disconnect between provider and patient. In addition, interdisciplinary topics are integral to education on communication in a care setting (Deveugele, 2015).

The study “Medical Students’ Perceptions Towards Learning Communication Skills: A Qualitative Study Following The 2-Year Training Programme” by members of the School of Medicine at Francisco de Vitoria University in Spain focuses on an understanding about training communication for medical experts (Ruiz-Moral et al., 2019). This particular qualitative study focuses on “experiential” methods, which include role playing with simulated patients while being supervised by trainers. However, there is an argument that communication is subjective and difficult to teach in such a confined setting. Different individuals have different strategies and perceptions of needs for effective communication. The study itself, done with 20 participants, showed that a structured communication program was less helpful after surveying participants, and these participants felt they learned more from practice and experience in the work force. The study was done as a thematic analysis with open-ended study questions, which indicated participants felt hindered when exposed to criticism in peer review and found more benefit in personalized and constructive individualized criticism. Additional feedback suggested that the stress of assessment on simulated communication made participants doubt themselves to a greater degree. Limitations of this study were identified by the authors during interview analysis, where the summative data differed between groups as some were more talkative than others.

Related to the survey being used in this study, the article “Validating the Interpersonal Communication Assessment Scale” offers insight into the dimensions of communication. Written by the survey authors Marilyn D. Klakovich and Felicitas A. Dela Cruz, this article was published in the *Journal of Professional Nursing* in 2006 when the survey was released. The scale validation article illustrates that this particular instrument truly captures the critical dimensions of interpersonal communication as an educational outcome. Characteristics of communication are identified as a notion of “shared meaning,” encompassing skills such as empathy and assertiveness. These dimensions, behaviors or mannerisms in which the communication is demonstrated, illustrate one’s ability to effectively communicate. They include prescriptive, informative, confronting, cathartic, catalytic, supportive, listening, and nonverbal elements. What is perceived by the communicator is not always what is being identified as a bystander or the one with whom one is communicating, as communication perception is contextual (Klakovich & Dela Cruz, 2006).

Samuel Freitas Soares and team researched professional nursing standards as a part of their development of their own measurement tool to measure professional communication competencies. A strength of the article was that this methodological study was tested over three phases: prior to lecture, after simulation, and again after debriefing. The development of this measurement tool was based in the idea that “communication is a multifaceted event involving context and process of the interaction” (Soares et al., 2021). Communication as a basic tool of nursing care is what interconnects the interdisciplinary team and care management, not only managing patient plan of care but as an individual nurse, learning how to manage and process events related to barriers of communication put up by patients or their families.

Mobile Unit Benefits in Rural Communities

In a study designed by Kenneth Olive (1998) and his team, the students were introduced to the rural community via a community partnership in health education program. The program was designed to "introduce students to the community, its people, their healthcare needs, and the process of working in interdisciplinary groups" (Olive et al., 1998). This quantitative and qualitative evaluation study done on 93 students found that the students who participated felt more prepared in interdisciplinary work and collaboration regarding patient care after leaving the course. Additionally, community members indicated increased satisfaction with their health needs because of the availability of community resources such as a Mobile Unit. Identification of the need for healthcare to catch up on the needs of the community thus focuses on curricular revisions in nursing schools, with key elements of education programs focusing on teaching in a community-based setting (Olive et al., 1998).

The article "Interprofessional Teams: Lessons Learned from a Nurse-Led Clinic" was published in the *Journal for Nurse Practitioners* in 2019. Denise Schentrup and her team showcased a multidisciplinary care team model and implemented it into practice. The setting is a Rural Health Clinic funded by the University of Florida's College of Nursing in Archer, Florida, and a practice review and evaluation of lessons learned was conducted on 60 case studies through the program. The Archer Family Healthcare team was developed as a nurse-led team to help implement the vision of offering cost-effective, high-quality healthcare. Sampling from 2017 indicated over 1500 patients seen, most of whom needed their primary and mental health issues integrated by the clinic. The creation of the Care Team Model was implemented with the planning period, which developed job descriptions, fulfilled these positions, and then scheduled

collaborative meetings for the whole team which consisted of a family nurse practitioner, mental health practitioner, pharmacist, case manager, quality facilitator, physician, and non-clinical staff. The team focused on diabetes, COPD, and depression management in their patients. Their evaluation instruments include three functionality-testing tools at six-month intervals. This article concluded that team-based care is at the forefront of the healthcare system. A strength of the article is that they had the financial resources and individuals that created a successful, long-term study. A limitation would be the focus of only three diagnoses on the unit itself (Schentrup et al., 2019).

The article “Impact of a Nurse-Led Clinic for Chronic Constipation In Children” was published in the *Journal of Child Healthcare* in 2011. Nevine Ismail and the team with the department of pediatrics in the United Kingdom focused on a study that assessed the impact of nurses in management of children with constipation who were not making progress despite regular treatment. The sample included children who had this diagnosis for at least six months and attended at least three clinic appointments, and the quantitative survey was conducted on 50 patients involved in the program. This is a very strong sample population because it is very specific. The setting was a nurse-led clinic run by pediatric nurses, who tried to see the same children at 4-week, 8-week, and 4-month intervals. Education and follow up was given, but medication dose was not changed. The rationale was that the problem rested with compliance rather than effectiveness. Parents were asked to complete a questionnaire that was administered again at a later time. Results showed statistically significant reduction in pain, and an increase in frequency in productive bowel movements. A benefit of the study was there was improvement with little to no changes in medication management, rather it focused on education and follow up. A

limitation of the study could be the small sample size (50) as well as disconnect in information from the child patient to their adult parent filling out the survey (Ismail et al., 2011).

The article "Movin' On Up: An Innovative Nurse-Led Interdisciplinary Healthcare Transition Program" was published by the *Journal of Pediatric Healthcare* in 2011. Author Cecily Betz and team did an overview of a successful evidence-based program, a nurse-led clinic in Los Angeles Country. The clinic worked specifically with spina bifida patients from childhood through adulthood. What makes this program and article stand out is the fact that this innovative care program is long term for these patients. The team functions through the nursing service specialist leading a team meeting that reviews the patient's constantly changing medical record, hospitalizations, and ER visits. Nursing monitors the self-management of medication, knowledge, and education, as well as core skills the patient develops throughout their diagnoses. Betz highlights the nurse-led benefit and how an advanced practice nurse directs and manages the interdisciplinary members and their scheduled meetings with the patients. A limitation of this method would be staffing changes, which may negatively impact patients when relationships must be reestablished (Betz et al., 2016).

The article "Effectiveness of a Community Based Nurse-Pharmacist Managed Pain Clinic: A Mixed Methods Study" is a quasi-experimental study with face-to-face semi-structured qualitative interview study published in the *International Journal of Nursing Studies* in 2015. This mixed-methods design, consisting of qualitative interviews with a quasi-experimental study, observes adults with chronic pain who were referred to the pain clinic. The four evaluating questionnaires involved a pain inventory, an anxiety and depression scale, and a chronic pain grade survey, which were given at baseline, discharge, and three

months post discharge. A total of 79 participants participated in the study, but only 36 followed up at discharge, and nine followed up at three months, which is a significant limitation of this study. The results indicated that nurse managed community clinics efficiently delivered effective pain management. This holistic approach allowed for the service burden to be reduced on secondary care like emergency rooms (Hadi et al., 2016).

The article “The Scope and Impact of Mobile Health Clinics in the United States: A Literature Review” was published by the *International Journal for Equity in Health* in 2017. Authors Stephanie Yu, Caterina Hill, Mariesa Ricks, Jennifer Bennet, and Nancy Oriol developed a literature review studying the transformation in care delivery thanks to the accessibility and improvement of the mobile health clinic in healthcare today. The literature review was strong in the fact that three reviewers searched for articles for 1 year, and 51 articles were pulled, spanning 20 years of publication. The focus of this literature is mobile units offering preventative health screenings and initiating chronic disease management. There are over 2,000 mobile health units registered nationwide. This alternative healthcare model also provides education for navigating community resources. The main focus is about collaboration with other local agencies, such as spiritual services, mental health clinics, and other clinics to help build a better resource network for mobile units. Limitations, as brought up by the article, include fragmentation of care, staffing issues, and financial burden of the unit itself (Yu et al., 2017).

Perception of Preparedness

A qualitative study by Gerrie Barnett and team entitled “Use Of The Standardized Patient To Clarify Interdisciplinary Team Roles” (2011) organized

students of different disciplines in actual interdisciplinary work. Students from medicine, pharmacy, occupational therapy, physical therapy, audiology, nutrition, and bachelor's in nursing programs were split into teams and interviewed each patient individually, then coming together to form a plan of care. This study showed that interdisciplinary work allowed for a more prioritized and developed plan of care with recommendations for diagnosis, treatment, teaching, and follow up. These valuable experiences allowed for improved communication in future workplaces (Barnett et al., 2011).

The article "An Exploration of Graduate Nurses' Perceptions of Their Preparedness for Practice after Undertaking the Final Year of their Bachelor of Nursing Degree in a University-Based Clinical School of Nursing" was published in the *International Journal of Nursing Practice*. Authors Elizabeth Watt and Elizabeth Pascoe focused on the education of nurses and their readiness for practice. This interpretive descriptive study examines semi-structured interviews from nurses and their perception of clinical experience and the resulting high anxiety and stress that comes with their first year of nursing. Certain factors such as the gap between classroom learning and practice setting, the quality of practice setting, and the feeling of belonging and connection to these real-world clinical settings influence the perception of being fit for practice. This article does a good job of showing the existing literature's examination on the facilitation of preparedness for practice, starting with the quality of experience at the first clinical site. Although it has limitations including small sample size and limited venue and data collection, as well as not using a validated survey, this study may prove helpful as an example for larger studies (Watt & Pascoe, 2013).

The article "Preventative Health, Diversity, and Inclusion: A Qualitative Study of Client Experience Aboard a Mobile Health Clinic in Boston,

Massachusetts" was published in the *International Journal of Equity in Health* in 2017. Authors Zoe Bouchelle et al. developed a qualitative report on the patient's actual perspective on the mobile unit. This article is more oriented to the production benefits, but the interview aspect of this report showed what real patients like and do not like about a mobile health unit. Patients responded well and appreciated that providers communicated in a way they understood, created a respective cultural environment, and that they unit was diverse and knowledgeable of the community. The patients focused on the benefits of the preventative health and management of chronic disease, which would take longer to access with primary care providers, and be more expensive in emergency departments. The benefit of this article allows readers to see more than just research and literature review on the benefits of mobile unit; it also provides direct patient narratives, despite a small sample size of 25 participants (Bouchelle et al., 2017).

The article "Undergraduate Nursing Students' Strategies for Coping with Their First Clinical Placement: Descriptive Survey Study" was published in *Nurse Education Today* in 2018 and addressed the importance of clinical placement. Yousef Alsharani, Lynette Cusack, and Dr. Philippa Rasmussen stress the importance of the first clinical placement, as it can have an effect on the future of the nursing student. This design was a mixed methods descriptive survey and focused on a university in South Australia. A positive clinical experience was defined by: 1) a debriefing session with clinical staff and peers, 2) gaining advice from supportive staff, and 3) effective communication in the unit on expectations and care planning (Alshahrini et al., 2018).

CHAPTER 3: METHODOLOGY

Study Design

The study presented is a cross-sectional descriptive study administering an adapted validated survey designed to assess interpersonal communication skills to a population of undergraduate Fresno State nursing students who have trained on the Mobile Unit (Appendix A). It utilized a survey of a convenience sample of BSN students in order to explore the overall confidence levels of BSN students in communication concepts. The analysis of 4-item Likert scale data allowed for ranking of skills efficacy to better determine weaknesses of the set curriculum. The study design was selected to separate and compare students who went to the Mobile Unit for the first time in their first year of nursing school versus the second year of nursing school. This design was selected after collaboration between the researcher and the statistician, because it allowed for comparison of each question between the two years, as well as to determine if there was a difference in confidence and which elements specifically were the weakest and strongest related to communication skills learned during practicum.

Population and Setting

The population of interest was a variety of nursing students in all semesters from the Bachelor of Nursing (BSN) program at Fresno State. The Canvas class page consists of all students who have completed the University required training modules to complete clinical time on the Mobile Unit, including HIPAA training, Covid-19 and infection control training, as well as policy and procedures. The goal was to obtain 100 responses, with a minimum of 20 responses within the first five days. There was no exclusion of any individual based on age, race, gender, or practice background. The only inclusion criterion was that one must have been a

nursing student at Fresno State and have utilized the Mobile Unit in their time in nursing school. Permission to utilize the student database was granted by Mobile Unit Director, Dr. Kathleen Rindahl. The appropriate IRB process was completed through the University. Informed consent was presented and collected before surveys were authorized for use (see Appendix B).

Instrumentation

The Interpersonal Communication Assessment Scale (ICAS) is a survey that was accessed through the library at Fresno State (see Appendix C). This scale was created in 2006 by Marilyn Kalkovych and Felicitas Dela Cruz who are affiliated with the Azusa Pacific University School of Nursing. Through the services provided to students by the Henry Madden Library, permissions are granted to access certain databases with survey tools. Through the PsycTESTS database, an electronic version of the survey could be found along with information regarding the purpose of the survey, a description of the format, and a statement of granted permission for students to use for research and teaching. The statement indicated that the test content may be reproduced and used for research and educational purpose without having to seek written permission. There was no fee for use of this survey (Klakovych & Dela Cruz, 2006). For this study, the questions were adapted to read "After serving time as a student on the Fresno State School of Nursing Mobile Unit, how confident are you with…" (see Appendix A). Three questions were omitted after review as the nature of the question was deemed outside the scope of a new nursing student, not relevant to a practicum rotation, or there was already a similar question in the survey: 1) inviting family to explore discrepancies, 2) using behavioral descriptions for feedback, and 3) states discrepancies in information.

The purpose of this scale was to assess the communication competencies of students in undergraduate nursing programs on topics covering advocacy, therapeutic use of self, and validation in communication with patients, as well as collaboration with a team. Professional nursing practice requires competency in these areas in order to foster positive relationships related to health outcomes and patient satisfaction. The original scale was a 23-item measurement covering the three topic areas. Items were rated using a standard Likert scale with 1=seldom, 2=often, 3=usually, 4=always. Reliability was based on Cronbach's alphas of 0.84-0.93 for the variety of topics. Results indicated both construct validity and internal consistency (Klakovych & Dela Cruz, 2006).

Data Collection

Surveys were sent out beginning November 4, 2020 and participants were asked to complete the survey within two weeks, to obtain all final survey results by November 20, 2020. In a section before the survey, the participant was required to agree to informed consent, in which the exact consent language outlined practice and privacy details. With this SurveyMonkey feature, there was the ability to skip people who did not agree with the consent prior to the survey, as it showed the acknowledgement once results were received. Three survey responses were not included in final analysis, as not all the elements of the informed consent were completed. An announcement post was made by the primary researcher on November 4, 2020 to Canvas giving information regarding the research project, what the benefits of participating in the study could be, and the link to the survey. An additional post was made by an instructor indicating an email was sent out to students, and a reminder was also generated that same week. All survey results

were compiled in the SurveyMonkey database and remained only accessible by the primary researcher and committee chair.

Data Analysis Plan

An independent t-test through SPSS data as well as assistance from the Fresno State Statistics Studio were utilized to analyze survey data. Precautions were taken to properly enhance the probability of trustworthy data, such as ensuring the surveys remain anonymous, as confirmed by the Survey Monkey user agreement. The purpose of this study was deemed appropriate based on the literature reviewed, showing that early onset education in regard to certain factors such as communication has a more positive effect on students in their clinical practice. A comparison of confidence levels in this independent group of students at different stages of their education who have started clinicals and have utilized the Mobile Unit were to be evaluated for outcomes related to going to their first outing at the Unit in the first year of nursing school, versus the second year of nursing school.

Ethical Consideration (Human Subject Protections)

The purpose of this study and survey was to measure competencies in communication for undergraduate nursing students, focusing on elements of patient advocacy, therapeutic use of communication for patients, and validation of skills through interdisciplinary collaboration. Possible individual benefits could include individualized recognition of strengths and weakness in their own collaborative and communication skills. Within the overall study, benefits include research that could support putting more nurse-led clinics in the community, and a possible benefit not only for underserved populations, but for education purposes for providers as well.

Bias

Potential risks were thoroughly considered. The human element was of concern, especially with the sensitive subject of dealing with personal practices. When working with students, they may feel that not participating in a study may negatively impact their education or grades. Statements in the consent reassured participants that there would be no impact on their academic standing if they decided not to participate. Offering opportunities for questions helped eliminate fear of personal information being exposed. Confidentiality concerns were addressed by excluding all demographics from the research materials.

All surveys were handled by SurveyMonkey which assisted with eliminating identifiers. All information will be destroyed by May 31, 2021, which is stated in the consent. As confirmed by the SurveyMonkey help page for design and management, an option is to “delete” all data collected. Once all the data has been used and confirmed, as stated previously, all survey results will be deleted by May 31, 2021.

CHAPTER 4: RESULTS

Results

All participants received and agreed to consent to the survey prior to answering questions. This was verified through the SurveyMonkey breakdown, as surveys in which participants had not acknowledged the consent were dropped from the results analysis. No descriptive or demographic data was recorded. Demographics were not pulled for this study due to the nature of it being a pilot study and there was projected relevance to the information being collected. As depicted in Table 1, a total of 20 responses were collected from students. Three additional surveys were collected but disqualified due to the student not participating in the Mobile Unit at all (2) or not expressly consenting to the survey (1).

Table 1

Group Statistics and Independent Samples Test

Item: Class Standings	N	Mean	Std. Dev	Mean Diff.	Sig.	t
First Year (Semester 1 or 2)	7	64.71	3.90	5.40		
Second Year (Semester, 3,4, or 5)	13	59.30	12.31	5.40	0.106	1.45

FirstYear is defined as a student currently in the first or second semester of the Fresno State BSN program, while SecondYear is defined as a student currently in the third, fourth, or fifth semester of the program. Of the sample, 35% (7/20) of the students first went to the Fresno State Mobile Unit in their first semester, with 65% (13/20) of students going for the first time in their second year of nursing school. A maximum score of 80 would indicate total confidence in all skill areas assessed by the survey. As seen in Table 1, the mean score for FirstYear students

was 64.71 (80%), and the mean score for SecondYear students was 59.30 (74%), with a mean difference of 5.40. Comparing the mean score for each against the maximum score possible, FirstYear students scored at about 80% compared to SecondYear students scoring at 74%, with a difference of about 6%. An independent sample t-test was run for the data provided. Overall responses indicate no statistical significance between responses in FirstYear versus SecondYear students (n=20, MD=5.40, SD=4.81, p=0.106; Table 1). Statistical significance would be affected by the small sample size of the pilot study.

The survey was broken up into three different sections of competency as it related to communication: therapeutic use of self, advocacy, and validation. Each subset contained questions as they related to that particular topic. Therapeutic use of self-contained questions that involved the student as this subset referred to how they personally act, such as maintaining personal space, making eye contact, recognizing body language, and observing the need for emotional support. Advocacy involved giving clear instructions, providing referrals when indicated, and teaching preventative care. Validation involved asking for clarification from preceptor, using specific follow-up questions as opposed to closed-ended questions, and asking for feedback related to care. The FirstYear (1Y) students overall scored higher than the SecondYear (2Y) students in all categories (see Table 2). SecondYear students scored slightly higher in advocacy, specifically related to giving clear instructions to a client and providing a referral when indicated. SecondYear students also scored higher when it came to validation, such as giving descriptive feedback using written communication for the preceptor to review. All three of these questions could possibly have been correlated with a higher level of thinking related to practicum hours already completed with other preceptors and professional settings.

Table 2

Questions with Mean Scores

Therapeutic Use of Self	Mean Score 1Y	Mean Score 2Y
Maintaining comfortable personal space	3.71	3.23
Maintaining neutral facial expressions	3.86	3.23
Making eye contact	3.86	3.54
Allowing patient/family to express responses	3.42	3.30
Acknowledging any concerns (i.e. payment, time, pain)	3.57	3.15
Recognizing body language for inconsistency	3.14	2.77
Spending time with patient/family on concerns	3.71	3.07
Communicating with silent patient/family members	2.86	2.53
Observing for needed emotional support	3.14	2.77
Advocacy		
Giving clear instructions to a client	3.00	3.08
Providing a referral when indicated	2.42	2.84
Asking questions regarding treatment decisions to your provider/preceptor	3.14	3.08
Requesting a consultation when needed	2.71	2.61
Teaching and promoting preventative care	3.57	2.77
Preparing a patient for certain tests	3.42	3.15
Explaining different treatment options	2.71	2.53
Validation		
Asking for clarification from provider/preceptor	3.86	3.15
Using specific follow-up questions for "yes/no" answers	3.00	2.85
Asking for confirmation of perceptions related to diagnosis and treatment plans	3.00	2.85
Giving descriptive feedback using written communication for provider/preceptor to review (i.e. charting)	2.57	2.77

The Likert scale measured the survey respondents' confidence level from 1 (not confident) to 4 (most confident) based on their first interaction and clinical experience on the Mobile Unit. The highest scored questions as seen in Table 3 across the board in regard to highest self-efficacy were: 1) Making eye contact (73/80), 2) Maintaining neutral facial expressions (69/80), and, 3) Asking for clarification from provider/preceptor (68/80). The lowest scored questions were:

1) Communicating with silent patient/family members (53/80), 2) Requesting a consultation when needed (53/80), and, 3) Explaining different treatment options (52/80) (see Table 4). Two out of three of the highest scored items were in the therapeutic use of self-competency, while two out of three of the lowest competencies were in advocacy. Overall as well, therapeutic use of self (64.22) had the highest overall mean score compared to validation (59.50) and advocacy (58.28) as seen in Table 5.

Table 3

Highest Score Competency

Highest Scored	Competency	Sum Score
Making eye contact	Therapeutic Use of Self	73
Maintaining neutral facial expressions	Therapeutic Use of Self	69
Asking for clarification from provider/preceptor	Validation	68

Table 4

Lowest Score Competency

Lowest Scored	Competency	Sum Score
Communicating with silent patient/family members	Therapeutic Use of Self	53
Requesting a consultation when needed	Advocacy	53
Explaining different treatment options	Advocacy	52

Table 5

Overall Competency Area

Competency Area	Overall Mean Score
Therapeutic Use of Self	64.22
Validation	59.50
Advocacy	58.28

CHAPTER 5: DISCUSSION AND ANALYSIS

Discussion

Provider and patient relationships require individualized planning and teamwork to help create a plan of care that is realistic and effective to meet the goals of the patient. Disconnects can be found in communication breakdown, but as seen in the study done by Yousef Alsharani, Lynette Cusack, and Dr. Philippa Rasmussen (2018), reshaping curriculum in initial practicum placement can provide a more positive experience for the nursing student as well as future care provided because of learned experiences. Targeting students early on, especially in a controlled environment like the Mobile Unit, can potentially help focus on identifiable weak areas from the survey. This data is important for future curriculum creation for the Mobile Unit. Utilizing the Mobile Unit as an initial clinical site can help address any barriers with transition to practice.

Strengths and Limitations

The study overall had a strong validated survey that was broken up into viable competencies that can illustrate where strengths and weaknesses lie in a practicum setting. In future research and development, this is the kind of material that could be used to cultivate evidence-based curriculum for teaching programs and clinical sites. The sample size of participants was less than the goal of 100 participants stated in the IRB proposal. With only 20 survey responses received, this pilot study could have more statistical weight with increased survey numbers. Recruitment involved posting the survey with instructions on the Mobile Unit class Canvas site. Additional respondents could have been gathered if the researcher reached out directly to classes to promote research, a stronger recruitment effort from professors, including sending email reminders or offering

extra credit, as well as a longer period of time to gather responses, such as two months instead of two weeks. The Covid-19 pandemic that limited the Mobile Unit from going out during the semester the survey was given could have impacted traffic on the Mobile Unit Canvas page due to the possibility of limited opportunities to operate.

Theorization

Referring back to Betty Neuman's Systems Model, the flexibility of intervention starts with creating the total person approach. The ideal provider is one who is able to meet all patient needs, including identifying stressors and modeling a coherent interdisciplinary team for care (Petiprin, 2016). The execution of research around basic competencies in nursing care at the initial practicum level can help develop an understanding of what students require. QSEN utilization has been identified as a successful way to address critical issues within the nursing education environment, specifically around quality and safety. Communication and collaborative efforts remain the foundation on which practice is built. How and when these strategies are learned can influence one's studies and future career opportunities, particularly when focused on nursing graduates to mold them into instrumental and effective members of the healthcare team on an interprofessional level (Disch, 2012). Not only do communication and collaboration affect the interdisciplinary team efforts, they have a significant impact on the provider-patient relationship. Individualized care helps promote patients' initiative to take control of their own care needs, rather than feeling like they are just a number in a lineup. The known versus unknown of client stressors and provider is the line by which we measure health deviation. The team must continue to consider the client as the central variable of care, and consider how to

break stress barriers. Limitations of the theory continue to be the complexity of the theory, and the difficulty of testing success related to it (Montano, 2020).

Future Uses

In future studies, the researchers could take this study a step further by introducing a specific education piece related to an element in each category. They could then do a prospective survey using a pre- and post-test, comparing confidence from the start of practice to the end of the semester on the Mobile Unit. There is potential to break down and branch out to compare the difference between RN, BSN students and FNP clinical experience on the Unit. There would also be an opportunity to compare students who utilize the Unit versus students who had never used it.

Recommendations made from this study include upfront utilization of the Mobile Unit as an initial clinical site for first or second semester students. Reviewing the data, students scored higher in confidence levels regarding communication competencies when the Mobile Unit was their first site (Table 2). Controlled environments and controlled preceptors can allow for focus on the weak elements illustrated in the survey. Potentially, students who did not go out to the Unit as quickly were not exposed to appropriate hands-on education regarding essential elements such as how to identify education and communication gaps in patient care. Additional research can be conducted on how students feel at other clinical sites: how they feel with outside preceptors and how invested they feel in their learning. This research can function as a platform for future larger studies, with comparison done between new developed curriculum versus a standard group of students, both groups going to the Mobile Unit for their entire first semester of nursing school.

Summary

This project focused on how students have benefited from the education provided by participation with the Mobile Unit at Fresno State by assessing their confidence in different competencies focusing on therapeutic use of self, advocacy, and validation. Future changes can be made to preceptor-student relationships and focuses based on initial results on low-scoring competency questions. Ultimately, reflection on self-efficacy in certain areas should direct students toward what areas to focus on through schooling so that the transition to their nursing career is one that not only are they prepared for, but that prepares future patient populations as well.

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APPENDICES

APPENDIX A: ADAPTED SURVEY WITH INTRODUCTION

Interpersonal Communication Assessment Scale

Informed Consent

Please read and acknowledge the informed consent.

You are invited to participate in a study conducted by Madelyn Broach and Dr. Carrie Holschuh. We hope to learn about the benefits of communication education based in the nurse-led clinic. You were selected as a possible participant in this study because of your affiliation with the Fresno State School of Nursing as well as the School of Nursing Mobile Unit.

If you decide to participate, you will take part in a fifteen-minute survey that will only need to be completed once. There are no known risks or personal benefits associated with taking this survey.

Any information that is obtained in connection with the study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. If you give us your permission by signing this document, we plan to disclose your deidentified survey answers for the purpose of statistically analysis pertaining to the research done in this study.

I hereby willingly consent to the participate in the research project: Benefits of Collaborative Efforts Based on Nurse-Led Clinic Education

I am aware of all the following conditions:

All information is to remain confidential.

I will remain anonymous.

There will be no compensation while participating in this survey.

After the information is compiled, the original survey results will be destroyed by May 31, 2021.

I have the right to withdraw from this study at any time without prejudice or penalty. Moving forward with the informed consent does not represent any commitment to completing this survey in its entirety.

If I am emotionally upset from participating in this survey, I understand I have the resources available at the Fresno State Student Health and Counseling Center to contact.

California State University, Fresno has given permission for this study to be conducted.

The procedures for this research have been approved by the Human Subject's Subcommittee, College of Health and Human Services at California State University, Fresno.

If you have any additional questions, please direct them to mbroach@fresnostate.edu or primary investigator Dr. Carrie Holschuh, PhD, CNM at holschuh@sfsu.edu or leave a message at 1-415-338-6586, and you will receive a response as soon as possible.

Question Title

* 1. By participating in the survey, I give consent:

Yes No

Question Title

2. What semester of the BSN program are you in?

____

Question Title

* 3. Have you spent clinical time on the Fresno State Mobile Health Unit?

Yes No

Question Title

4. What semester did you first go to the Mobile Unit?

____

Interpersonal Communication Assessment Scale

The Fresno State School of Nursing Mobile Health Unit is a community project, staffed and supported by grant funding and the School of Nursing. This Mobile Unit offers free screenings to the underserved members of our community. Services offered by the unit and provided by the Bachelor of Science (BSN) registered nurse (RN) students include blood pressure checks, blood glucose and A1C screenings, and cholesterol screenings. Other services include screenings for asthma, flu shot administration, and full physical assessments offered by the Family Nurse Practitioner (FNP) students.

The purpose of the Interpersonal Communication Assessment Scale is to assess the communication competencies of students in undergraduate nursing programs, covering advocacy, therapeutic use of self, and validation.

Please answer the following using the Likert scale:

Seldom, Often, Usually, and *Always.*

After serving time as a student on the Fresno State School of Nursing Mobile Unit, how confident are you with:

Question Title

* 1. Giving clear instructions to a client

Question Title

* 2. Providing a referral when indicated

Question Title

* 3. Asking questions regarding treatment decisions to your provider/preceptor

Question Title

* 4. Requesting a consultation when needed

Question Title

* 5. Teaching and promoting preventative care

Question Title

* 6. Preparing a patient for certain tests

Question Title

* 7. Explaining different treatment options

Question Title

* 8. Maintaining comfortable personal space

Question Title

* 9. Maintaining neutral facial expressions

Question Title

* 10. Making eye contact

Question Title

* 11. Allowing patient/family to express responses

Question Title

* 12. Acknowledging any concerns (i.e. payment, time, pain)

Question Title

* 13. Recognizing body language for inconsistency

Question Title

* 14. Spending time with patient/family on concerns

Question Title

* 15. Communicating with silent patient/family members

Question Title

* 16. Observing for needed emotional support

Question Title

* 17. Asking for clarification from provider/preceptor

Question Title

* 18. Using specific follow-up questions for "yes/no" answers

Question Title

* 19. Asking for confirmation of perceptions related to diagnosis and treatment plans

Question Title

* 20. Giving descriptive feedback using written communication for provider/preceptor to review (i.e. charting)

APPENDIX B: INFORMED CONSENT

INFORMED CONSENT FORM

You are invited to participate in a study conducted by Madelyn Broach MSN, FNP and Dr. Carrie Holschuh, PhD, CNM. We hope to learn about the benefits of communication education based in the nurse-led clinic. You were selected as a possible participant in this study because of your affiliation with the Fresno State School of Nursing as well as the School of Nursing Mobile Unit.

If you decide to participate, you will take part in a fifteen-minute survey that will only need to be completed once. There are no known risks or personal benefits associated with taking this survey.

Any information that is obtained in connection with the study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. If you give us your permission by signing this document, we plan to disclose your survey answers for the purpose of statistical analysis pertaining to the research done in this study.

I, ______________________________, hereby willingly consent to participate in the research project: Benefits of Collaborative Efforts Based on Nurse-Led Clinic Education

I am aware of all the following conditions:

All information is to remain confidential.

I will remain anonymous.

There will be no compensation while participating in this survey.

After the information is compiled, the original survey results will be destroyed by May 31, 2021.

I have the right to withdraw from this study at any time without prejudice or penalty. Moving forward with the informed consent does not represent any commitment to completing this survey in its entirety.

If I am emotionally upset from participating in this survey, I understand I have resources available at the Fresno State Student Health and Counseling Center to contact.

California State University, Fresno has given permission for this study to be conducted.

The procedures for this research have been approved by the Human Subject's Subcommittee, College of Health and Human Services at California State University, Fresno.

If you have any additional questions, please direct them to mbroach@fresnostate.edu or primary investigator Dr. Carrie Holschuh, PhD, CNM at holschuh@sfsu.edu or leave a message at 1-415-338-6586, and a response will be given as soon as possible.

By participating in the survey, I give consent.

APPENDIX C: ORIGINAL SURVEY

doi: http://dx.doi.org/10.1037/t52600-000

Interpersonal Communication Assessment Scale
ICAS

Advocacy
Invites patient/family to explore discrepancies
Uses behavioral descriptions for feedback
Gives clear instructions
Provides referral when necessary
Questions treatment decisions
Requests consultation when needed
States discrepancies in information
Teaches and promotes preventive care
Prepares patient/family for procedures
Explains treatment options

Therapeutic Use of Self
Maintains comfortable distance
Matches facial expressions
Makes eye contact
Allows patient/family to express reactions
Acknowledges concerns
Watches body language for inconsistency
Spends time with patient/family on concerns
Converses with silent patient/family
Observes for needed emotional support

Validation
Asks for clarification
Uses specific questions
Asks for confirmation of perceptions
Gives descriptive feedback

Note . All response options utilized a Likert-type scale (1 = seldom; 2 = often; 3 = usually; 4 = always).

PsycTESTS™ is a database of the American Psychological Association

Fresno State

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