5-2024

# Evaluating Effective Communication of Baccalaureate Nursing Students

Christine Brockway
*University of Northern Colorado*

UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

# EVALUATING EFFECTIVE COMMUNICATION OF BACCALAUREATE NURSING STUDENTS

A Dissertation Submitted in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy

Christine Brockway

College of Natural and Health Sciences
School of Nursing
Nursing Education

May 2024

This Dissertation by: Christine Brockway

Entitled: *Evaluating Effective Communication of Baccalaureate Nursing Students*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in College of Natural and Health Sciences in the School of Nursing, Program of Nursing Education

Accepted by the Doctoral Committee

_____
Michael Aldridge, Ph.D., Research Advisor

_____
Darcy Copeland, Ph.D., Committee Member

_____
Carlo Parker, Ph.D., Committee Member

_____
Silvia Correa-Torres, Ed.D., Committee Member

Date of Dissertation Defense _____

Accepted by the Graduate School

_____
Jeri-Anne Lyons, Ph.D.
Dean of the Graduate School
Associate Vice President for Research

ABSTRACT

Brockway, Christine. *Evaluating Effective Communication of Baccalaureate Nursing Students*. Published Doctor of Philosophy dissertation, University of Northern Colorado, 2024.

The purpose of this mixed methods study was to determine how communication evaluation by clinical faculty compared in a clinical setting versus a simulation setting for Bachelor of Science in Nursing (BSN) students. Fifty (50) BSN students from three different schools of nursing were scored using the Interprofessional Situation, Background, Assessment, Recommendation Nurse to Physician Rubric in both clinical and simulation settings by seven nursing faculty. Scoring for each student occurred in both settings during one semester. Following the evaluation, students and faculty were asked to participate in a focus group to discuss their experience.

Results from this study showed that scores from both settings were statistically the same, implying that a rubric used in a simulation setting could also be used in a clinical setting. Both the faculty and student focus groups found the rubric beneficial for improving student skill with hand-off report.

ACKNOWLEGEMENTS

I would like to thank my husband and children, not only for all the work they had to do when I was writing or doing my assignments, but for reading through some of my rough drafts and being supportive. To my cohort of Ph.D. candidates, especially Elizabeth Cunniff, I wouldn't have been able to complete this without you. Lastly, to my advisor, Dr. Aldridge, for being encouraging and excited for me and never making me feel like an imposter.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

# CHAPTER I

# INTRODUCTION

Registered nurses (RN) must be able to communicate effectively in the healthcare setting as they spend about 20% of their time communicating with other healthcare members (Yen et al., 2018). The American Nurses Association (ANA, 2015) listed communication as a standard of professional performance that requires all RNs to "communicate effectively in all areas of practice" (p. 72). Communication includes both written and verbal methods as well as reading non-verbal cues occurring with patients, other nurses, and all healthcare disciplines. Communication consists not only in a one-on-one interaction but in relaying critical information, documenting assessments, and therapeutic connections. The profession of nursing requires proficiency in all types of communication to optimally treat patients and function within the healthcare system.

## Communication Errors and Patient Safety

The main accrediting body for U.S. health care, The Joint Commission (TJC, 2020), reported that poor communication caused the majority of medical errors and sentinel events. The Joint Commission Center (2017) noted that poor communication skills led to many poor outcomes including increased length of stay, increased costs for both patient and facility, adverse events, wrong treatment, and medication errors. In fact, in 2021, TJC created a National Patient Safety Goal calling specifically for improved effectiveness of communication among caregivers. Communication is considered ineffective when there is a delay in reporting critical information, unclear reporting, or omission of information that is needed for optimal patient care (TJC, 2017).

Medical errors could include giving an incorrect medication to delayed or incorrect treatment. A sentinel event is “a patient safety event that results in death, permanent harm, or severe temporary harm” (TJC, 2020, p. 1). Beyond patient safety, poor communication has also been a significant factor in litigious action in health care. The *Malpractice Risks in Communication* report (Risk Management Foundation, 2015) found that breakdowns in communication figured in 30% of all malpractice claims filed. These malpractice suits stemmed from issues ranging from delay of care to death and were filed for all types of patients: young, old, and those with both acute and chronic health issues. Communication affects everyone involved in health care where errors are costly in monetary terms and, even more importantly, in worsening patient outcomes.

## Communication Skills and Education Practice Gap

While communication occurs at all times in the healthcare setting, transitional times, such as shift change or patients moving from one unit to another, require a specific type of communication often labeled ‘hand-off report.’ Lim and Pajarillo (2016) defined hand-off report as “a process used by health care professionals when providing a status report to other members of the health team” (p. 3). Good hand-off report is essential for effective communication. In 2017, TJC published the Sentinel Event Alert 58 that centered on inadequate hand-off communication, noting that “gaps in communication during hand-off processes continue to exist, thereby increasing patient safety risk. The problem is compounded by the high frequency of hand-offs in health care, especially in hospitals” (p. 2). The recommendations for best practice of hand-off report were to have a specific structure to the report, training in giving and receiving, face to face performance, and assessment of process (TJC, 2017).

Issues with hand-off, also called transitioning, do not start in the hospital setting. The *Patient Safety Monitor* (“Patient hand-offs: The gap,” 2017) noted, in the most recent study on

the topic, that “transitioning isn’t formally taught in medical or nursing schools” (p. 6), which leads to poor transitioning in the hospital setting. In a study of Italian nursing schools, Palese et al. (2019) noted that less than half of nursing students reported being involved in a hand-off report. Lack of communication preparation for nursing students contributes to the education practice gap. Hickerson et al. (2016) defined the preparation to practice gap as “the deficits in knowledge and skills that novice nurses may demonstrate on entry into the clinical setting” (p. 17). Novice nurses are those beginning their professional career and entering into new settings with little experience on their own. When institutions expect a certain level of competence from their new graduate nurses and a novice nurse does not quite meet that level, there is a ‘gap’ between expectation and reality. Hickerson et al. noted that managers were very concerned about the gap and its effect on safety and patient care. The most prevalent skill noted in the review of gaps was communication, and several studies identified communication as a major gap for new graduate nurses (Huston et al., 2018; Hyun et al., 2020; Murray et al., 2018).

## Communication in Nursing Programs of Study

Communication might be an area of focus for health care but that is not always the case in nursing education. Communication is often termed a ‘soft skill,’ a part of nursing present in the performance of nursing but not always emphasized or evaluated in nursing programs. Soft skills of nursing include communication, attitude, teamwork, critical thinking, and professionalism (Dziados, 2019). These skills are hard to measure but help nurses adapt and work with others (Deering & Bal, 2021) and are best developed through experience in situations (Liebrecht & Motenery, 2016). Situational experience generally occurs through clinical where students are educated not just about the information needed to care for patients but how to practice nursing. Clinical settings, which could include simulation experiences, are areas where

students could perform skills and perform in the role of nurse. The American Association of Colleges of Nursing's (AACN, 2021) *The Essentials* document stated the following about clinical experiences:

> Clinical experiences assist the graduate to develop proficiency in cognitive, psychomotor, and affective learning. Clinical experiences are essential for students to care for a variety of individuals, families, groups, and populations across the lifespan and across the four spheres of care. Clinical learning provides opportunities for a student to enhance the provision of care and gain the skills needed to be an effective member of an interprofessional team…graduates of all types of entry-level professional nursing education programs need sufficient practice experiences (both direct and indirect care experiences) to demonstrate end-of program learning outcomes. (p. 20)

Clinical experiences provide the setting for optimal learning of communication as the student is learning the role of a nurse, whether that be in a hospital or clinic setting or in a simulation. Communication should be evaluated in the same setting as it is learned to determine competence. Communication has been studied in clinical settings from the view of the student (Hustad et al., 2019) or with Likert-type scales of self-efficacy (Chen et al., 2015; Young et al., 2022) but not in an objective manner from faculty. While the emergence of simulation has provided a controlled setting to evaluate nursing student practice (Johnson et al., 2020), not all nursing programs have simulation centers and the amount and quality of simulation in nursing programs varies widely. Thus, since nursing graduates need to effectively communicate in practice, there is a need for evaluation of nursing student communication skills in clinical settings while students are still in the educational phase. Communication is not merely a concept to be learned, it is a skill that needs to be practiced and honed.

While there is no standard tool for measuring communication skill for nursing students, several methods have been used for evaluation. As previously mentioned, students have done self-reports of skill in clinical but self-rating is not always a true measure of skill. Individuals might rate themselves as competent when that might not be the case. Recent evaluation tools, such as the Creighton Competency Evaluation Instrument (Hayden et al., 2014), have been developed to objectively evaluate communication, but these tools have only been used in studies with simulation and have not been widely used for other purposes. Many of the studies about communication have called for more study in clinical settings (Hayden et al., 2014; Shafakhah et al., 2015; Sowko et al., 2019; Uhm et al., 2019; Xie et al., 2013) since that would mirror practice after graduation. The benefit to evaluating skills in the clinical setting is factors affecting student performance cannot be controlled, just as with real life. The ability to communicate well in an uncontrolled environment is a better measure of the skill for the nurse.

## Problem Statement

New graduate RNs are insufficiently prepared to provide effective communication and schools of nursing (SONs) lack a standard to evaluate effective communication skills in the clinical setting while still in the program.

## Purpose of the Study

The purpose of this mixed methods study was to determine how communication evaluation by clinical faculty compares in a clinical setting versus a simulation setting for Bachelor of Science in Nursing (BSN) students. This comparison helped determine if a tool that had been tested with simulation could be applied in clinical experience as well. In addition, faculty and students were asked to share about the experience of evaluation in both the clinical

and simulation setting. This study also examined how the setting of the evaluation affected the scoring.

## Research Questions

This study examined the following questions:

### Quantitative

Q1 What is the difference in scores using the Interprofessional Situation, Background, Assessment, Recommendation (ISBAR) Nurse-to-Physician communication rubric between students in a simulation setting and a clinical setting?

### Qualitative

Q2 How do nursing faculty describe evaluating nursing student communication competencies in practical settings?

Q3 What is the experience of nursing students who are evaluated on hand-off report skill in practical settings?

### Mixed Methods

Q4 How does communication evaluation by clinical faculty compare in a clinical setting verses a simulation setting for BSN students?

### Hypotheses

H1 There will be a difference in measurement of communication using a standardized tool in clinical settings.

H01 There will be no difference in measurement of communication using a standardized tool in the clinical setting in comparison to a simulation setting.

## Significance of the Study

Effective communication is key to patient safety and efficient workflow. The lack of ability to communicate effectively could increase healthcare costs and ultimately lead to poor patient outcomes and even death. While effective communication in nursing is an identified need both by employers and the governing bodies of the discipline itself, a gap was identified between what employers expected to see in new graduates versus the level of communication proficiency

present at program completion. Increased demand for new nurses only compounds the preparation to practice gap unless something is done to address this issue.

The practice gap is very important to the discipline of nursing now due to the current shortage in the nursing profession. The Coronavirus disease (COVID)-19 pandemic has put a strain on the availability of practicing nurses (French et al., 2021; McNicholas et al., 2021). The strain is due to increased staffing needs as well as increased burnout (Ross, 2020) in seasoned nurses. With an increased need for nurses, many positions will be filled by newly graduated nurses who have fewer seasoned nurses to mentor and oversee their practice (Ross, 2020).

> By 2022, there will be far more registered nurse jobs available than any other profession, at more than 100,000 per year. With more than 500,000 seasoned RNs anticipated to retire by 2022, the U.S. Bureau of Labor Statistics projects the need for 1.1 million new RNs for expansion and replacement of retirees, and to avoid a nursing shortage. (ANA, n.d., n.p.)

The increased need for qualified nurses puts even more pressure on nursing education to examine teaching and evaluation practices to ensure safety and produce competent graduates who are able to handle the evolving healthcare setting. The accrediting bodies for nursing schools utilize *The Essentials: Core Competencies for Professional Nursing Education* (AACN, 2021) to guide evaluation of programs. The revision of the *Essentials* done in 2021had a major change as it became competency-based, focused on achieving levels of mastery. Programs are looking at how to objectively assess competencies such as communication for the future and it is important to guide evaluative processes and increase competency for nursing graduates.

## Theoretical Framework

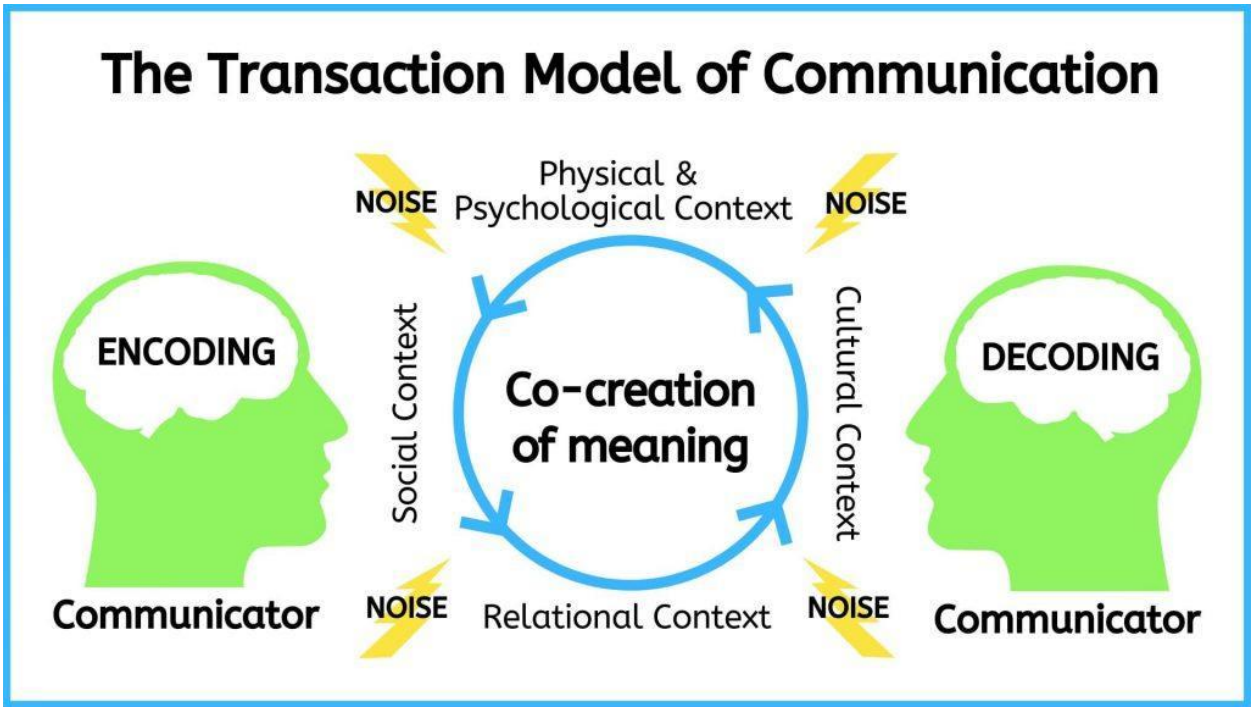
Skill evaluation should be guided by theory. The Dreyfus model of skill acquisition (Dreyfus & Dreyfus, 1984) focuses on levels of expertise achieved with skill acquisition. As practice with the skill increases, so does the proficiency. Patricia Benner's (1982) theory is based on Stuart Dreyfus's model of skill acquisition using a nursing lens to review how development within the discipline aligns with skill development. Benner's theory of novice to expert outlines five levels of nursing skill expertise. Within the theory are suggested timeframes for achieving each level but the time itself is not the main factor, experience is. Experience contributes to nursing assessment of a situation and how knowledge is accessed. According to Benner, as a nurse progresses to the next level, patient situations are approached differently due to knowledge and skill gained from previous experiences. Benner's novice to expert theory provides a structure to examine skill acquisition for nursing students who are considered novices when they begin the program as they have had no nursing experience. As the students are exposed to knowledge and experience of nursing, their skill level increases. The goal for nursing students is to achieve a competent level before graduation, which according to the levels from Benner's theory would be the third level of skill acquisition—competency. According to Benner, this level is usually achieved by a nurse who has about two or three years of experience with something new, comparable to time spent in nursing school. For the skill of transitional communication, level three would mean the student would have experience and skill to be able to prioritize the needed pieces of communication for any given situation and to act.

As the focus for skill centers on communication, consideration should also be given to the theory of communication. With health care focusing on safety and patient outcomes, attention should be paid to how communication takes place between individuals as in hand-off.

Barnlund's (1970) transactional theory of communication (TTC) is useful in providing a structure to examine the process of communication. In this theory, communication is not unidirectional as both the sender and receiver are always sending and receiving some sort of information. Each participant brings their own experience, culture, and ideas to a transaction of information. Several concepts are involved with the TTC such as context, which is where the communication takes place such as on the phone, in a bustling unit report room, or on telehealth platforms. Another concept embedded in this theory is the field of experience, which consists of an individual's personal experience, values, and beliefs that shape how a person sends and receives a message. During the transaction, both external and internal factors can impede or confuse clear communication. External factors include those in the environment of the exchange, also called 'noise.' Noise can be anything that confuses the flow of the message. Internal factors, the field of experience, include bias, cultural influence, and emotion. Both participants are communicators where encoding and decoding is happening for both parties at the same time. The TTC is important for studying nursing communication because of the human aspect of communication seen in health care. The variety of professionals who work together brings many different internal factors to the action of communication. These factors should be considered as well as the external 'noise' present in nursing work. Evaluating a skill during actual practice requires looking at the factors that could impede communication. Figure 1 provides a diagram of the theory.

**Figure 1**

*Transactional Model of Communication*




*Note*. Professional Communication in Health Professions as found on Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. Barnlund, D. (1970). A transactional model of communication. In K. K. Sereno & C. D. Mortenson (Eds.), *Foundations of communication theory* (pp. 93-102). Harper.

The novice to expert model (Benner, 1982) has been used extensively in research examining skill development, specifically with clinical and simulation experiences. Thomas and Kellgren (2017) used Benner's (1982) model to guide the development of simulation as an educator. Landers et al. (2020) used Benner's model to structure clinical learning experiences. Several studies that focused specifically on communication evaluation used Benner's model to underpin the learning process (Adams et al., 2014; Bambini et al., 2009; Goupil, 2009; Hayden et al., 2014; Krautscheid, 2008; Shafakhah et al., 2015). Other studies included tools that were developed for evaluating communication (Pagano et al., 2015; Sweeney et al., 2020). Benner's

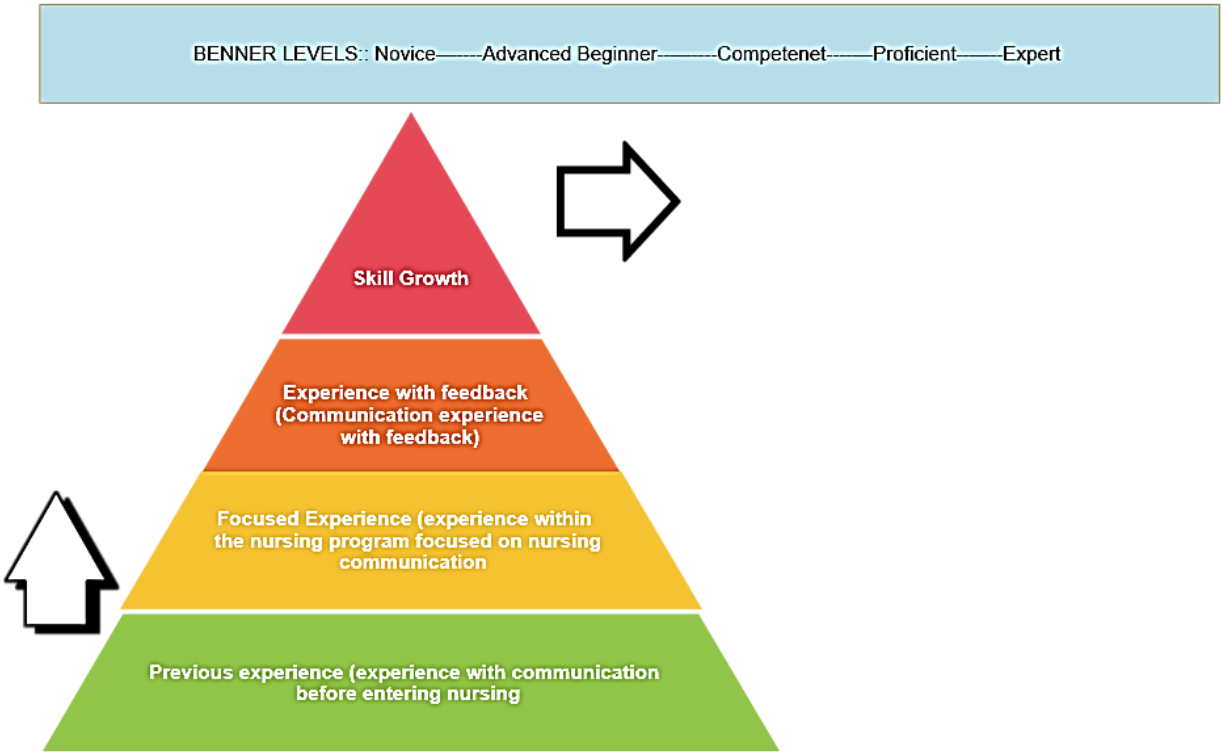
model has also been used to help define the needed level of competence in communication skill for new graduates (Hyun et al., 2020).

While the TTC (Barnlund, 1970) has not been used in nursing research, the structure has been used to review internal and external factors that influence effective communication. The theory has been used for studies in international or cultural communication (McDaniel et al., 2009; van Ruler, 2018) as well as project management (Henderson, 2004).

Pairing the two theories together creates a foundation for communication skill evaluation that can be built on for further study. Communication experience grows from the bottom up, each level providing increased skill until the nurse moves to a higher level on the Benner (1982) scale. The researcher created the following theoretical diagram to illustrate how these two theories work together where the theory of communication is applied within each step up the pyramid to gain understanding and move to the next level (see Figure 2):

**Figure 2**

*Theoretical Diagram Pairing Transactional Theory of Communication with Novice to Expert Theory*




## Definitions of Terms

**Advanced Beginner (1-2 Years).** One who has a little experience in a situation and can "demonstrate marginally acceptable performance" (Benner, 1982, p. 403). They still need to be supervised as they cannot always prioritize.

**Aspects**. "Recurrent meaningful situational components" (Benner, 1982, p. 403). They can be pointed out by mentors or part of a discussion but they are not completely objective and are dependent on prior experience.

**Attributes**. “Features of the task that can be recognized without situational experience” (Benner, 1982, p. 403). This would be something like vital signs or urine output—things that are objectifiable and measurable.

**Communication, Effective**. Afriyie (2020) presented a concept analysis on effective communication that called for improved quality of care, patient satisfaction, adherence to care, and positive health outcomes:

> Effective communication in nursing is clearly a complex, multidimensional and multifactorial concept. Factors such as emotions, general appearance, personality trait, mood and level of education on communication may influence the practice and outcome of effective communication. However, effective communication is an ultimate determinant of success for a nurse. Effective communication was defined as a mutual agreement and satisfaction of care for both patients and nurses. It has been linked to precede the achievement of concordance in patients, and in nurses, it influences clinical reasoning and the nursing process. (p. 444)

**Communication, Transactional Theory**. Public cues are like the physical environment or the reason for being together (Barnlund, 1970). Private cues are psychological elements that influence the meaning taken and given from interaction. Behavioral cues are verbal and nonverbal actions that influence meaning. Co-creation of meaning is what the participants make as a shared meaning from the transaction, which is informed by culture and psychological context as well as relational and social context (Barnlund, 1970).

**Competent Level**. One who has developed enough experience (two to three years) to no longer need to look at the steps of the action and to develop a plan of their actions for the day (Benner, 1982).

**Evaluation, Nursing**. Using information from established domains of nursing: cognitive, psychomotor, and affective learning (Kardong-Edgren et al., 2010)

**Expert**. As defined by Benner (1982), expert is one who has so much experience that they no longer use rules to guide their action but have a deep understanding of past situations that allows them to reach conclusions faster. These individuals can use instinct to guide their practice as their experience has given them a recognition of nuances that develop in situations.

**Gap**. Difference in expectation and preparation of a new grad nurse performance.

**Hand-Off Report**. A process used by healthcare professionals when providing a status report to other members of the health team (Lim & Pajarillo, 2016).

**Maxim**. "What guides a proficient performer… reflect what would appear to the competent of novice performer as unintelligible nuances of the situation" (Benner, 1982, p. 405). This is a recognition of aspects that on their own might mean little but when put together by a proficient nurse could lead to early recognition of a change in status.

**Nursing Student**. A person enrolled in a BSN degree.

**Novice**. Someone who has no prior experience in a situation (Benner, 1982). Generally, one who is in their first year of practice in an area.

**Objective Simulation Clinical Evaluation (OSCE)**. Standardized practical exam (Harden et al., 1975).

**Proficient**. One who looks at the overall situation and not the pieces. They can identify what is out of the ordinary due to their experience and not by going through an algorithm or a set of rules (Benner, 1982).

**Transactional Model of Communication**. People are both senders and receivers at the same time in the process of communication. Focus is what happens "between people" (Barnlund, 1970, p. 15). Communication includes verbal, non-verbal and personal interpretation of interaction. "The environment, social and personal factors influence how messages are interpreted" (Barnlund, 1970, p. 15). Noise can affect the message and includes both environmental stimuli as well as internal thoughts/feelings

## Summary

Effective communication in health care is essential. When communication is ineffective, costs increase and patient safety can be compromised. Because nurses comprise the majority of healthcare workers, it is imperative that they be able to communicate effectively with other professionals in the workplace to reduce costs and improve patient outcomes. While there are many facets to communication, the aspect that most directly affects safety is the hand-off report, which is not consistently taught in nursing programs.

The worsening nursing shortage has resulted in many positions being filled with new graduate nurses. There is a gap between what is taught about communication in nursing programs and what is expected as a practicing nurse. Nursing schools need to ensure that faculty are able to evaluate whether new graduates are able to communicate effectively before graduation. At the present time, no standardized tool is available for nursing faculty in evaluating effective communication of nursing students. Implementing a standard tool for evaluation would enable faculty to identify and remediate areas where students need improvement.

# CHAPTER II

# LITERATURE REVIEW

Poor communication in health care is the leading cause of medical errors and patient harm (TJC, 2020). In the era of ever-changing technology and charting regulations, communication can be a difficult skill in which to become competent, especially for those new to the profession. Because there is an identified gap between education and practice in communication skills, nursing faculty need to focus on how communication is taught and evaluated in nursing programs. To ensure competent, effective communication by new nurses, nursing faculty should be objectively evaluating this skill in their programs. This literature review examined current objective evaluative tools nursing faculty could use to evaluate communication in nursing students in practice at the prelicensure BSN level as well as the experience of communication evaluation by faculty and students.

## Literature Review Search Process

Three literature searches were performed for this topic. First, a search of the literature was conducted April 2022 using the Cumulative Index to Learning and Allied Health Literature (CINAHL), PubMed and Google Scholar. The search timeframe was limited to articles published between 2001 and 2023. Key terms included “evaluation tool,” “clinical”, “baccalaureate,” and “nursing student” with the subject of “communication” or “communication evaluation” with limiters added for the article to be available in English. The result was 70 Google Scholar articles, 611 articles in CINAHL, and 46 in PubMed. The search was narrowed by the following limiters: duplicates, not focused on the evaluation of students, not using an evaluation tool, and

self-rating evaluations. These articles were further reviewed for relevance and 53 were found to specifically address how faculty evaluated communication with a specific communication assessment tool. Adding more terms reduced the search to zero articles so the decision was made to read through the remaining to find applicable literature. Through article review by hand, four additional articles were found also relating to objectively evaluating communication.

The second and third literature searches were conducted in September 2022 using the Cumulative Index to Learning and Allied Health Literature (CINAHL), PubMed and Google Scholar. The search was limited to full text articles available in English with publication between 2001 and 2022. Key terms included “faculty experience,” “student experience,” “nursing,” and “evaluation of communication.” There were no results. Removing “student experience” resulted in six Google Scholar articles, zero articles in CINAHL, and zero articles in PubMed. Only one of these resulting articles applied to the experience of communication evaluation. Replacing the “faculty experience” term with “student experience” in the search yielded 11 Google Scholar articles, 35 articles in CINAHL, and 339 in PubMed. The PubMed articles were further limited after first pass review showed most articles were about advanced practice. The term “baccalaureate nursing” was added to the search to yield 124 articles. Of these combined articles on student experience, only three addressed the experience of having communication skills evaluated.

## Results of Review of Literature

The process of accurately measuring communication was complicated. Communication focused on being relational such as with therapeutic communication or informational. Measuring communication from a relational view would look very different from an objective view. Several themes emerged from the literature search for communication evaluation tools of nursing

students: hand-off report, interprofessional communication, structured testing, and standardized patients.

**Hand-Off Report**

Hand-off report is a crucial aspect of nursing that requires effective communication. A large focus on communication evaluation was on the hand-off report (Guhde, 2014; Krautscheid, 2008; Reising et al., 2015; Thomas et al., 2009; Uhm et al., 2019; Yeh, 2018). According to several studies (Kesten, 2011; Ross, 2018; TJC, 2017), use of a specific hand-off tool decreased errors and improved communication. The focus of most hand-off studies was on a form of hand-off report called SBAR (Situation, Background, Assessment, and Recommendation). Good hand-off report is associated with safe and effective communication. Most studies recommended a standard type of report such as the SBAR.

The structure of the SBAR report outlined necessary information for exchange of important patient information (Adams & Osborne-McKenzie, 2012; Guhde, 2014; Kesten, 2011; TJC 2020). Studies noted that communication effectiveness was improved with the use of SBAR for report (Foronda et al., 2016) and use of SBAR format was associated with improved patient care (Burgener, 2017).

Lancaster et al. (2015) also used the SBAR report for communication evaluation. Students were told to write out a SBAR report after a simulation they took part in to assess student ability to pick up on important information and relay it in the correct format. While the SBAR format was used, no specific tool or rubric was used to evaluate effective use of communication in this study.

**Tools Used in Hand-Off Evaluation**

Standardizing the approach to hand-off communication ensures increased safety and effectiveness of communication (TJC, 2020) and the SBAR structure has been used as a standard more often than other hand- off tools. The SBAR format focuses communication on key elements that need to be shared between healthcare professionals (Kesten, 2011; Thomas et al., 2009; Uhm et al., 2019) and has been used in study of communication globally (Uhm et al., 2019). Kesten (2011) developed their own tool, the SBAR Observed Behavior Checklist Tool, to assess the communication effectiveness of nursing students pre and post an intervention in a simulation setting, which was then piloted and revised prior to the main study. The inter-rater reliability for Kesten's tool was established with a Cohen's Kappa of 0.857, indicating that when different people rated the same thing they had a high level of agreement. Uhm et al. (2019) used an SBAR checklist previously developed by Cho (2013) with a Cohen's Kappa inter-rater reliability of 0.724. While the checklist itself was similar to that used by Kesten, both had specifics particular to the simulation settings in which they were used.

Another evaluation tool based on the SBAR structure was developed by Guhde (2014). Guhde added categories to the SBAR to be scored including identifying self, identifying problem early, following an orderly sequence, and use of only pertinent information to develop the inter-professional critical incident report evaluation tool. Content validity was based on a literature review and input from three nurse faculty. Inter-rater reliability was determined to be 0.948. The tool was used to evaluate communication in a simulation setting for students.

Foronda et al. (2015) developed the ISBAR rubrice. Content validity was determined by 12 healthcare providers including nursing faculty and physicians. The tool was tested in simulation experiences in nursing schools throughout the United States and in China. Evaluators

were given training on using the tool and inter-rater reliability for BSN students in the United States was 0.79. This tool was revised by Yeh (2018) to be used as a checklist for online communication assessment. Foronda et al. (2021) revised the tool again and renamed it the ISBAR Nurse-to-Physician Communication Rubric. Content validity of the latest revision was 1.0 and inter-rater reliability was 0.931. All of the studies with this tool were conducted in a simulation or online setting.

The final hand-off report study was also based on the standard of SBAR but included tool development that increased clarity for the SBAR structure (Adams & Osborne-McKenzie, 2012). Adams and Osborne-McKenzie (2012) utilized the Demographics and Stability-Before I Began to Provide Care-As I Provided Care-Next care Provider Needs to Know-Questions method of hand-off report. While the tool was studied for inter-rater reliability, which was significant at 1.0, no further study was done to examine reliability outside of the single hospital for which it was developed. Content validity was reviewed by seven nurses involved in the trial but there were no reviewers outside of the hospital system.

The Krautscheid (2008) and Uhm et al. (2019) studies both focused on effective clinical communication. Simulations were evaluated based on the ability of the student to implement a hand-off report with SBAR format. Uhm et al. found that using SBAR improved "communication clarity, and perceived handover confidence" (p. 78). Their study employed a tool that scored each part of SBAR with a range of scores to determine overall effectiveness as well as looking at the students' perception of their communication. The tool "provides one solution to assist student nurses with organizing the information they have to provide a complete report" (Krautscheid, 2008, p. 11). Guhde (2014) also indicated that evaluating an SBAR could

be effective in multiple settings such as simulation, clinical areas, and case studies, making it very versatile.

Tools developed using the SBAR format have good interrater reliability but have been focused on single settings or simulation alone. None of these were utilized in a clinical setting.

**Tools to Measure Interprofessional Communication**

In simulation, students are put into real life situations without fear of real-life consequences and are given the opportunity to practice their skills. Research advocated for the use of simulation to evaluate practical skills like critical thinking and communication (Baird et al., 2021; Gore, 2017; Todd et al., 2008). This life-like experience could be used to evaluate learners' performance without fear of harm to the patient while also having control of the environment. The Indiana University Simulation Integration Rubric, which focused on interprofessional communication in simulation (Reising et al., 2015), was designed based on Interprofessional Education Collaborative (IPEC) competencies. The tool developed by the university focused on six measurements of team communication: body language, closed loop communication, feedback, seeking input, identifying critical patient care issues, and patient reassurance. The tool evaluated interventions for interprofessional education. Inter-rater reliability was at 0.92 but there were only two raters for the study. Validity of the tool was based on ability to differentiate levels of nursing students with senior level students expecting to score higher. The statistics demonstrated that the tool was able to detect a differentiation in different levels of nursing students.

Young et al. (2022) developed a tool focusing on teamwork and communication, again focusing on the IPEC using a case study. They developed the Interprofessional Collaboration Competency Attainment and the Assessment of Collaborative Environments surveys. Both

surveys asked for self-report on communication skills with ratings also provided on the members of the team in the Assessment of Collaborative Environments. No inter-rater reliability was described.

Klakovich and Dela Cruz (2006) developed the Interpersonal Communication Assessment Scale to evaluate communication competencies in nursing students. The Interpersonal Communication Assessment Scale focused specifically on competent communication in three dimensions: advocacy, therapeutic use of self, and validation. Content validity was reviewed by nine mental health nursing experts from across the United States and then the tool was piloted with four clinical nursing faculty. Of note, this study was conducted in the clinical setting with various faculty across the United States.

Several studies have examined interpersonal communication using IPEC competencies. While a couple were very limited in scope, one tool was used in several U.S. clinical settings.

**Structured Testing**

Objective Structured Clinical Exams (OSCEs) were developed by Harden et al. (1975) to help standardize a practical exam for medical students. The OSCEs assess the competence of the student by evaluating the action of a student under controlled circumstances in several different stations. The OSCE exams are another form of simulation as they try to emulate a real situation, but specific objective rubrics are employed to ensure a standard level of competence. The OSCE framework requires the evaluation of the communication aspect to be clear and quantifiable. The setting for this type of experience is very controlled and factors within the setting can be altered to fit the needs of the objectives for individual institutions. The OSCEs are similar to standardized patients (SPs) in that they are costly to use and are time consuming (Adamson et al., 2013; Krautscheid, 2008). The review by Adamson et al. (2013) featured a few studies that

utilized an OSCE format, mostly focused on psychomotor skills with a small portion covering communication. The OSCEs are gaining popularity in the other health sciences as well as undergraduate nursing programs because of the focus on competent skill performance. Mospan et al. (2017) used an OSCE format to evaluate interprofessional assessment and communication among medical, nursing, and pharmacy students focused on suicidal ideation.

Brashers et al. (2016) developed a collaborative OSCE that evaluated the interactions of medical and nursing students. This project focused on interprofessional education objectives such as the Collaborative Behaviors Observational Assessment Tool and the Interprofessional Teamwork Objective Structured Clinical Examinations. The tools used were based on desired behaviors for both medical and nursing students. Students also performed a self-assessment of teamwork competence. Standardized patients were trained in scoring, resulting in an inter-rater reliability of 0.706. Content validity was based on interprofessional education competencies and best practice models.

Krautscheid (2008) worked on developing Clinical Assessment Simulations (CAS) as specific leveled situations that could be used to evaluate students for various aspects of nursing such as communication. The study by Krautscheid specifically looked at evaluating the ability of the nursing student to communicate with a physician in report using SBAR format and found that when performing structured evaluations, the cohort scores on effective communication improved by at least 25%.

Structured testing is time consuming and costly but provides data specific to outcomes departments hope to achieve. A controlled environment with trained evaluators provides solid assessment of an individual’s skills.

**Communication as a Subscale**

While communication evaluation can be the main focus of a tool, some tools have a subsection devoted to communication rather than the entire tool. The Sweeney-Clark Simulation Evaluation Rubric (Sweeney et al., 2020) is a single page scoring sheet that provides a leveled rubric aimed at differentiating skill according to the novice to expert (Benner, 1982) framework. The tool evaluates student performance in eight domains: patient assessment, history, patient teaching, laboratory diagnostics, nursing interventions, clinical judgment, communication, and safety. Faculty performing evaluations were trained and an instruction sheet was developed, resulting in a Cronbach alpha of 0.86. This tool was used to evaluate student performance in simulation. The rubric provided levels according to Benner (1982) from novice to expert with explanations of what needed to be achieved at each level. The subset of communication had a Cronback alpha of 0.91, showing high agreement between raters using this tool.

Another tool that has a subscale devoted to communication is the Creighton Simulation Evaluation Instrument developed by Todd et al. (2008). This tool was further developed into the Creighton Competency Evaluation Instrument, which was used to measure the effectiveness of simulation as it relates to a substitute for clinical experiences by the National Council of States Boards of Nursing National Simulation Study done in 2014 by Hayden et al. The tool focuses on four areas of competency:  assessment, communication, clinical judgment, and patient safety. Each factor is rated with competence demonstrated or not demonstrated. Communication is broken down into four factors: effective interprofessional team communication, effective patient communication, documentation, appropriate response to abnormal findings, and promoting professionalism. This tool has been used extensively at a national level for simulation evaluation. Content validity was altered with the second iteration to be appropriate for use with associate

degree programs and in the clinical setting and evaluated with a survey completed by 35 faculty. Inter-rater reliability was 0.794 when compared with the expert rater in reviewing created videos. The communication subset of this tool focused on both communication with patient and with other healthcare providers. While there was high interrater reliability for the communication section, extensive training was needed prior to use.

Rusch et al. (2018) developed a survey for faculty to evaluate student competencies, three of which were related to communication. Content validity was ensured by review from 11 different nurses in differing healthcare settings. These were scored on a scale of 1-5 and used to compare the experience of dedicated education units to traditional clinical experiences for nursing students. While the tool itself had 33 survey items, three were dedicated to communication. These surveys were completed by clinical preceptors in practice, not simulation.

These tools have been tested and are useful in evaluation but it would be difficult to use them to solely evaluate communication.

**Standardized Patients**

Simulation can add another layer of realism by employing the use of standardized patients. Standardized patients are live actors who play the part of a patient. The SP is provided with dialog and background with a role to play in simulation (Baird et al., 2021). These types of patients provide more realism than a manikin or virtual scene and have the ability to present human interaction. Studies advocated for the use of SP in the evaluation of communication skills (Andrea & Kotowski, 2017; Beaird et al., 2017; MacLean et al., 2017) because of the realism and ability to interact. Beaird et al. (2017) also used SPs to evaluate communication skill and give feedback to students to improve their performance using the Macy Communication Scale. This scale evaluated “information gathering, relation development, education/counseling, and

organization" (Beaird et al., 2017, p. 180). Another tool, the Health Communication Assessment Tool (O'Shea et al., 2011), was used by SPs in a study by Baird et al. (2021) to evaluate three factors of therapeutic communication: relationship building, empowering, and empathy in a simulation setting. De Góes et al. (2017) and Pagano et al. (2015) both used the Health Communication Assessment Tool. The tool focused on "six factors: relationship building (rapport, empathy, avoiding miscommunication), education/empowerment, and power sharing" (Pagano et al., 2015, p. 403). Communication was assessed between healthcare professionals and patients. Inter-rater reliability was good when looking at the average score for factors (0.98) but poor for single measures (0.19), meaning two raters might not agree on a score for a single measure but when the measures grouped and those scores were averaged, the group scores were close. Pagnano et al. noted this difference in reliability would call for three raters to obtain good consistency factor reliability. Needing three raters to evaluate each simulation or clinical setting might not be practical for a nursing program. This tool has been studied with video case studies and simulation in the United States and in Brazil.

Johnson et al. (2020) used SPs for communication evaluation as well with the study focused on how the student felt about their communication afterward. A brief communication checklist was filled out by the faculty or SP that focused on the following: "greets warmly, friendly, never rude; never talks down to you; does not interrupt, listens well, summarizes accurately; shows interests in you as a person; asks if you have questions; and uses language you understand" (Johnson et al., 2020, p. 4). These aspects were present in both interactions with patients and other health team members. Drawbacks to utilizing SPs were the cost and time both to train the SP and to schedule the simulation (Baird et al., 2021; Beaird et al., 2017; MacLean et al., 2017).

Standardized patients could provide for realistic experiences for evaluation but the added cost might not be practical for many programs. The sparse literature that evaluated communication in clinical settings did not use tools specifically focused on communication nor was the setting itself explored for evaluation issues. As a result, this study aimed to address the need for objective evaluation of communication specifically in the clinical setting

**Experiences of Evaluation**

The study by Roman et al. (2020) utilized an escape room to assess various skills of nursing students including communication. The students were asked about their experience using this method for evaluation. Students noted that being evaluated in the relaxed environment of an escape room was preferable to an OSCE setting where correct actions seemed more limited and structured (Roman et al., 2020). While communication was an element discussed in the findings, it was not a focus nor was how the students felt about being evaluated specifically on their communication skills. The study by Shorey et al. (2020) also used a simulation type experience and then the students were asked about their experiences of using that model to be evaluated. Students reported that the virtual evaluation felt less threatening than being evaluated in person but evaluators noted that some non-verbal aspects of communication were not well demonstrated because of the environment (Shorey et al., 2020). Another study by Shorey et al. (2018) briefly touched on how students felt about being evaluated but most of the focus of this study was on describing the experience of learning about communication rather than how it felt to be evaluated. The student reflections noted that feedback about performance was very helpful and helped with building self-confidence (Shorey et al., 2018). The only other study that described the experience of being evaluated for communication skill focused more on how the students felt about different ways of learning communication rather than specifically on being evaluated

(Boschma et al., 2010). In summary, there were few studies about the experience of being evaluated and none were specifically devoted to evaluation of communication skills

## Discussion

While communication is important in nursing, no common standard was found for evaluating communication effectiveness for nursing students. The tools used to evaluate communication looked at specific aspects of communication primarily in the simulation setting and many agreed the hand-off report was an area of high importance. Whether used to evaluate program effectiveness or student skill performance in general, evaluation of practice is a difficult but essential process for nursing programs. Gore (2017) noted that for the area of communication, nursing students felt the "traditional clinical experience" met the need for learning communication better than a simulation experience (p. 7). When proposing a tool for use, it is important for the tool to have clear directions for rating and high levels of inter-rater reliability for the tool to be considered for use in multiple situations.

One thing prevalent in the studies was a high interrater reliability in studies in a simulation setting. Having a controlled setting provided a standard for evaluation. Another important point from these searches was very little research has been done on the lived experience of either being evaluated or performing evaluation on communication skills, and nothing was found that discussed the clinical setting.

## Gaps and Limitations of Evidence

While communication can be effectively evaluated in simulation settings, not every nursing program has access to a well-developed simulation program. Simulation has higher costs both financially and time of faculty (Petrucci et al., 2017) than face to face instruction. According to a national review by Beroz (2017), even though there are evidence-based standards

for well-developed simulation programs, many programs surveyed did not adhere to all standards including faculty training and evaluation. Simulation should be used in tandem with clinical to provide the best learning experience (Beroz, 2017). Many studies reviewed communication in a simulation setting but the literature produced few studies that objectively evaluated communication in the clinical setting. The sparse literature that evaluated communication in clinical settings did not utilize tools specifically focused on communication nor was the setting itself explored for evaluation issues. As a result, this study aimed to have faculty use an objective rubric to evaluate the communication of students in both clinical and simulation settings. This comparison would help determine if a tool that has been tested with simulation could be applied in clinical experience as well. The absence of literature examining the experience of being evaluated for communication skills demonstrated the need to qualitatively research this phenomenon.

## Summary

Poor communication skills negatively affect both cost of health care and patient outcomes. Safety of the patients depends on effectiveness in communicating with other team members, especially in hand-off reports. When measuring competence in communication, a practice setting is essential. The practice setting could be a controlled situation as in a simulation, but not all programs have a simulation center or the time and money to use SPs or OSCEs. Standardized evaluation tools such as those used in simulation or OSCEs provide a reliable evaluation on the competence of nursing student skills.

Recent review of the literature showed there is still a question of how to best evaluate effective communication in nursing students, especially in real clinical settings. With new graduate nurses filling critical positions in the hospital and clinic settings, the need for

competence in communication is essential before graduating. Even though educators, nurses, and healthcare employers all agree this skill is important, little research focused on evaluating students in a practical setting using a standardized tool. To educate nurses who are competent in the skill of communication, nursing education needs to identify a way to effectively evaluate that skill in a method that could be used in practical settings. With no study looking specifically at the experience of communication evaluation from either the faculty or student perspective, there is a need for qualitative research on this topic as well.

# CHAPTER III

# METHODOLOGY

The purpose of this mixed methods study was to determine how communication evaluation by clinical faculty compares in a clinical setting versus a simulation setting for BSN students. Comparisons between the settings were made using the simulation setting as the control and the clinical setting as the experimental data. Scores from the simulation setting were used as a control and compared to scores in the clinical setting to help determine if the tool could be applied in clinical experiences as well as the simulation experience. A mixed methods approach was optimal to both compare settings and examine experience of evaluation in each setting because the experience of evaluation in the setting might contribute to actual scoring practices. This chapter discusses the research design, sampling procedures, instrumentation, data collection methods, data analysis and synthesis, ethical considerations, and trustworthiness.

## Research Questions

This study attempted to examine the following research questions:

**Quantitative**

Q1 What is the difference in scores using the ISBAR Nurse-to-Physician Communication Rubric between students in a simulation setting and a clinical setting?

**Qualitative**

Q2 How do nursing faculty describe evaluating nursing student communication competencies in practical settings?

Q3 What is the experience of nursing students who are evaluated on hand-off report skill in practical settings?

**Mixed Methods**

Q4 How does communication evaluation by clinical faculty compare in a clinical setting verses a simulation setting for BSN students?

**Hypotheses**

H1 There will be a difference in measurement of communication using a standardized tool in clinical settings.

H01 There will be no difference in measurement of communication using a standardized tool in the clinical setting in comparison to a simulation setting.

## Research Design

This study addressed the evaluation of hand-off communication for nursing students using a mixed methods design. This design collected qualitative and quantitative data at the same time that were analyzed separately and then merged using a convergent parallel design (Creswell & Poth, 2018). Quantitative data were obtained by nursing faculty using the ISBAR nurse-to-physician communication rubric developed by Foronda et al. (2021). Faculty who taught students in either a simulation and clinical experience scored a nursing student's ability to deliver an effective hand-off report. Each student was scored with the rubric in both clinical and simulation settings. The rubric score from both settings was statistically compared to determine if there was a difference in communication scores between the two settings.

Descriptive qualitative focus groups explored the faculty and student experiences using a tool in the practical settings of clinical and simulation for communication evaluation. The data from the focus groups provided more insight into possible factors inherent in the environment that influenced communication during hand-off. Faculty focus groups focused on the barriers to scoring in their specific environment, whereas the student focus groups examined the challenges and factors of both settings in comparison. The questions focused on how the scoring process went and perceptions about feasibility of the tool used in the settings as well as validity of

results. Students who were evaluated were asked to participate in focus groups to better understand their experiences with being evaluated in both the clinical and simulation settings. The reason for collecting both quantitative and qualitative data was to determine if both settings provided a reliable setting for tool use and to examine how settings influenced evaluation. The results of the two sources of data brought greater insight into the problem than would be obtained by either type of data separately and better answered the questions of the study.

Simulation helps students develop knowledge, skills, and attitudes of a professional nurse without harm to a patient (Koukourikos et al., 2021). Simulation is a controlled setting where faculty have all the information about the patient and the scene. Appropriate data are shared with a student and the experience and environment are crafted to meet learning objectives.

Clinical settings can be very diverse. Clinical includes any setting where a student is involved in the practice of a professional nurse alongside the professional. In the clinical setting, there is very little control over the setting itself. Clinical can be chaotic, confusing, hectic, and is shaped not just by the physical space but all individuals in the setting such as healthcare workers, patients, and visitors.

Simulation has had increased research on learner outcomes related to skill performance, but clinical evaluation has not been the focus of study for nursing. A quantitative comparison of scores providing evaluative data could lead to standardizing a tool for use in both settings, but those data would not examine the possible differences in setting. Qualitative data were needed to explore influences in the setting of evaluation and provide insight about the experience of evaluation in the two practice settings. Focus groups with faculty from both settings as well as the students who are being rated would help provide insight to barriers and advantages for evaluating communication. Using a mixed methods design to research the topic provided not

only a quantitative comparison between actual communication evaluations but also examined environmental and contextual factors that could complicate evaluation.

Mixed method designs have become more prevalent in nursing research, especially when one research methodology might not provide enough information alone. Kettles et al. (2011) noted that mixed methods research was emerging in nursing. Dickson and Page (2021) used mixed methods to get a deeper understanding of cardiovascular nursing and Rasmussen et al. (2021) employed a sequential triangulation approach to explore the professional identity of nurses. The study by Rasmussen et al. closely mirrored the design of this study in quantitative data collection, providing a basis for comparison followed by a qualitative look at other factors that might not be available to study with the quantitative data.

**Setting**

The settings of the study were various SONs in the Midwest United States. Two of the SONs had two BSN programs, had been established for over 100 years, and enrolled over 100 students a year. The schools were accredited through either the Accreditation Commission for Education in Nursing or the Commission on Collegiate Nursing Education. One other accredited SON, which has been established in the last 10 years with smaller admission numbers, was added to obtain a sufficient number of participants. Study evaluations for quantitative data took place in the simulation setting of the programs as well as various clinical settings. Faculty who taught clinical and/or simulation performed evaluations of the consenting students in those settings. Qualitative focus groups took place in Zoom format for participant convenience.

**Sample**

Participants were recruited through convenience sampling based on inclusion criteria. It was important to use the *Essentials* (AACN, 2021) to guide evaluative processes and increase

competency for nursing graduates. Since the *Essentials* divided competency mastery levels into entry-level and advanced nursing practice, it was important to study objective evaluation from a specific level of mastery. For this reason, the sample was gathered specifically from BSN programs. Recruitment started with a local SON with which the researcher was not currently affiliated. Recruitment continued to include a smaller program in Minnesota as well as a program in California. Initially, a letter (see Appendix A) was sent to the Dean(s) of the SONs listing the study criteria and asking for permission to approach potential faculty participants. Eligible programs included those that had nursing students in both a simulation and a clinical setting in the same semester. Inclusion criteria for faculty included being employed as a nursing faculty, either full or part time, as well as adjunct nursing faculty. Nursing faculty needed to teach either a clinical group or simulation experience or both in Spring 2023, Summer 2023, or Fall 2023 semesters. There were no specific requirements regarding length of time teaching or specific degree or certification of the faculty, although those data were collected. The exclusion criterion was nursing faculty who only taught in theory or classroom settings.

Once willing faculty were identified, it was necessary to ensure there were students who had both clinical and simulation faculty who were willing to be part of the study. Students who had both clinical and simulation faculty who participated in the study were approached for consent by the researcher to participate in the study. Inclusion criteria for student participants included being a current nursing student, over 18 years of age, had a faculty in charge of clinical and simulation experiences who had agreed to participate, and had both clinical and simulation experiences in the same semester. There were no specific requirements for length of time in the nursing program. Students could be in any semester from their first to their last semester in the nursing program. Exclusion criteria were nursing students who had clinical experiences only in a

dedicated education unit as a preceptorship, only had shadow experiences for clinical, or attended a school where faculty were not participating in the study.

Sample size needed was determined using G Power 3.1 software for a paired sample *t*-test to analyze comparison data. To control for type one error, an alpha error of probability of 0.1 was needed and controlling for type two error required a high power level. The power of the test determined the probability a test would correctly identify a difference. The study actually focused on proving the null hypothesis rather than the hypothesis so the power of the study was more important than the alpha error of probability. Taking these points into account, this correlational study with matched pair groups used a high power of 0.9, an alpha error of probability of 0.1, and a medium effect size of 0.5. These values resulted in a calculated recommended sample size of 36 subjects. Kellar and Kelvin (2013) recommended a minimum of 30 participants for matched pair studies. The chance of type one error would be increased if the scores from each section of the tool were analyzed. If a power of 0.95 was desired, the calculated sample size was 45 student participants. Accounting for possible retention issues, the aim was for at least 50 student participants. Subjects for the qualitative focus groups were also needed but the focus was on gathering data that explored possible differences in setting.

## Procedures

The researcher sent a letter to the deans of local SONs to request using their SONs as settings for the study. The letter (See Appendix A) explained the purpose and details of the study. Once the Deans agreed to allow the study, the researcher set up a time to meet with eligible faculty to identify willing participants. An informational session explaining the purpose and details of the study was discussed and faculty were asked to participate in the study. Consent was obtained at the session (see Appendix B). Participating faculty needed to teach either clinical

and simulation areas or both of the same student cohort/group as individual students needed to be rated in both settings. Eligible faculty who consented to participate in the study were given information packets that included Information and Consent forms for student participation (see Appendix C) and then sent an email message (see Appendix D), the training videos, instructions on how to enter scoring data the link to the online Qualtrics scoring for the tool, and directions for obtaining consent for students in their clinical group or simulation setting.

Participating faculty helped the researcher set up a Zoom meeting with their students to present the study. Faculty had a paper copy of the study details and consent and distributed the study information and student consent forms to their student groups at that time. Students verbally consented to the researcher during the meeting. The researcher ensured that participating faculty were involved with the same students from a cohort so each student participant had a faculty from both the simulation setting and the clinical setting.

After both faculty and students consented to participate in the study, students were evaluated by participating faculty both in the clinical and in the simulation settings during the same semester. Evaluation took place once in each setting for a total of two times per student during the semester: one time during a simulation experience and one time during a clinical experience. Faculty from each setting performed an evaluation using the ISBAR Nurse-to-Physician Communication Rubric (see Appendix E) to score students delivering end of shift report. Students might have evaluated in one setting at the beginning of the semester and the other setting at the end of the semester so the date of evaluation was recorded for each evaluation. The timing of the evaluation was considered when evaluating any differences in scores of the individual.

Once faculty evaluated all participating students in their clinical or simulation groups, qualitative focus groups were scheduled with the researcher. The focus groups took place via Zoom and were recorded for later review. Consent to participate in the focus groups was obtained at the onset of the meeting (see Appendix F).

## Instrumentation

The checklist of the ISBAR Nurse-to-Physician Communication Rubric (see Appendix E) was used to measure communication skill of nursing students in this study. Permission to use the tool was granted as long as it was cited. The ISBAR Nurse-to-Physician Communication Rubric was developed to assess ISBAR reporting skills for nursing students. This tool was a revision to a previous tool developed by Foronda et al. (2015). The previous tool was revised to combine the background and assessment into one category and added a category of order and accuracy. The ISBAR Nurse-to-Physician Communication Rubric is a 5 x 4 rating tool with five quantitative items: Identify, Situation, Background and assessment; Recommendation and repeat; and Order and accuracy that were rated with the following standards for each item: Ineffective (0), Marginal (1), Developing Competence (2), and Exceptional (3). Each quantitative item had three required criteria to achieve an exceptional rating. For example, under the Identify item, the student would need to provide their name, position/professional title, and where they were calling from to score a rating of exceptional for that item. The total score ranged from 0 lowest, to 15 highest, and represented poor to exceptional performance respectively (Foronda et al., 2021). Foronda et al. (2021) reported the ISBAR Nurse-to-Physician Communication Rubric scale content validity index as 1.0. The reliability of the rubric with three raters was Cronbach's alpha of 0.931. Each section of the tool had the following intraclass correlation coefficients calculated: Identify (0.640), Situation (0.858), Background and Assessment (0.363),

Recommendation and Repeat (0.822), and Order and Accuracy (0.864). Intraclass correlation coefficients values less than 0.5 were considered low reliability (Koo & Li, 2016). The authors of the study recommended tailoring the rubric of the Background and Assessment to specify what the evaluator needed to be looking for to decrease the subjectivity (Foronda et al., 2021).

Based on review of the literature and verification from Dr. Foronda, one of the instrument's authors, this instrument has not yet been used in nurse-to-nurse communication evaluation. To establish validity and reliability of the instrument for this study, a group of nurse faculty experts who routinely assess communication skills of nursing students reviewed the instrument to establish face validity before tool utilization. Reliability was assessed using the appropriate statistical tools and consultation with the Statistical Research Department at the University of Northern Colorado following data collection.

Simulation settings provide specific points that should be mentioned for the Background and Assessment topic, but the clinical setting would not be able to be standardized in this manner. The training video that was distributed to the faculty addressed this. Nursing faculty viewed a video that provided three different examples of SBAR reports that demonstrated Ineffective, Marginal, and Developing Competence levels according to the rubric. Scoring for each of the examples was discussed. Recently, the ISBAR Nurse-to-Physician Communication Rubric has been used by the Quality and Safe Education for Nurses Institute to teach competencies related to patient-centered care, safety, and teamwork and collaboration (Yeh, 2021). Strengths of the tool included it is a revision of a tool that was developed by multidisciplinary experts and has established validity and reliability. A limitation of the tool was it was only studied with nurses, not other health professions. When rating effectiveness, physicians were not asked to rate the tool for completeness in SBAR format. For the purpose of

this study, the student might not achieve the maximum score as the rubric was designed for nurse to physician communication, which might include extra criteria such as identifying one's name on the telephone when starting report.

## Methods to Improve Interrater Reliability

Prior to engaging faculty participants in the study, a training video was developed to aid in interrater reliability. The video consisted of three different hand-off reports on the same fictional patient. Each report was delivered verbally with the rubric visible on the screen for reference. The first hand-off demonstrated a SBAR report that was rated as 'Ineffective' according to the rubric, the second was at a 'Marginal' level, and the final example was at a 'Developing Competence' level. After each example was presented, the appropriate scoring was presented as well as a short description of why each section was scored for that example. Faculty were then be asked to score a fourth example to ensure interrater reliability. Scores were submitted to the researcher to ensure all evaluators were scoring consistently for a standard example. Any faculty submitting a score more than one point different than the calculated score obtained by the researcher required follow up before starting to evaluate students. As part of the informational packet, each faculty was given paper copies of the rubric to use for the end of shift report that could then be used as a guide to enter final scores for students into the Qualtrics survey.

## Data Collection

### Quantitative Data Collection

Faculty who consented to the study completed a brief demographic survey as part of their consent (see Appendix G). Once training was complete, faculty participants who rated the student participants were given copies of the tool as well as a link to the Qualtrics survey to enter

in the completed evaluation scores. Each student was scored once in a simulation setting and once in a clinical setting over the course of one semester. The clinical faculty observed an ISBAR hand-off report of the student and scored their proficiency using the ISBAR Nurse-to-Physician Communication Rubric. The same student was scored using the same process by the simulation faculty member. The faculty for both settings might have been the same person if that faculty taught in both the clinical and simulation settings for the same group of students. Once faculty scored a hand-off report for a student, they entered the scores and the date of the evaluation to the available Qualtrics survey. Faculty also noted where the scored hand-off report occurred such as at the bedside, at the nurses' station, or off the unit.

**Qualitative Data Collection**

Once the quantitative data were complete for at least three student participants, they were asked to participate in a focus group about the communication evaluation. The focus group was scheduled as a Zoom meeting once at least three students were available and agreed to participate. The focus group questions (see Appendix H) lasted an estimated 40-60 minutes and were recorded for accuracy and transcription.

The research questions were developed and piloted prior to the start of the study. The pilot took place in August 2022 with a group of five current senior nursing students known to the researcher who graduated in September and thus not possible participants in the study. Based on feedback from the pilot participants, questions were reworded for clarity and questions were added that asked about the participant's opinion of the value of performing the communication evaluation.

Faculty who participated in the study were also asked to participate in a different focus group. Once the faculty had completed all scoring for consented students, they were asked to

participate in a focus group about the experience. When at least two faculty from both simulation and clinical settings were available for a focus group, a Zoom meeting was scheduled that explored the qualitative research questions, lasting 40-60 minutes, and was recorded.

The qualitative research questions for faculty were piloted in August 2022 with a small group of nurses known to the researcher who were previously involved in both clinical and simulation experiences with nursing students. These nurses had experience with both settings but were not currently teaching so they were not possible participants in the study. Based on feedback from this group, questions were reworded for clarity and questions were added asking about faculty's previous experience with tools used to evaluate communication.

During the recorded focus group meetings, the researcher took detailed notes on impressions and details that might not have been captured by the recording. These notes were reviewed and added with subsequent viewings of the recordings. These field notes were kept in a separate notebook and tried to capture nonverbal communication about the participants when they were answering the semi-structured questions.

## Data Analysis

### Quantitative Data Analysis

Once the required number of participants was scored, the data were downloaded from Qualtrics into an Excel spreadsheet for data cleaning. The data were then loaded directly into Statistical Package for the Social Sciences software. The descriptive analysis including mean, median, mode, skewness and kurtosis as well as variance for each item were calculated. The data were inspected for out-of-range values and missing data to ensure all items were coded properly. Dependent variables included the scores obtained using the ISBAR Nurse-to-Physician Communication Rubric and the independent variable for the paired *t* test was either simulation

(0), or clinical (1). Means and standard deviations for each independent variable were calculated for each group. Assumptions that had to be met for the paired t-test were only two measurements per subject, total sample size should be at least 30 pairs of data, the resulting data were normally distributed, and the measurement scale was interval or ratio. The rubric measurement scale was interval, and all other assumptions should be met which would ensure little to no threat to internal validity for the study. If assumptions were not met, such as number of sample size or random distribution, then the Wilcox paired test could be performed. If all statistical assumptions were met, the paired *t* test statistic was computed and compared with the critical value for the *t*-statistic to determine if a real difference existed between the two settings.

**Qualitative Data Analysis**

The Zoom meetings were recorded and transcribed using the transcription process available through Zoom. The transcriptions were reviewed for accuracy and downloaded into a Microsoft Word format. Each line of the transcript was numbered in the document. Each participant was assigned initials, thus keeping their identities confidential. Pseudonyms were given to the SONs and any actual names used by participants were de-identified. This step protected the identity of both the schools and the participants of the study. The researcher's field notes were also put into the resulting document. After transcription was completed and reviewed, a thematic analysis was conducted. Thematic analysis employed close examination of data to identify common themes and patterns of meaning (Moustakas, 1994). Transcripts were analyzed question by question to identify themes from the data gathered as detailed by Krueger and Casey (2009). The first step in thematic analysis was to take the data collected from the responses and open code it, segment data into categories of information, starting with multiple categories and slowly reducing them to be combined into major themes (Creswell & Poth, 2018). Similar

statements were placed together to develop categories of data. Data were weighted on how frequent the theme appeared and if there was specific emphasis placed on the comment as noted by the meeting notes. Findings were separated into ideas and recommendations. Coding started with the student focus group and once that analysis was complete, the data from the faculty focus group were analyzed.

Axial coding was the next step of data analysis, involving taking the categories from open coding and identifying common phenomena to determine possible causation, actions taken by participants as a response, and what context influenced these actions (Creswell & Poth, 2018). Each unit of meaning was assigned an axial code that was then collapsed and combined to identify significant themes related to the research questions (Merriam & Tisdell, 2016).

### Interpreting Integrated Results

Results of the quantitative data were reviewed with the qualitative data. Connections that confirmed or supported found data were examined as well as those that illustrated possible disconnections. Themes and data points were examined for new emerging insight that addressed the usefulness of the tool in a new setting with identification of possible impeding factors. Results were reviewed to see if the data from each arm supported, disproved, or expanded on the other. Any incongruencies were examined for reasoning and connection.

## Researcher Reflexivity

As the researcher, it was important to identify personal bias I might have had since I was the primary data collector. I have been a nurse for over 20 years and an educator for over eight years. I have a master's degree in nursing education and am a certified nurse educator. I am currently a nursing faculty and have been leading students in the clinical setting for all of my years as an educator. I have personal experience with evaluating new employees and students

and it could be difficult at the bedside in the hospital. I have been involved with studies that used evaluation tools in simulation and found the rubrics were easy to adjust to the situation in the simulation. I believe faculty found environmental factors impeded good communication in the clinical setting because of my experience with giving report at shift change.

## Trustworthiness

Since qualitative studies cannot be replicated due to the nature of data, the researcher ensured trustworthiness by accounting for dependability, credibility, and transferability. Personal bias of the researcher was examined through the process of bracketing. Previous experience as both a clinical and simulation instructor created personal bias for the researcher about how faculty participants might respond to the focus group questions. Bracketing occurred when the researcher wrote reflective notes during both the development of questions and the reviewing of focus groups data. The reflections of the researcher were compared with the results of the focus group in an attempt to bracket out any personal ideas from the findings. Raw data and thematic analysis underwent peer review through the research advisor.

### Dependability

Dependability is part of trustworthiness that ensures methods are well detailed and able to be repeated. During the data analysis process, the researcher developed a code book that served as an audit trail. According to Merriam and Tisdell (2016), an audit trail describes in detail data collection, category development, and rationale throughout the research process. The code book illustrated the reasoning for pinpointing individual codes from interview transcriptions and the development of subsequent themes.

### Credibility

Credibility refers to the use of multiple sources or views to provide accurate data. A process that ensured credibility was that of member checking. Merriam and Tisdell (2016) noted that the member checking process takes place after themes are developed and initial analysis is complete when participants are asked to review findings to see if the summary captured their experience. Once themes were completely identified, the researcher compiled a single page document with themes listed to send out in an email to participants to give them an opportunity to validate the findings before final analysis. Participant responses on accuracy were reviewed before findings were finalized.

### Transferability

Transferability of research relates to being able to apply findings from one setting to another situation. According to Polit and Beck (2012), transferability of qualitative research is dependent on the researcher providing "detailed descriptive information that allows readers to make inferences about extrapolating the findings to other settings" (p. 525). To address transferability of this research, detailed description of the process, setting, and participants were provided. This allowed readers the needed information to determine whether the study results were applicable to different settings.

## Data Security

To maintain confidentiality, any personal identifiers were removed from collected data. Survey data were stored on password-protected computers and secured online sites for the study's duration. The informed consents were placed separately from other data and stored digitally in password protected files.

## Ethical Considerations

Prior to conducting the study, approval was received from the University of Northern Colorado's Institutional Review Board (IRB; see Appendix I). Following initial IRB, the researcher inquired to the IRBs from the hospitals where student participants performed clinical experiences and, if required, obtained approval from clinical site IRBs prior to data being collected. To protect the participants' rights, informed consent was obtained from each participant. Participation was voluntary and participants were allowed to stop the survey, skip questions, or drop out of the study at any point. The study had minimal risk to participants.

Although the participants did not receive direct benefits from participation, their responses provided valuable information to aid in positively informing and changing communication practices including educational initiatives to increase effectiveness of communication in nursing education. Further, each participant and site's leadership received a copy of the final research report. Depending on the level of participation needed, there was a monetary or gift card for participating with an approximate value of $30.

## Summary

Evaluation of nursing student communication skill has been identified as an important focus for schools of nursing, which has been researched primarily in a controlled simulation setting. Simulation is very close to real life practice but the controlled environment of simulation is different than what students encounter in a clinical setting. This study has two primary aims: first, to examine how the ISBAR Nurse-to-Physician Communication Rubric could be used to score a student in both settings to compare scoring; second, to examine the experience of evaluation and the factors that could influence the process. Using a mixed methods approach provided comparison data for the difference in setting as well as explored possible factors that

could influence the process. This research design was appropriate to address all stated research questions by comparing scoring from different settings and examining the experience of scoring from both the faculty and student perspectives.

# CHAPTER IV

# RESULTS

The purpose of this mixed methods study was to determine how communication evaluation by clinical faculty compares in a clinical setting versus a simulation setting for BSN students.

## Research Questions

The following research questions guided this study.

### Quantitative

Q1 What is the difference in scores using the Interprofessional Situation, Background, Assessment, Recommendation (ISBAR) nurse-to-physician communication rubric between students in a simulation setting and a clinical setting?

### Qualitative

Q2 How do nursing faculty describe evaluating nursing student communication competencies in practical settings?

Q3 What is the experience of nursing students who are evaluated on hand-off report skill in practical settings?

### Mixed Methods

Q4 How does communication evaluation by clinical faculty compare in a clinical setting versus a simulation setting for BSN students?

### Hypotheses

H1 There will be a difference in measurement of communication using a standardized tool in clinical settings.

H01 There will be no difference in measurement of communication using a standardized tool in the clinical setting in comparison to a simulation setting.

This chapter details the results from the paired scores of 50 nursing students obtained from the ISBAR rubric as well as the findings from focus groups of students and faculty involved.

## Quantitative Findings

### Description of Study Participants

Participants were obtained through introduction letters to deans of nursing schools. Introduction letters were sent to all deans in the surrounding Midwest area as well as to deans of other nursing schools with whom the researcher had connections. Nursing faculty of three different SONs consented to participate in the study in the spring and fall of 2023. Of note, each of the consenting schools was part of organizations that had religious affiliations. Two SONs were in the Midwest. One had a well-established nursing program with several different program levels, whereas the other was more recently established with very small cohorts, less than 20 students, and a single nursing program. The third SON was located on the West Coast and has a long-standing program with larger cohorts. Each SON contributed data from a nursing cohort from one semester with one SON gathering data from both semesters. The nursing students from the SON that participated in both semesters were from different cohorts but the faculty conducting the scoring were the same.

All faculty participants were White females. Ages ranged from 31 to over 51 years old. Years of teaching for the faculty ranged from between 1 to 14 years. Degrees held by faculty included BSN, master's in nursing, and DNP. Faculty were not asked to obtain the demographics of the students they were scoring (see Table 1 for faculty demographics). All faculty who submitted at least one completed rubric and each of the students who participated in the focus group received a gift card for participating as an incentive for their participation.

**Table 1**

*Demographics of Faculty Conducting Scoring*

| Characteristic | *N* (7) | % |
|---|---|---|
| Age | | |
| 31-35 | 2 | 28.6 |
| 36-40 | 2 | 28.6 |
| 41-45 | 1 | 14.3 |
| 46-50 | 0 | 0.00 |
| 51+ | 2 | 28.6 |
| Current Degree | | |
| BSN | 1 | 14.3 |
| Master's | 5 | 71 |
| DNP | 1 | 14.3 |
| Years Teaching | | |
| 1-4 | 4 | 57 |
| 5-9 | 2 | 28.6 |
| 10-14 | 1 | 14.3 |

The quantitative data in this study addressed the first research question:

Q1 What is the difference in scores using the Interprofessional Situation, Background, Assessment, Recommendation (ISBAR) nurse-to-physician communication rubric between students in a simulation setting and a clinical setting?

## Instrumentation

The checklist of the ISBAR Nurse-to-Physician Communication Rubric (see Appendix E) was used to measure communication skill of nursing students in this study. The ISBAR Nurse-to-Physician Communication Rubric, hereafter referred to as "the rubric," was developed to

assess the skill of hand-off report for nursing students. This rubric was revised from the original version by Foronda et al. (2015). The sections assessed in the rubric related to the SBAR structure for hand-off: Identify, Situation, Background and Assessment, Recommendation and Repeat, and Order and Accuracy. Each quantitative item was rated with the following standards for each item: Ineffective (0), Marginal (1), Developing Competence (2), Exceptional (3). Each quantitative item had three required criteria needed to achieve an Exceptional rating. For example, under the Identify item, the student would need to provide their name, position/professional title, and setting to score a rating of Exceptional for that item. The total score ranged from 0 (lowest) to 15 (highest), and represented poor to exceptional performance respectively (Foronda et al., 2021).

**Data Collection**

Once faculty members agreed to participate in the study, they were required to complete training on how to implement the tool. After they were trained by the researcher, they used the rubric to evaluate students. Each student was scored once in a high-fidelity simulation setting and once in a clinical setting over the course of one semester. There was no requirement as far as which scoring had to occur first. The data from faculty scoring students in simulation and clinical settings were entered into Qualtrics by the faculty conducting the scoring. Once all data were entered, they were downloaded into an Excel spreadsheet and cleaned for processing. One faculty did not use Qualtrics and instead sent PDF files of the checklist for each of the students they scored to the researcher. These data were transferred to the Excel spreadsheet by the researcher. Seven scores could not be used as the corresponding score from the second setting was missing entirely. As a result, those seven scores were not included in the analysis.

## Data Analysis

The first research question sought to identify the difference in scores using the rubric between two settings: clinical and simulation. To answer this effectively, the scores from both settings for each individual student needed to be compared. The method chosen for this comparison was a paired *t*-test using a score from clinical and one from simulation for each student. The data were entered into Statistical Package for the Social Sciences (SPSS) software version 28.0 for a paired *t*-test. Analysis compared the independent variable of the scores (of each section and the sum of all the sections) with the dependent variables (the two settings of clinical and simulation).

## Results

Students were scored in five sections on the rubric. Scoring took place twice for each student, once in the clinical setting and once in the simulation setting. The student scores from each setting were paired up for comparison and analyzed with a paired *t*-test in SPSS. Each of the sections, as well as the sum or total score, were compared using the paired *t*-test. Each section had a possible score between zero and three and the scores from the five sections were added together to create the total score. The actual scores for each section ranged from 0-3 with the exception of the Orders section in the simulation setting that ranged from one to three. The rubric total scores for our study ranged from 5-15 out of a total possible score of 15.

First, the pairs of scores were compared for mean and standard deviation and a *t*-test was used to determine the difference in scores between clinical and simulation settings (see Table 2).

**Table 2**

*Section Statistics*

| | | Minimum | Maximum | *M* | *SD* |
|---|---|---|---|---|---|
| Pair 1 | Identify Clinical | 0 | 3 | 1.88 | 1.118 |
| | Identify Simulation | 0 | 3 | 1.40 | 1.195 |
| Pair 2 | Situation Clinical | 1 | 3 | 2.26 | .694 |
| | Situation Simulation | 0 | 3 | 2.26 | .751 |
| Pair 3 | Background Clinical | 1 | 3 | 2.28 | .701 |
| | Background Simulation | 0 | 3 | 2.24 | .716 |
| Pair 4 | Recommendation Clinical | 0 | 3 | 1.56 | .884 |
| | Recommendation Simulation | 0 | 3 | 1.66 | .917 |
| Pair 5 | Orders Clinical | 1 | 3 | 2.48 | .707 |
| | Orders Simulation | 1 | 3 | 2.56 | .675 |
| Pair 6 | Total Score Clinical | 5 | 15 | 10.46 | 2.659 |
| | Total Score Simulation | 5 | 14 | 10.12 | 2.265 |

All sections of the rubric had scores ranging from zero to three with the exceptions of Situation in the clinical setting, Background in the clinical setting, and Orders in both settings. The exception scores ranged from one to three. Total scores for clinical were between 5 and 15 and the total scores for simulation ranged from 5 to 14.

Data were also analyzed for significance with SPSS using a paired *t*-test comparing the differences of the paired scores. Significance values for the paired values ranged from 0.023 (Identify section) to 1.00 (Situation section; see Table 3).

**Table 3**

*Summary of Paired Samples Test*

| | Paired Differences | | | 95% Confidence Interval of the Difference | | | Significance |
|---|---|---|---|---|---|---|---|
| Paired values | *M* | *SD* | Standard error mean | Lower | Upper | t | Two- sided *p* |
| Identify | .480 | 1.446 | .205 | .069 | .891 | 2.347 | .023 |
| Situation | .000 | 1.010 | .143 | 0.287 | .287 | .000 | 1.000 |
| Background | .040 | .925 | .131 | -.223 | .303 | .306 | .761 |
| Recommendation | -.100 | .953 | .135 | -.371 | .171 | -.742 | .462 |
| Orders | -.080 | .900 | 0.127 | -0.336 | .176 | -.629 | .533 |
| Total | .340 | 2.421 | 0.342 | -0.348 | 1.028 | .993 | .326 |

The timing of when the evaluation took place during the semester was reviewed for any section that had a statistically significant difference. The only section of scores to be significantly different was the Identify section. When comparing the times the scoring took place during the semester, the data showed the majority of scores did not change between settings. When there was a difference in score, the scores that decreased for the second scoring were in simulation. The opposite was true for those who were scored in the clinical setting last (see Table 4). Of note, the five pairs of data that were manually entered into the Excel sheet did not contain dates of the evaluations so those score comparisons were not used for this data set. Comparison of the total rubric score statistics is as follows.

**Table 4**

*Comparison of Timing for Settings*

| Setting of Last Score | Increase | No change | Decrease |
|---|---|---|---|
| Clinical | 7 | 9 | 1 |
| Simulation | 5 | 12 | 11 |

## Data Interpretation

To control for type one error, an alpha error of probability of 0.1 was used. The focus of the study was to prove the null hypothesis rather than to show statistical significance so a higher power level of 0.95 was needed with a medium effect size equal to 0.5.

The assumptions needed to perform a paired *t*-test were that there should only be two measurements per subject, total sample size should be at least 30 pairs of data, the resulting data are normally distributed, and the measurement scale is interval or ratio. All of these assumptions were met with this data. The paired *t*-test statistic was computed and compared with the critical value for the *t*-statistic, which is 1.684 for a two-tailed test.

Comparisons of means of each section were analyzed for statistical differences between the paired scores. In order for a significance in mean score to be demonstrated, the value of the *t*-statistic needs to be less than 0.05 (Kellar & Kelvin, 2013). The only section to demonstrate a statistically significant difference in mean score was the Identify section (0.023). Each of the other sections had significance values greater than 0.3. The research question specifically asks for the comparison of the sum or the total of the score. There was no statistical significance in the comparison between the total score in the clinical setting and the total score in the simulation setting for the students (significance of the difference in sums was 0.326).

These data proved that the null hypothesis was correct—there was no statistical difference in measurement of communication using the ISBAR Nurse-to-Physician Communication Rubric in the clinical setting in comparison to a simulation setting.

## Qualitative Data

Descriptive qualitative focus groups explored the faculty and student experiences of using the ISBAR Nurse-to-Physician Communication Rubric in the practical settings of clinical and simulation for communication evaluation. The data from the focus groups provided more insight into the experience of evaluating hand-off communication in practical settings. Faculty focus groups focused on the experience of scoring in their specific environment, either clinical or simulation, whereas the student focus groups examined the experience of being scored in both settings. The questions focused on how the scoring process went and perceptions about using the rubric in these settings.

Focus group meetings took place on Zoom™ in Fall of 2023 for both groups. Focus groups were composed of participants from a single Midwestern SON that also participated in the scoring portion of the study. The student focus group had experience with the rubric for Fall of 2023, but the faculty focus group utilized the rubric both in Spring and Fall of 2023. The student focus group was composed of three students who were in the same cohort but not in the same clinical or simulation sections. These students knew each other and were scored in similar situations but were not together at the time of their scoring. The nursing faculty were all from the same nursing program and had worked together for at least six months.

The Zoom meetings were recorded and downloaded by the researcher onto a secure device. During the focus groups, the researcher made notes of impressions and details not captured through the video recording. The transcriptions of the Zoom meetings were reviewed

for accuracy and formatted into a Microsoft Word document. Each line was numbered and the participants were assigned a pseudonym to protect the participant's identity.

After completing both student and faculty focus groups, the researcher performed a thematic analysis to identify the key components identified by students and faculty that described how it felt to either be evaluated or to evaluate using the ISBAR tool. A code book was developed during the analysis to detail the category development and the code book was shared with the research advisor to ensure credibility. The researcher met with their advisor to discuss category development and possible themes. Several suggestions of the advisor were utilized for the final themes and both the advisor and researcher agreed on the final coding. Using the processes of open and axial coding, major themes emerged from the data that answered the qualitative research questions.

**Faculty Focus Group Findings**

The data gathered in the faculty focus group directly addressed the second research question:

> Q2 How do nursing faculty describe evaluating nursing student communication competencies in practical settings**?**

The faculty focus group was composed of four faculty members who worked together and are only named here by their pseudonym. Diane is a faculty member who has been teaching primarily in the simulation lab and classroom for around eight years. Elisa is a clinical faculty member who is relatively new to teaching, having just started within a year of this study. Fran is another novice faculty who has worked with the simulation for the nursing program for about two years. Grace, the final faculty, teaches in both clinical and simulation with most of her time spent in the clinical setting. She began teaching this past year.

The results of the thematic analysis of the faculty focus group yielded four main categories of the experience of evaluating: clinical setting, simulation setting, faculty preparation, and benefit (see Table 5). The following sections provide descriptions for each theme.

**Table 5**

*Findings from Faculty Focus Group*

| Themes | Characteristic Quotes of the Theme |
|---|---|
| Clinical Setting | Simulation would have been more like real life (because students would give report to a doctor) versus (delivering) the SBAR in the clinical setting was them giving it to *me* (Elisa) |
| Simulation Setting | So I think we intentionally make it kind of chaotic in those sims (Fran) |
| Faculty Preparation | I also think about how we introduce SBARs, prior to this, we didn't introduce it as a I SBAR, we've always introduced it just as an SBAR (Diane) |
| Benefits | Just helps kind of further their clinical judgment (Grace) |

### *Clinical Setting*

Of the four faculty members in the focus group, two of them completed evaluations in the clinical setting. The main factor that impacted the experience in clinical related to the environment or setting that hand-off report was actually given. Both faculty described the clinical setting as providing a controlled or calm environment for students to present their report. Students were required to give hand-off report either to the clinical faculty or the nurse of the patient. Timing for the report varied but was generally toward the end of the shift, either on the

unit outside the patient's room, or during debriefing in a conference room off the unit. "I gave students (the choice) we either do it when we would be reporting off to go to break, to go to lunch, or at the end of the shift is when they could do it. So… it was kind of a stopping point" (Grace)/

Also along the lines of environmental impact was the focus on realism. Grace and Elisa both thought that giving the report at the stopping point was not as real as if the student had to call the provider due to a change in condition. Elisa mentioned that "simulation would have been more like real life versus the SBAR in the clinical setting was them giving it to *me*." There were times this affected how the student would report because they were not actually calling a provider. Elisa said it was this lack of a specific reason that made students miss certain parts of the ISBAR report and she felt the need to prep or prompt students at certain parts of the report, specifically with identifying themselves and with making recommendations.

***Simulation Setting***

Three of the four faculty were involved in scoring students in a simulation setting. These faculty also identified that the environment influenced the experience of evaluating the students. However, in simulation, the environment was very distracting. As Grace said, "There's usually a lot going on in the room…when they worked in pairs, one student was calling the provider while the other student was talking to family or something, so sometimes that was tricky." Fran also added that some simulations were even more distracting on purpose: "I think in the Peds OB Sims in particular, we try and throw in a lot of things like siblings and crying babies and very concerned parents, and like caring for the whole family unit. So, I think we intentionally make it kind of chaotic in those sims." The faculty had trouble hearing the full report during the simulations so as the semester progressed, different interventions were tried. Faculty moved

closer to the students to hear what they were saying and sometimes had students write the report rather than deliver it verbally.

The faculty involved with simulation noted more of a progression or increased communication skill as the students moved through the semester. Fran pointed out:

> It was *very* interesting to see kind of the progression of students throughout our four Peds OB sims, and you could tell that students by the end of the semester were very much internalizing that, like, OK, What do I need before I call the provider? kind of mindset as opposed to at the start, it was like, I need a provider, and then when I'm on the phone, like ohh shoot, I didn't have a full set of vitals, so it was interesting to see that progression.

The students were only evaluated once in simulation using the rubric but as observers or participants in the simulation, they were able to see the other students deliver an SBAR as part of an experience. Fran was involved in simulation in more than one class even though she only evaluated in Peds OB and she was happy "to see that they were transferring those ISBAR skills into their other content areas."

As the faculty group was able to use the scoring rubric for two consecutive semesters, they identified some areas that made the evaluation process smoother, relating to more preparation on the part of the faculty. Diane pointed out:

> Depending on the simulation scenario, they (students) may or may not have called a provider. If they officially called a provider, it would have been more natural and sometimes they did the first section or not (Identify). But then other times, if they didn't have the need to call the provider, we still have them provide a SBAR and so then they often would skip the first part. So, it's this *context* of doing it with us also not quite standardized all the time and there's not that opportunity to cue them all the time.

Cueing is delivering a type of feedback during communication that is either verbal or non-verbal, which influences meaning. For example, if the student was saying something correctly, the faculty would smile and nod but if they were saying something incorrect, the faculty would shake their head. Both Fran and Grace agreed that faculty needed to create the right situation during simulation to provide a better opportunity for students to deliver a complete report. Fran even said that "in some of the sim(ulation) scenarios we kind of like, artificially created a provider interaction when there naturally would not have been in the hopes of gaining an SBAR."

***Faculty Preparation***

This theme was evident in clinical and simulation settings. Faculty noted that the way things were introduced or presented needed to change for students to have better understanding. Diane commented:

> I also think about how we introduce SBARs, prior to this, we didn't introduce it as a I SBAR, we've always introduced it just as an SBAR in our program and so we've never really emphasized that I part of it which through this study I've discovered (pause) we really could spend a little bit more time on that.

The need to prepare the students prior to asking for a report in clinical was evident to Elisa and Grace. Some preparation was given related to specific parts of the report but there was a lot of information that students had to process for their patients. Grace said:

> Their level of knowledge and where they're at in the program, you know, in clinical trying to put all of those pieces together and follow what's even happening with the patient and what needs to be prioritized that thinking of (pause) how they would need to contact the provider with information was kind of another level for them.

### *Benefit*

Faculty noted overall that using the rubric for evaluation was helpful for students as it was easy to use and it helped the students develop their critical thinking. Elisa pointed out, “The recommendation part of the tool brought up good points for conversation with the students.” Beyond providing a specific score for how well the student did, using the rubric gave the faculty the means to provide specific feedback about what was included or omitted in the report that each student gave, and it increased student communication skill development. When talking about the use of the evaluation rubric, Grace said that having the structured rubric “just helps kind of further their clinical judgment.”

All the faculty agreed that using the rubric in both settings increased the level of proficiency for the student’s skill in delivering report over the semester. As Grace said, “The multiple times that they have had to provide SBARs, I think it helps them kind of take some of the dread out of it”, but also it “helped them start really thinking about this as part of my practice.” As the students were exposed to hearing and giving more ISBARs throughout the semester, they started to “ingrain it in their practice” as Grace said. Elisa echoed this: “They're going to feel more comfortable using it because they practiced it more.” Practice helped the student to be less reactive to stressful situations with patients and helped them shift “a little bit more towards being proactive,” said Grace. Overall, it was not just feeling more comfortable but actually increasing skill level and learning how to “be pretty clear and succinct about who you are and why you're calling” (Diane).

## Student Focus Group Findings

The student focus group data addressed the third research question:

Q3 What is the experience of nursing students who are evaluated on hand-off report skill in practical settings?

Qualitative data from this group explored how students experienced hand-off communication evaluation in clinical and in simulation, and how the settings differed. The participants were Caris, a 26-30-year-old African American female; Ann, a 51+ year old White female; and Bob, a 30-year-old African American male. All the students in the focus group were in the second to last semester of nursing school.

The results of the thematic analysis of the student focus group yielded five main categories of the experience being evaluated: clinical setting, simulation setting, factors making it easier, factors making it harder, and the benefits. The following sections provide descriptions for each theme (see Table 6).

**Table 6**

*Findings from the Student Focus Group*

| Themes | Characteristic Quotes of the Theme |
|---|---|
| Clinical Setting | You're trying to perfect what you hopefully think that someday could be what you do |
| Simulation Setting | It's a learning environment.. so you aren't going to be worried about the repercussions if ... you get it right or you get it wrong, you just do the best that you can |
| Facilitators | (My instructor's) verbal or non-verbal responses were kind of guiding me like, okay, I'm going in the right direction |
| Barriers | The fact that it is a learning environment (in sim) is comforting, but still, you know that everybody's watching |
| Benefits | Because the more you practice the better you get at it |

### *Clinical Setting*

In the clinical setting, all the students described experiences that focused on how delivering report increased their ability to apply communication skills to real-life practice in

nursing. Bob said, “You’re trying to perfect what you hopefully think that someday could be what you do”. This was echoed by the other participants and Caris made the distinction that “unlike in sim(ulation), you’re not getting the information that was already presented to you, you’re kind of putting together information as it’s happening”.

Students expressed that clinical experiences were stressful as they felt “like you have to have all the answers” (Caris). Because students were dealing with real people and a lot of information, it was harder to feel like they were presenting everything needed. Also, Ann mentioned that being scored in the clinical setting increased the pressure of the experience. In addition, Ann talked about wanting to “get it right” and not miss anything.

However, all participants noted that in the clinical setting, it felt like coaching was provided: “the actual nurses…to kind of coach you or guide you” (Bob). Caris also said she learned more from being around the actual nurse because “that’s one place where I learned to verify what the provider is saying because every time the doctor said something the nurse would clarify.”

***Simulation Setting***

Students seemed to find the simulation experience different than clinical due to the extra noise of the environment when they had to deliver their report. Caris stated, “There are so many things going on at once, whereas in a clinical setting you can kind of step out or step to the side away from the commotion and kind of have like a more secure conversation.” The noise or extra stimulus that took place in the setting where report was delivered only seemed to take place in the simulation setting. Ann also thought the simulation had more noise in the environment as she felt “a little more rattled because of all the conversation and then trying to listen to the doctor.” The noise not only was distracting but increased stress when actually having to perform.

The information from the students about simulation experiences also had a focus on the safety of the environment. Bob stated that "it's a learning environment… so you aren't going to be worried about the repercussions if...you get it right or you get it wrong, you just do the best that you can." Both Caris and Ann felt the same, pointing out that the learning environment was a safe space and because the situation is 'fake,' they did not feel the same pressure about having to get the information right as they did in the clinical setting.

All three participants felt there was a lot of overlap between the two settings as far as how well they were able to perform the skill of giving report. Caris and Bob did not think there really was a difference for evaluation as the expectations of faculty were the same for both settings. Bob even said, "The instructors will always be different…but they follow the same grading rubric."

***Facilitators***

The main point the student group identified influencing the ease of giving report focused on who they were talking to or the receiver of the information. "(My instructor's) verbal or non-verbal responses were kind of guiding me like, okay, I'm going in the right direction" (Caris). Bob and Ann agreed with this statement and Ann even went so far as to say, "It was helpful having an instructor that that was supportive in us learning it and doing it well and doing it right." Other helpful aspects included having available resources like an SBAR form to refer to or having a quiet environment in which to give report.

The final aspect each of the participants connected with making it easier to deliver a good report was having more practice or experience with the skill. It was not just the practice of giving the report themselves, but listening to other nurses or students throughout the semester helped the students know how things should sound and what was needed. When talking about why

report was easier once you were working, Bob said, “You're probably working with that patient, you know, for maybe a couple of hours. And you've had experience being a nurse…and most likely that's not your first report.”

***Barriers***

Aspects that contributed to difficulty in delivering report were mainly divided between two themes: the environment and correct phrasing. Environmental factors mainly focused on extraneous noise and distractions. Ann also noted, “The fact that it is a learning environment (in simulation) is comforting, but still, you know that everybody's watching,” and that makes it harder to perform.

Other than the environment, Bob focused a lot on “having the awareness of how to put your words together would be a barrier for me” with regard to things like pronouns for patients or using correct terminology. He also said that “being able to use the right words to articulate myself and that comes with practice and experience” could be a barrier.

***Benefit***

All participants in the student focus group agreed that using the rubric was beneficial for them this semester. They felt they were able to practice the skill of SBAR more, which improved their skill overall with hand-off report. The scoring and direct feedback from faculty were also beneficial according to Caris:

> It helps you find or determine your area of weakness, like do you have problems gathering like assessments? Or do you give too *much* background information? Do you give too *little* background information? Are your recommendations relevant to the rest of the information that you gave so kind of getting everything *aligned*... so that once we do

> go into the field, we're like, oh, don't forget to include all the correct assessments or all the relevant assessments.

Finally, practice was important, according to Caris, “because the more you practice the better you get at it.”

**Mixed Method Data Analysis**

The convergent parallel design of the study that used both quantitative and qualitative data allowed for mixed method data analysis that answered the final research question:

> Q4 How does communication evaluation by clinical faculty compare in a clinical setting versus a simulation setting for BSN students?

Emerging data points were similar in all sets of data. First was the review of overall scores. The quantitative data showed little difference between the overall scores in the different settings. These scores had correlations with themes from the different focus groups (see Table 7).

The faculty group identified a need to prepare students before they performed the skill of giving report, specifically with the Identify and Recommendation sections of report. Students also mentioned that practice or familiarity with the skill made their responses more correct. The quantitative data reflected a slight difference between the scores of the Identify section, showing that students tended to score slightly higher overall in the clinical setting when compared to the simulation setting. However, the students noted that using the rubric in both settings made the scoring similar for both settings.

**Table 7**

*Joint Display for Quantitative and Qualitative Data*

| Quantitative Data | | Qualitative Data | Mixed Methods Comparison Noting Convergence and Discrepant Results |
|---|---|---|---|
| Setting/Type of score | Average Scores | Focus Group Themes | Meta-Inferences |
| Identify (when clinical was last) | No change or increase | Faculty clinical setting<br>Student Facilitators | Scores in the clinical setting for this section were the same or slightly higher with the main noted difference between settings seen in the environment of space that report is given. Clinical faculty talked about cueing for this section and students noted that it was easier when faculty helped them. |
| Identify (when simulation was last) | No change or decrease | Faculty simulation setting<br>Student barriers<br>Student simulation setting | Chaotic environment is seen more in simulation settings, which was noted by both students and faculty. The setting itself led to a slightly decreased score for individuals in the Identify section when they gave reports in simulation. |
| Total scores | 5-15 | Faculty Preparation<br>Students' settings (clinical and simulation) | Each setting had distinct influences on individuals, the scores had a full range for most of the sections. Both students and faculty noted that the use of the rubric seemed to make the settings equal. |
| Difference in Mean between settings | No statistical difference | Faculty benefit<br>Student benefit | The rubric was seen as beneficial by both focus groups. The lack of statistical significance in scores between simulation and clinical paired with the benefit in practice with the skill seen by all lead to the conclusion that the rubric could be used in either setting. |

Overall, themes from the focus groups focused on the settings and evaluation specifically without specific regard to score. Both students and faculty groups felt a chaotic environment, not having the right phrasing or words, and not knowing enough about the patient made it more difficult to give report in either setting. Students described faculty roles in the clinical setting making performance easier either due to cues or having external resources. This idea echoed the clinical faculty point that cueing in the clinical setting seemed to help students. Simulation faculty did not talk about cueing students but they did mention they tried to focus on preparation and development of the scene.

The final area for comparison was in total scores. While the quantitative data did not show any statistical significance between the means of the total scores, both the student and

faculty focus groups noted that having increased experience and practice with the skill made both the evaluator and the evaluated have increased performance.

## Chapter Summary

This chapter presented both quantitative and qualitative data from the research study aimed to determine how communication evaluation by faculty compared in a clinical setting versus a simulation setting for BSN students. Paired scores from 50 nursing students were obtained for the quantitative data with each student being scored once in a clinical setting and once in a simulation setting. All participants were from one of four SONs with most of the data originating in a singular school. Qualitative data originated from participants of focus groups, students, and faculty who all belonged to one SON.

The first research question asked whether there was a difference in scores using the ISBAR Nurse-to-Physician Communication Rubric between students in a simulation setting and a clinical setting. Paired *t*-test analysis showed no statistically significant difference in the means of the total scores (0.326) using the rubric when scores from the clinical and simulation settings were compared. These data answered the first research question as well as proved the null hypothesis.

Data from the faculty focus group answered the second research question: How do nursing faculty describe evaluating nursing student communication competencies in practical settings? Four themes emerged about the experience of evaluating student communication competencies in practical settings: clinical setting, simulation setting, faculty preparation, and benefits. Certain differences were noted between the settings, mostly identified as noise or environmental factors, that impacted the evaluation experience. All faculty agreed that the rubric could be used successfully in both settings and provided benefits to both students and faculty.

The student focus group data answered the third research question: What is the experience of nursing students who are evaluated on hand-off report skill in practical settings? Student focus group data explored the student experience of being evaluated in both settings, which yielded five main themes: clinical setting, simulation setting, facilitators, barriers, and benefits.

Comparison of the different sets of data, the quantitative with each of the focus groups, yielded an answer to the fourth research question: How does communication evaluation by clinical faculty compare in a clinical setting versus a simulation setting for BSN students? The paired scores were statistically the same with the exception of one section, Identify. Data from both focus groups noted there was more cueing in the clinical setting compared to the simulation setting. This cueing specifically impacted the Identify score in the clinical setting. Factors impacting the ability to deliver and/or evaluate the communication skill of delivering hand-off report were noted in each setting by students and faculty including environment, skill in phrasing, and level of practice or experience. Further integration of the data sets showed that even though factors in each setting might have affected the ability to deliver hand-off report, the use of the rubric and increased practice elevated skill levels were seen as useful by both faculty and students. Chapter V provides discussion for the data as well as implications for nurse educators and for future research.

# CHAPTER V

# DISCUSSION

Registered nurses (RNs) need to be effective communicators in order to provide safe and high-quality care (Wieke Noviyanti et al., 2021). This was evidenced through safety reports listing communication as the main cause of the errors (TJC, 2020) as well as standards of nursing practice focusing on communication (ANA, 2015). As an essential part of practice, nursing education programs need to be able to objectively evaluate communication to ensure best practice in graduate nurses. Current studies indicated that many new graduate RNs are insufficiently prepared to provide effective communication and SONs lack a standard method to evaluate effective communication skills in the clinical setting while still in program (Huston et al., 2018; Hyun et al., 2020; Palese et al., 2019).

## Purpose of Study

The purpose of this mixed methods study was to determine how communication evaluation by clinical faculty compares in a clinical setting versus a simulation setting for Bachelor of Science in Nursing (BSN) students. This study not only examined the usefulness of the rubric but compared experiences of faculty and students in different settings. The evaluations of students took place in the two environments where students practice nursing skills: clinical and simulation.

Analysis focused on answering each of this study's research questions and the findings were presented in depth in the previous chapter. This chapter includes a brief review of the methodology, results, discussion of the major findings as related to the literature on effective

communication in nursing, and discussion of how the findings connected with the theory guiding this research. The chapter concludes with a discussion of the limitations, what this means for current educators, areas for future research, and a brief summary. The discussion in this chapter is based on the following research questions:

**Quantitative**

Q1 What is the difference in scores using the ISBAR Nurse-to-Physician Communication Rubric between students in a simulation setting and a clinical setting?

**Qualitative**

Q2 How do nursing faculty describe evaluating nursing student communication competencies in practical settings?

Q3 What is the experience of nursing students who are evaluated on hand-off report skill in practical settings?

**Mixed Methods**

Q4 How does communication evaluation by clinical faculty compare in a clinical setting versus a simulation setting for BSN students?

**Hypotheses**

H1 There will be a difference in measurement of communication using a standardized tool in clinical settings.

H01 There will be no difference in measurement of communication using a standardized tool in the clinical setting in comparison to a simulation setting.

## Methodology

This study included nine nursing faculty and the 50 students they scored in the practical settings of clinical and simulation as well as a select few from each of those two groups to provide focus groups data. The majority of these students and half of the faculty participants were part of the same SON. The remaining subjects were part of two different SONs. Evaluation of communication skills was completed through use of the ISBAR Nurse-to Physician Rubric, which was tested previously in a simulation setting (Foronda et al., 2020). Qualitative data were

obtained through two focus groups, one with students and one with faculty, examining the experience from their viewpoints.

## Summary of Results

Each student was scored using the ISBAR Rubric in both the clinical and simulation settings. Paired *t*-test analysis showed no statistically significant difference in the means of the total scores (0.326) using the rubric when scores from the clinical and simulation settings were compared. The average score in the clinical setting was 10.46 and the average score in the simulation setting was 10.12. This result proved the null hypothesis: there was no difference in measurement of communication between the settings. Essentially, the scores from the clinical site were equal to the scores in the simulation site. Commonly, when scoring is compared between two different settings, there is a difference in scores—one is higher than the other due to inherent factors in the setting itself. The finding of this study demonstrated that the difference in setting did not lead to a difference in scores.

Data from the faculty focus group contained themes about the experience of evaluating student communication competencies in practical settings including clinical setting, simulation setting, faculty preparation, and benefits. Certain differences were noted between the settings, mostly identified as noise or environmental factors, that impacted the evaluation experience. All faculty participants agreed the rubric could be used successfully in both settings and provided benefits to both students and faculty.

Student focus group data explored the experience of being evaluated in both settings and yielded five main themes: clinical setting, simulation setting, facilitators, barriers, and benefits. Finally, comparison of the quantitative data with each of the focus groups yielded a deeper understanding of data overall. The paired scores of the rubric were statistically the same with the

exception of one section—Identify. Data from both focus groups found there was more cueing in the clinical setting compared to the simulation setting. This cueing increased the Identify score in the clinical setting. The range of scores for the Identify section in the clinical setting was 1-3; whereas in the simulation setting, the range was 0-3. Factors the students and faculty felt impacted the ability to deliver and/or evaluate the communication skill of hand-off report noted in each setting included environment, skill in phrasing, and level of practice or experience. Further integration of the data sets showed that even though factors in each setting might have affected the ability to deliver hand-off report, the use of the rubric made the evaluations feel similar in both settings. Both faculty and students noted the increased practice elevated skill levels and was important to the students' future practice.

## Discussion of Results

### The Participants

All student participants scored were part of a BSN program with the majority of them (40/50) being enrolled at one SON. There were five students from each of the other two SONs: one program scoring in Spring 2023 and the other in Fall of 2023. The only student demographic data collected were the initials of the students with the exception of the three students who were part of the focus group. The student focus group participants were a 26-30 year old African American female; a 51+ year old White female; and a 30 year old African American male. All the students in the focus group were in the second to last semester of nursing school. While the group was small, various different backgrounds were represented—one being in health care already, another choosing nursing as a second career, and the third going for their first degree.

The seven faculty participants were all White females with ages ranging from 31 to over 50 years old. They had a wide range of experience in teaching, ranging from 1 year up to 14

years. The majority of the faculty (4/7) had four or less years teaching experience. Faculty participants' degree levels varied from one with a DNP, five with their master's (two of which were in program for their Ph.D.), and one with a BSN. The faculty focus group was made up of one Ph.D. candidate, two faculty with MSN degrees, and one BSN. One of the four faculty participants in the focus group had two years teaching experience, two were in their first year of teaching, and the remaining faculty member had eight years at the time of the study. Both novice educators in the focus group scored in the clinical setting and shared that having a rubric made it easier to teach and evaluate in this setting. The more seasoned members of the faculty focus group seemed more aware of how skill was translating across courses but those faculty were also the only ones teaching in other courses.

**Format of Report**

All areas of nursing need to practice safe care including clear communication, especially with nursing hand-off or shift report. Current research on hand-off studies included a form of hand-off report called SBAR, which stands for situation, background, assessment, and recommendation. The structure of the SBAR report outlines necessary information for exchange of important patient information (Adams & Osborne-McKenzie, 2012; Guhde, 2014; Kesten, 2011; TJC 2020). Focus group faculty stated they were familiar with the SBAR format prior to the study and students had exposure to the SBAR in other classes as well as previous terms. The use of the SBAR format for hand-off reports is a common standard in health care for information exchange between health professionals (Adams & Osborne-McKenzie, 2012; Guhde, 2014; Kesten, 2011; TJC 2020). Even the limited scope of this study showed that both faculty and students saw the benefit to using the SBAR format for evaluation.

## Comparison of Settings Quantitative Data

In this study, Research Question 1 asked about the difference in scores using the ISBAR rubric between the clinical and simulation setting. Many studies about nursing have called for increased research about communication and safety in the clinical settings (Hayden et al., 2014; Sowko et al., 2019; Uhm et al., 2019). Uhm et al. (2019) noted that teaching communication in clinical settings could be just as beneficial as using simulation, especially if a SON did not have well-developed simulation centers. In addition to a call to use clinical settings, Torabizadeh et al. (2018) identified a lack of suitable evaluation tools for use in clinical settings. The original and subsequent research done using the ISBAR rubric evaluated communication in the controlled setting of simulation only. However, the quantitative data provided by this study indicated the use of the rubric was statistically the same in clinical as it was in simulation, which suggested the rubric could be used in either setting for evaluation. During this study, there no training or intervention was done to increase skill in communication between evaluations nor was there a specific time frame between evaluations. These data showed that despite differences in settings, the rubric yielded similar scores in both settings, meaning it could effectively be used in clinical for evaluation.

## Faculty Experience

### *Faculty Preparation*

Experience of the faculty provided the answer to Research Question 2. Faculty who participated in the focus group all pointed out that after using the rubric initially, changes were made to their process because something was not connecting for students. Elisa said her first couple of students did not seem to identify themselves fully when delivering their report. She felt it was because the students were not actually calling a provider but were delivering the report to

her. To make it more realistic, she set the scene before the students delivered their report, putting them in the right mind frame, and they did better. Setting the scene for students in this manner might have caused the slightly increased scores in the Identify section for the clinical students.

The current study also found those teaching in simulation remarked on the need to set the scene and expectations (pre-briefing) before asking for student demonstration. The need for pre-briefing for simulation aligned with the NLN Jeffries simulation theory (Jeffries et al., 2015) that called for pre-briefing strategies to be part of the design of the simulation. Al Khasawneh et al. (2021) and Oliveira Silva et al. (2023) agreed that pre-briefing increased learning and critical thinking skills. The students in the study by Al Khasawneh et al. found that pre-briefing increased student learning by ensuring a standard of learning before starting the simulation so all students had consistent preparation. Oliveira Silva et al.'s literature review on simulation highlighted that pre-briefing "reduces anxiety and increases participant performance" (p. 1978), thus ensuring a better learning environment. The faculty focus group in the current study had to design their simulation scene in a way that required the student to call a provider to set the correct scene. Faculty also reviewed the ISBAR report format with students before their experience and provided a guide for review, ensuring students were aware of expectations. Faculty participants in both settings noted the importance in design to promote student success.

### *Setting*

Faculty in both settings noted it was important to have students deliver the ISBAR report in the right environment, whether on the phone or in the same space the bedside nurse would sit to call a provider. Having the proper setting in this study made it "more like real life" (Elisa) and helped the students experience a more natural report in both settings according to the focus groups. The clinical faculty participants mentioned they had their students give report in the

same area the bedside nurses used to feel as real as possible. Fidelity and realism were factors that impacted the SON's simulation faculty as well. The simulation faculty said they structured their settings to be as real as possible by adding the chaos of family members or loud patients. While several studies focused on using standardized patients in communication evaluation (Andrea & Kotowski, 2017; Beaird et al., 2017; MacLean et al., 2017), the reasoning was to promote realism and the ability to interact while performing the skill. This focus on realism in simulation aligned with several other studies (Brannan et al., 2008; Chen et al., 2015; Luctkar-Flude et al., 2012; Merriman et al., 2014) that noted high fidelity simulation improved student performance. These studies demonstrated that teaching content using simulation with high fidelity manikins resulted in higher proficiency scores than with teaching with lecture, especially in developing clinical skills. With regard to increasing communication effectiveness, use of the standardized patient has been shown to increase skill in the clinical setting, more so than simulation with manikins or teaching with lecture (Luctkar-Flude et al., 2012; Mesquita et al., 2010). In both settings, the focus on realism in patient encounters increased the communication skill of the student and aligned with professional practice.

Faculty in the clinical setting noted less interruptions or environmental noise than faculty in the simulation setting. This was different from the qualitative study by Rafiee et al. (2014), who discovered that students and faculty both found the clinical environment more unpredictable than simulation. The clinical faculty focus group participants reported that the evaluation in their setting provided rich discussion and skill practice. Oermann et al. (2016) found clinical settings had a varied experience that might not be conducive to evaluating the skills of a student fully, which contrasted to the clinical faculty experience in this study. Although not well described in

the literature, faculty participants noted that lack of time was a barrier to evaluating in the clinical setting.

### *Benefits*

Faculty in the focus group noted many benefits to using this rubric. They stated that learning to do a good SBAR report was important no matter what the student might want to do in nursing. They found the tool easy to use and did not find any negatives with continued use. All faculty noted the practice with communicating report helped students to identify what to expect to communicate during a hand off as well as with the development of professionalism. The importance of a common structure for report mirrored what Bonfe and Carroll (2023) found in their study, which also used the SBAR structure. Bonfe and Carroll evaluated communication in nursing students and found timely feedback promoted better skill. Bonfe and Carroll also found that feedback enabled students to identify the areas that needed improvement. The simulation faculty from the current study mentioned they could see students improve their reporting skill in other classes and it seemed to develop over a singular semester. All faculty were in favor of incorporating some sort of SBAR evaluation in every term with different communication goals set for each level of student. The faculty's idea to increase use of this rubric in future semesters of their nursing program and evaluate according to leveled skills throughout the nursing program aligned with Krautscheid (2008) who identified the need to develop leveled situations to evaluate specific aspects of nursing.

## Student Experience

### *Settings and Barriers*

Results from the student focus group directly answered Research Question 3. In this study, student participants remarked that the safe environment was present in all their simulation

experiences. Other authors also noted the importance of creating a safe environment including Oliveira Silva et al. (2023) who noted that pre-briefing for simulation created a safe environment. Regarding the setting, participants in the student group noted that in simulation, it was stressful having their peers watch them give report but the opposite was true when asked how it was to be watched by a bedside nurse in the clinical setting. Other studies showed nursing students reported moderate to severe stress from simulation education, which might be related to critiques by faculty and peers (Cantrell et al., 2017). Moreover, studies by Roman et al. (2020) and Shorey et al. (2020) both noted that students felt more relaxed when not evaluated in a structured environment like simulation, although neither of these studies evaluated the clinical setting to compare.

On the other hand, student participants had a different experience in the clinical setting, describing they felt support and coaching from their clinical faculty and from the nurses they were working with. Bob, one participant in this study, noted that watching the nurses on the unit give report to the provider helped him understand what things were important to say and how to say them. Similarly, the study by Gore (2017) highlighted that the students felt the clinical setting met the need for communication learning better than the simulation setting. Hunter and Cook (2018) also noted the importance of observing and learning from nurses on the job, which helped students increase skills and develop practice. According to participants in this study, the role modeling by nursing staff helped the nursing students in the clinical setting to not only learn what to say but how to say it. They did not describe this experience in the simulation setting.

### *Facilitators for Evaluation*

Student participants in the focus group all remarked that the most important facilitating factor in their evaluation was the support and feedback from the nursing faculty. All three

students felt the faculty and nurses they worked with were supportive and helped coach them at times. The study by Donovan et al. (2022) echoed the idea that faculty who encouraged learners increased students' positive perceptions of their clinical instruction with higher satisfaction scores. The Donovan et al. study also found that faculty who individualized learning in the clinical setting with feedback and support helped create a safe space in clinical. Participants in this study said they learned from being able to practice delivering report and that getting immediate feedback from faculty helped them determine what they could improve. Gerdes (2018) noted this idea as well, saying timely feedback from faculty increased student learning. Participants in this study did not remark on simulation faculty as being either helpful or a hindrance.

### *Benefits*

The student focus group of this study noted that learning how to say things succinctly made report easier for them and they were more articulate when they were able to practice and have feedback about their performance. There was even mention of cultural barriers such as using correct pronouns that students felt the need to learn how to approach for hand-off report. Rose (2013) presented the reverse of this by examining how nursing students received a report and used what they heard to prioritize and think critically about the patient situation. Both findings emphasized that practice with hand-off and feedback on student performance surrounding that experience increased critical thinking and communication skill. Nursing students who practiced communication not only learned what information was more important for patient care but also the culture of the setting in which they practiced.

## Comparison of Evaluation in a Clinical Versus a Simulation Setting

The final research question (4) of the study asked for a comparison of the evaluation in clinical versus simulation settings. The ISBAR Nurse-to-Physician Communication Rubric originally developed by Foronda et al. in 2015 and revised in 2021 was studied in the simulation setting and was identified as a rubric that could reliably be used for evaluation of skills in practice. Previous research using this rubric only studied the simulation setting because of the controlled setting with rubric development as well as focus on the Jeffries et al. (2015) simulation model as a conceptual framework (Foronda et al., 2015). The current study took the testing of the rubric further by looking for consistency between the clinical and simulation settings and examining both faculty and student experiences.

While the Identity section of the rubric had a statistically significant variation, faculty noted in the focus group that the difference could be attributed to how faculty set up the evaluation in the study. This difference did not seem to be a reflection on the setting itself per se but rather the difference in cueing from clinical faculty versus simulation faculty.

Students and faculty agreed that using the rubric more than once with feedback made the process easier and students improved with increased practice. Liebrecht and Motenery (2016) highlighted that skills like communication were best developed through experiences and increased practice also aided in skill development. Beroz (2017) also suggested using both clinical and simulation settings to provide the best learning experience. Evaluating nursing students in clinical settings could develop and test critical thinking skills (as evidenced by the experience of the faculty in this study). Faculty participants also mentioned having good conversation points for learning following the ISBAR evaluation, especially in the clinical

setting. Students were learning how to communicate effectively from the role modeling of the bedside nurses and nursing faculty, which increased student comfort level with hand-off.

Within the limited bounds of this study, students and faculty noted the use of the rubric between the two settings over the course of the study was consistent as one student participant said, “They follow the same grading rubric.” All of the focus group students noted the experience of being evaluated in either setting felt the same as far as what they had to do and know because the expectations were the same in both settings. While there were factors in each setting that presented as barriers, such as noise in simulation and context in clinical, the experience of delivering report felt the same since both settings had the same requirements.

## Implications for Theory

In this study, the student and faculty focus groups both noted that communication skill seemed to increase even over the course of one semester due to the increased practice with the ISBAR hand-off. Both focus groups also identified specific barriers to the skill that connected with communication theory. Chapter II included a conceptual framework that combined two theories: one focused on communication, the TTC by Barnlund (1970), and one focused on skill level, novice to expert by Benner (1982). The following section discusses how the combined framework tied the results of this study together.

Communication happens in a two-way manner according to the TTC (Barnlund, 1970) with the sender and receiver always sending and receiving some sort of information. Each participant brings their own experience, culture, and ideas to a transaction of information; these are considered internal factors. Context, also referred to as the environment, is part of the external factors that also influence communication. Both types of factors (internal and external) were highlighted in the focus group data as potential barriers. The student participants pointed

out a need to use the correct words or pronouns, which represented the internal factor or culture aspect to communication. Faculty participants noted it was important to set the right scene, such as creating a reason in simulation to call the provider, which sets the right context behind the transaction. Both groups noted the noise of the setting was a barrier, whether it was intentional or not, which led to the next consideration.

Knowledge of impacting factors is key for faculty who are trying to ensure realism and help students develop their communication skills. The external noise both for the listener and the speaker provided a barrier for clear and effective communication in simulation. Noise could be controlled by either changing the setting of the report or including noise as a barrier on purpose if that was the objective of the learning for the day. With any learning activity, it is important to identify what the purpose of the activity is and then review how to structure the impacting factors.

Students noted it was harder to give report when they did not know what to say or how to say it, which is an internal factor that comes from their field of experience. As students have increased experience with communication in health care, specifically with hand-off, they develop increased skill. Nursing research used the Benner (1982) levels to evaluate nursing students (Hayden et al., 2014; Shafakhah et al., 2015; Sweeney et al., 2020), considering skills to be part of a continuum rather than a pass/fail. Using the diagram from Chapter II to apply the theory, we could say that nursing students start out in the green level as a novice, bringing with them very little experience. Some students might have enough previous experience and even focused healthcare experience to be in the yellow level as a novice. As the student has more experience with communication in the healthcare setting, the individual increases skill level and eventually becomes proficient.

It will be important to incorporate practice and exposure to the critical nursing skill of delivering report so the skill level of the student can increase from novice to at least the level of advanced beginner or second level of Benner's (1982) novice to expert. This goal meets the needs of the workplace by preparing nursing graduates who can be effective in their communication as they start in the profession. Frequent exposure to the skill as well as directed feedback on performance improvement contributes to skill development. The students begin to approach the situation in a different manner when they have more experience with what is needed. This skill level, according to Benner, usually takes one to two years to achieve, which is similar to what most nursing programs run. Following the theory, if SONs start exposing students to effective report giving early in the program and continue to reinforce and practice the skill throughout the program, they should have graduates who are at the very least at the advanced beginner level of communication.

Some of the findings from this study were not presented in the model. While the student focus group made note of context being a barrier to communication, the faculty focus group did not. Faculty might not have noticed context as a barrier because they are at a higher level of nursing communication than the students and thus are adept at handling these types of barriers. Faculty also might have expected students to struggle with some context in report and did not comment because it was not out of the ordinary. Also, the high scores on the rubric for some of the students hinted at a higher proficiency with hand-off than advanced beginners. While this finding did not follow the suggested one to two years in Benner's (1982) theory, communication is a skill students might have experience with prior to nursing school and that could have impacted their proficiency overall.

In summary, the findings of this study generally supported the models of communication and skill level acquisition. The external factor of the environment and internal factor of personal context influenced how communication was sent and received, similar to the TTC. The practice gained through the experiences led to increasing the skill level of student in delivering hand-off report.

## Recommendations for Faculty

The following recommendations for nursing faculty were based on the information from this study:

1. Perform objective evaluation of student communication with a rubric**.** Currently, there is no standard evaluation of skills for nursing, only the National Council Licensure Examination. The American Association of Colleges of Nursing *Essentials* (AACN, 2021) call for focus on communication as a core concept of nursing care. Objective evaluations that could be utilized in practice settings to evaluate hand-off communication skills are important to ensure competent skill development. Subjective measurements such as self-rating or reflection do not accurately measure skill level (Reising et al., 2015). Previous studies demonstrated a need for strong communication skills in nursing graduates as well as a current lack of skill in this area. Standardized tools for evaluation that could be utilized in SONs within practice settings would aid in identifying areas of growth for students, thus enabling development.
2. Evaluate communication throughout the nursing program using the same rubric with leveled experiences in clinical and simulations. By using the same rubric in multiple situations, the outcomes for each course could be individualized and

leveled across a program, which not only increases communication skill but also comfort level. This idea would follow the recommendation from Sweeney et al. (2020) for SONs to level competencies according to Benner's (1982) novice to expert scale, providing a standardized measure for all nursing programs. Along with coursework and exam grades needed to complete nursing coursework, requiring demonstrable skills that could be evaluated throughout the program for standardized competencies might ensure more qualified graduates.

3. Embed faculty training with rubric into SONs**.** Use of a rubric requires some training to provide for greater interrater reliability. When a SON intentionally provides training for faculty, there is consistency across settings and courses. Training would involve review of what the rubric scores entail and could be done in a video or in person format. Ensuring that faculty are consistent in scoring provides a more equitable and fair evaluation process for students. Training also could help faculty focus on specific competencies that need to be met for a nursing program and help to meet program goals.
4. Utilize clinical experiences for practice and evaluation of communication skills. All nursing programs have clinical experiences, whether they are all in a hospital type setting or in a simulation lab. These hours provide experience to practice but could also be used for focused evaluation to help identify the areas of nursing practice a student could use focused improvement. As seen in the current study, the delivery and evaluation of hand-off report by the students increased the skill and identified areas for improvement in both settings. Clinical experience

evaluation places students in realistic settings that provide the opportunity for growth in practice skills.

5. Create specific clinical outcomes related to communication skills. Even though not all SONs have simulation centers, they all have clinical experiences for students. Often clinical outcomes of nursing courses tend to be broad due to the wide variety of experiences possible in a clinical setting. While experience with a specific disease process might not be feasible, increased skill with hand-off reporting or electronic charting are clinical outcomes that are demonstrable over the course of a semester. Creating specific outcomes for clinical settings offers opportunity for evaluation and feedback that also increase communication skill for students. Nursing educators should focus on these outcomes to create leveled objectives and goals for each clinical course within a program. With the current push for competency-based education in nursing academia, this type of structure might even aid in accreditation. Increasing evaluation by including clinical areas allows for variation in experiences for communication skill practice across the nursing curriculum and demonstrates the importance of effective nursing communication.
6. Involve bedside nurses, either through dedicated education units or coaches for practice of communication skills. Coaching by bedside nurses facilitates better student learning. Clear communication with clinical partners includes listing specific outcomes desired from a clinical experience. Bedside nurses should be given a list of outcomes as well as copies of rubrics that would be used for evaluation of report and communication. Clinical faculty should partner with

bedside nurses to ensure practice opportunities for students with communication skills.

## Limitations and Strengths

There were several limitations for this study, the first of which was the sample size for the qualitative data. Even though the study utilized three different SONs, only four faculty and three students volunteered to participate in the focus groups. With the limited pool of participants, interviews might have yielded richer data than gathering data in groups. There was no way to compare answers of individuals to ensure the data would reach saturation.

The lack of male faculty participants in this study could also have been a limitation. Having only female faculty conducting scoring could have affected overall scoring and experience for the nursing students.

A third limitation, which also applied to transferability of the tool, was the study only captured the experiences of BSN students. The lack of availability of other undergraduate nursing programs was a factor in determining the use of only BSN students as well as the listed core competencies. Bachelor of Science in Nursing programs often have increased focus on communication in the curriculum so a decision was made to study one level of nursing degree. Also, using graduate nursing programs might have skewed the results since the experience and skill levels were different from the BSN student so the experiences of students and faculty in other types of programs were not captured in this study.

Another limitation was the researcher did not have access to the demographics of the students who were scored. Age of the person scored could have influenced scoring either through the perceptions of the evaluator or through the amount of life experience that could have affected

the skill of the student. Finally, other variables that might have affected communication abilities were not captured in this study.

Even with the limitations, there were several strengths to the study. Utilization of a rubric that has been studied extensively in simulation settings across the United States, as well as in an international study, provided a good measure for comparison across settings. Having the same faculty perform multiple evaluations was helpful as those same faculty were part of the focus group. Those faculty had more experience with the rubric and thus provided insight about using the rubric over two separate semesters. Also, scoring both clinical and simulation settings in the same semester, sometimes within the same week, increased the strength of the change in the score being reflective of the environment and did not increase exposure or practice over time. Finally, having a varied schedule to the scoring of settings was a strength. Students were randomly scored throughout the semester in either setting, allowing for more variation.

## Recommendations for Future Research

Increasing the scope of this study by studying other SONs in different areas than the Midwest might give more insight to possible barriers or increased use of the rubric. Also, studying how communication skill increased throughout a program of study would be helpful in identifying areas of improvement and focus for SONs. Increasing understanding of the experiences of students and faculty surrounding skill evaluation in realistic nursing settings is needed to aid in developing better methods of evaluation and increase the skill and competence of nursing graduates.

An ultimate goal for nursing education would be to reach an advanced beginner level for nursing students in specific skills such as communication. Effectively reaching competency

levels requires a clear definition of what embodies each level of expertise. Creating those definitions to present what baseline competence is would be a future aim for nursing researchers.

## Unique Contributions of This Study

There was an identified preparation to practice gap between what employers expected to see in a new graduate versus the level of communication proficiency present at program completion. To address this gap, educators need to start evaluating knowledge with skills that new practicing nurses would be expected to perform. This study examined the evaluation of communication skill through the delivery of an SBAR report in both clinical and simulation settings. While there has been research in skill evaluation, the majority has been in simulation settings. The mixed method data of this study highlighted the usability of the ISBAR rubric in both clinical and simulation settings, which makes the rubric adaptable to programs that might or might not have a developed simulation center. The data showed that both students and faculty found use of the rubric in both settings increased communication skill and comfort levels.

## Conclusion

With safety being a priority, effective SBAR delivery is essential to nursing education in an ever-evolving healthcare setting. Skill in communication presents an identified gap between education and practice that must be addressed by nursing programs. Use of a rubric to evaluate communication in nursing education programs could identify learner needs before graduation and help further skill development to close the education gap. This study examined the use of a rubric evaluating hand-off communication in an effort to demonstrate transferability between the settings of clinical and simulation for communication evaluation.

The results of this study suggested there was no statistical difference in rubric scores between the clinical and simulation setting for BSN students. The experience of faculty produced

four main themes relating to evaluating students: clinical setting, simulation setting, faculty preparation, and benefits. Student experiences yielded themes around being evaluated including clinical setting, simulation setting, facilitators, barriers, and benefits. Data from this research study not only showed that rubrics used for simulation evaluation could be effective in the clinical settings but also that practice and evaluation themselves could increase communication skills for nursing students.

# REFERENCES

Adams, J. M., & Osborne-McKenzie, T. (2012). Advancing the evidence base for a standardized provider handover structure: Using staff nurse descriptions of information needed to deliver competent care. *Journal of Continuing Education in Nursing*, *43*(6), 261–266. https://doi.org/10.3928/00220124-20120215-88

Adams, J. M., Osborne-McKenzie, T., Allen, L., Molloy, E., Bagnasco, A., Tolotti, A., Pagnucci, N., Torre, G., Timmins, F., Aleo, G., Sasso, L., Bajjaly, S. T., Saunders, L., Ball, L. S., Kilger, L., Bambini, D., Washburn, J., Perkins, R., Bianchi, M., … Zimmer, M. A. (2014). An evaluation tool to measure interdisciplinary critical incident verbal reports. *Nursing Education Perspectives*, *35*(1), 180–184.

Adamson, K. A., Kardong-Edgren, S., & Willhaus, J. (2013). An updated review of published simulation evaluation instruments. *Clinical Simulation in Nursing*, *9*(9), e393–e400. https://doi.org/10.1016/j.ecns.2012.09.00

Afriyie, D. (2020). Effective communication between nurses and patients: An evolutionary concept analysis. *British journal of community nursing*, *25*(9), 438–445. https://doi.org/10.12968/bjcn.2020.25.9.438

Al Khasawneh, E., Arulappan, J., Natarajan, J. R., Raman, S., & Isac, C. (2021). Efficacy of simulation using NLN/Jeffries nursing education simulation framework on satisfaction and self-confidence of undergraduate nursing students in a Middle-Eastern country. *SAGE Open Nursing*, *7*, 23779608211011316. https://doi.org/10.1177/23779608211011316

American Association of Colleges of Nursing. (2021). *The essentials: Core competencies for professional nursing education*. Author. https://www.aacnnursing.org/Portals/42/AcademicNursing/pdf/Essentials-2021.pdf

American Nursing Association. (n.d.). *Workforce*. https://www.nursingworld.org/practice-policy/workforce/.

American Nurses Association. (2015). *Nursing: Scope and standards of practice.* Nursebooks.org.

Andrea, J., & Kotowski, P. (2017). Using standardized patients in an undergraduate nursing health assessment class. *Clinical Simulation in Nursing*, *13*(7), 309–313. https://doi.org/10.1016/j.ecns.2017.05.003

Baird, T., Corey, V. R., Sissom, J., Weber, J., & Campbell, S. H. (2021). Testing the validity and reliability of the Adapted Health Communication Assessment Tool©. *Clinical Simulation in Nursing*, *52*, 50–58. https://doi.org/10.1016/j.ecns.2020.11.001

Bambini, D., Washburn, J., & Perkins, R. (2009). Outcomes of clinical simulation for novice nursing students: Communication, confidence, clinical judgment. *Nursing Education Perspectives*, *30*(2), 79–82. https://doi.org/10.1043/1536-5026-030.002.0079

Barnlund, D. (1970). A transactional model of communication. In K. K. Sereno & C. D. Mortenson (Eds.), *Foundations of communication theory* (pp. 93-102). Harper.

Beaird, G., Nye, C., & Thacker, L. R. (2017). The use of video recording and standardized patient feedback to improve communication performance in undergraduate nursing students. *Clinical Simulation in Nursing, 13(*4), 176–185. https://doi.org/10.1016/j.ecns.2016.12.005

Benner, P. (1982, March). From novice to expert. *American Journal of Nursing, 82*(3), 402-407.

Beroz, S. (2017). A statewide survey of simulation practices using NCSBN simulation guidelines. *Clinical Simulation in Nursing, 13*(6), 270-277. http://dx.doi.org/10.1016/j.ecns.2017.03.005

Bonfe, L., & Carroll, E. (2023). Raising the SBAR. *Nurse Educator*. Advance online publication. https://doi.org/10.1097/NNE.0000000000001503

Boschma, G., Einboden, R., Groening, M., Jackson, C., Macphee, M., Marshall, H., Magee, K. O. F., Simpson, P., Haney, C., Croxen, H., & Roberts, E. (2010). Strengthening communication education in an undergraduate nursing curriculum. *International Journal of Nursing Education Scholarship*, *7*(1), 1–14.

Brannan, J. D., White, A., & Bezanson, J. L. (2008). Simulator effects on cognitive skills and confidence levels. *Journal of Nursing Education*, *47*(11), 495–500.

Brashers, V., Erickson, J. M., Blackhall, L., Owen, J. A., Thomas, S. M., & Conaway, M. R. (2016). Measuring the impact of clinically relevant interprofessional education on undergraduate medical and nursing student competencies: A longitudinal mixed methods approach. *Journal of Interprofessional Care*, *30*(4), 448–457. https://doi.org/10.3109/13561820.2016.1162139

Burgener, A. M. (2017). Enhancing communication to improve patient safety and to increase patient satisfaction. *The Health Care Manager*, *36*(3), 238-243. https://doi.org/10.1097/HCM.0000000000000165

Cantrell, M. L., Meyer, S. L., & Mosack, V. (2017). Effects of simulation on nursing student stress: An integrative review. *The Journal of Nursing Education, 56*(3), 139–144. https://doi.org/10.3928/01484834-20170222-04

Chen, A. M. H., Kiersma, M. E., Keib, C. N., & Cailor, S. (2015). Fostering interdisciplinary communication between pharmacy and nursing students. *American Journal of Pharmaceutical Education*, *79*(6). https://doi.org/10.5688/ajpe79683

Cho, H. J. (2013). The effect of SBAR Program education on a nurse's communication clarity and self expression (Unpublished master's thesis). Yonsei University, Seoul.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (4th ed.). SAGE.

Deering, M., & Bal, D. (2021). 10 crucial soft skills for nurses. *Nurse Journal.* https://nursejournal.org/resources/soft-skills-for-successful-nurses/

de Góes, F. D. S. N., Aredes, N. D. A., Hara, C. Y. N., Fonseca, L. M. M., & Campbell, S. H. (2017). Simulation with standardized patients: Nursing student's communication skills in health. *Revista Da Rede de Enfermagem Do Nordeste*, *18*(3), 383. https://doi.org/10.15253/2175-6783.2017000300014

Dickson, V. V., & Page, S. D. (2021). Using mixed methods in cardiovascular nursing research: Answering the why, the how, and the what's next. *European Journal of Cardiovascular Nursing*, *20(*1), 82–89. https://doi.org/10.1093/eurjcn/zvaa024

Donovan, L., Strunk, J., Lam, C., Argenbright, C., Robinson, J., Leisen, M., & Puffenbarger, N. (2022). Enhancing the prelicensure clinical learning experience. *Nurse Educator*, *47*(2), 108-113. https://doi10.1097/NNE.0000000000001085

Dreyfus, H. L., & Dreyfus, S. E. (1984). From Socrates to expert systems. *Technology in Society*, *6*(3), 217–233. https://doi.org/10.1016/0160-791x(84)90034-4

Dziados, V. (2019). *Top 10 soft skills for nurses*. https://www.nursingcenter.com/ncblog/march-2019/top-10-soft-skills-for-nurses

Foronda, C., MacWilliams, B., & McArthur, E. (2016). Interprofessional communication in healthcare: An integrative review. *Nurse Education in Practice, 19*, 36-40. https://doi.org/10.1016/j.nepr.2016.04.005

Foronda, C. L., Alhusen, J., Budhathoki, C., Lamb, M., Tinsley, K., MacWilliams, B., Daniels, J., Baptiste, D. L., Reese, K. K., & Bauman, E. (2015). A mixed-methods, international, multisite study to develop and validate a measure of nurse-to-physician communication in simulation. *Nursing Education Perspectives*, *36*(6), 383–388. https://doi.org/10.5480/15-1644

Foronda, C. L., Barroso, S., Yeh, V. J. H., Gattamorta, K. A., & Bauman, E. B. (2021). A rubric to measure nurse-to-physician communication: A pilot study. *Clinical Simulation in Nursing*, *50*, 38–42. https://doi.org/10.1016/j.ecns.2020.09.005

Foronda, C. L., Fernandez-Burgos, M., Nadeau, C., Kelley, C. N., & Henry, M. N. (2020). Virtual simulation in nursing education: A systematic review spanning 1996 to 2018. *Journal of the Society for Simulation in Healthcare, 15*(1), 46-54. HTTPS://doi.org/10.1097/sih.0000000000000411

French, G., Hulse, M., Nguyen, D., Sobotka, K., Webster, K., Corman, J., Aboagye-Nyame, B., Dion, M., Johnson, M., Zalinger, B., & Ewing, M. (2021, November 18). *Impact of hospital strain on excess deaths during the covid-19 pandemic - United States, July 2020–July 2021*. Centers for Disease Control and Prevention. https://www.cdc.gov/mmwr/volumes/70/wr/mm7046a5.htm?s_cid=mm7046a5_w

Gerdes, M. (2018). Teaching-learning strategy for promoting student success: Asynchronous post-exam reflections. *Nursing Science Quarterly*, *31*(4), 335-339. https://doi.org/10.1177/0894318418792876

Gore, T. (2017). The relationship between levels of fidelity in simulation, traditional clinical experiences and objectives. *International Journal of Nursing Education Scholarship, 14*(1), 1–9. https://doi.org/10.1515/ijnes-2017-0012

Goupil, K. (2009). *The effect of Situation, Background, Assessment, Recommendation (SBAR) education on the quality of student nurses handoff report*. https://scholars.unh.edu/thesis/479

Guhde, J. A. (2014). An evaluation tool to measure interdisciplinary critical incident verbal reports. *Nursing Education Perspectives, 35*(3), 180–184. https://doi.org/10.5480/12-957.1

Harden, R. M., Stevenson, M., Downie, W. W., & Wilson, G. M. (1975). Assessment of clinical competence using objective structured examination. *British Medical Journal, 22*, 447-451. http://www.bmj.com/cgi/content/abstract/1/5955/447

Hayden, J., Keegan, M., Kardong-Edgren, S., & Smiley, R. A. (2014). Reliability and validity testing of the Creighton Competency Evaluation Instrument for use in the NCSBN national simulation study. *Nursing Education Perspectives*, *35*(4), 244–252. https://doi.org/10.5480/13-1130.1

Henderson, L. S. (2004). Encoding and decoding communication competencies in project management–An exploratory study. *International Journal of Project Management*, *22*(6), 469-476. https://doi.org/10.1016/j.ijproman.2004.01.004

Hickerson, K., Taylor, L., & Terhaar, M. (2016). The preparation-practice gap: An integrative literature review. *Journal of Continuing Education in Nursing, 47*(1), 17–23. https://doi.org/10.3928/00220124-20151230-06

Hunter, K., & Cook, C. (2018). Role-modeling and the hidden curriculum: New graduate nurses' professional socialisation. *Journal of Clinical Nursing, 27*(15-16), 3157-3170. https://doi.org/10.1111/jocn.14510

Hustad, J., Johannesen, B., Fossum, M., & Hovland, O. J. (2019). Nursing students' transfer of learning outcomes from simulation-based training to clinical practice: A focus-group study. *BMC Nursing, 18*(1), 1–9. https://doi.org/10.1186/s12912-019-0376-5

Huston, C. L., Phillips, B., Jeffries, P., Todero, C., Rich, J., Knecht, P., Sommer, S., & Lewis, M. P. (2018). The academic-practice gap: Strategies for an enduring problem. *Nursing Forum*, *53*(1), 27-34. https://doi.org/10.1111/nuf.12216

Hyun, A., Tower, M., & Turner, C. (2020). Exploration of the expected and achieved competency levels of new graduate nurses. *Journal of Nursing Management, 28*(6), 1418–1431. https://doi.org/10.1111/jonm.13105

Jeffries, P. R., Rodgers, B., & Adamson, K. (2015). NLN Jeffries simulation theory: Brief narrative description. *Nursing Education Perspectives*, *36*(5), 292-293.

Johnson, K. V., Scott, A. L., & Franks, L. (2020). Impact of standardized patients on first semester nursing students self-confidence, satisfaction, and communication in a simulated clinical case. *SAGE Open Nursing*, *6*. https://doi.org/10.1177/2377960820930153

Joint Commission. (2020). *Sentinel event*. https://www.jointcommission.org/en/resources/patient-safety-topics/sentinel-event/

Joint Commission Center. (2017). *Sentinel event alert: Inadequate hand-off communication*. https://www.jointcommission.org/-/media/tjc/newsletters/sea-58-hand-off-comm-9-6-17-final2.pdf

Kardong-Edgren, S., Adamson, K. A., & Fitzgerald, C. (2010). A review of currently published evaluation instruments for human patient simulation. *Clinical Simulation in Nursing, 6*(1), e25–e35. https://doi.org/10.1016/j.ecns.2009.08.004

Kellar, S. P., & Kelvin, E. A. (2013). *Monro's statistical methods for health care research* (6th ed.). Lippincott Williams and Wilkins.

Kesten, K. S. (2011). Role-play using SBAR technique to improve observed communication skills in senior nursing students. *Journal of Nursing Education*, *50*(2), 79–87. https://doi.org/10.3928/01484834-20101230-02

Kettles, A. M., Creswell, J. W., & Zhang, W. (2011). Mixed methods research in mental health nursing: Mixed methods research. *Journal of Psychiatric and Mental Health Nursing, 18*(6), 535-542. https://doi.org/10.1111/j.1365-2850.2011.01701.x

Klakovich, M. D., & Dela Cruz, F. A. (2006). Validating the interpersonal communication assessment scale. *Journal of Professional Nursing*, *22*(1), 60–67. https://doi.org/10.1016/j.profnurs.2005.12.005

Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine, 15*(2), 155-163. https://doi.org/10.1016/j.jcm.2016.02.012

Koukourikos, K., Tsaloglidou, A., Kourkouta, L., Papathanasiou, I. V., Iliadis, C., Fratzana, A., & Panagiotou, A. (2021). Simulation in Clinical Nursing Education. *Acta Informatica Medica: AIM*, *29*(1), 15–20. https://doi.org/10.5455/AIM.2021.29.15-20

Krautscheid, L. C. (2008). Improving communication among healthcare providers: Preparing student nurses for practice. *International Journal of Nursing Education Scholarship, 5*(1). https://doi.org/10.2202/1548-923X.1647

Krueger, R. A., & Casey, M. A. (2009). *Focus groups: A practical guide for applied research* (4th ed.). Sage Publications.

Lancaster, R. J., Westphal, J., & Jambunathan, J. (2015). Using SBAR to promote clinical judgment in undergraduate nursing students. *Journal of Nursing Education, 54*(3), S31–S34. https://doi.org/10.3928/01484834-20150218-08

Landers, M. G., O'Mahony, M., & McCarthy, B. (2020). A theoretical framework to underpin clinical learning for undergraduate nursing students. *Nursing Science Quarterly, 33*(2), 159–164. https://doi.org/10.1177/0894318419898167

Liebrecht, C., & Motenery, S. (2016). Use of simulated psychosocial role-playing to enhance nursing students' development of soft skills. *Creative Nursing, 22*(3), 171-178. http://dx.doi.org/10.1891/1078-4535.22.3.171

Lim, F., & Pajarillo, E. J. Y. (2016). Standardized hand-off report form in clinical nursing education: An educational tool for patient safety and quality of care. *Nurse Education Today, 37*, 3-7. https://doi.org/10.1016/j.nedt.2015.10.026

Luctkar-Flude, M., Wilson-Keates, B., & Larocque, M. (2012). Evaluating high-fidelity human simulators and standardized patients in an undergraduate nursing health assessment course. *Nurse Educator Today, 32*, 448–52.

MacLean, S., Kelly, M., Geddes, F., & Della, P. (2017). Use of simulated patients to develop communication skills in nursing education: An integrative review. *Nurse Education Today*, *48*, 90–98. https://doi.org/10.1016/j.nedt.2016.09.018

McDaniel, E. R., Samovar, L., & Porter, R. (2009). Understanding intercultural communication: The working principles. In L. Samover, R. Porter, & E. R. McDaniel (Eds.), *Intercultural communication: A reader* (12th ed., pp. 4-19). Wadsworth.

McNicholas, M., Marcus-Aiyeku, U., Brodrick, T., Fleming, K., Harvey, J., Weaver, S., & Wurmser, T. (2021). Not alone: One network's approach to pandemic nurse staffing. *Nursing Management, 52*(10), 24-30. https://doi:10.1097/01.NUMA.0000792020.48900.45

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey Bass.

Merriman, C. D., Stayt, L. C., & Ricketts, B. (2014). Comparing the effectiveness of clinical simulation versus didactic methods to teach undergraduate adult nursing students to recognize and assess the deteriorating patient. *Clinical Simulation in Nursing, 10*(3), e119-e127.

Mesquita, A. R., Lyra, D. P., Brito, G. C., Balisa-Rocha, B. J., Aguiar, P. M., & de Alemedia Neto, A. C. (2010). Developing communication skills in pharmacy: a systematic review of the use of simulated patient methods. *Patient Education and Counseling, 78*(2), 143-148.

Mospan, C. M., Hess, R., Blackwelder, R., Grover, S., & Dula, C. (2017). A two-year review of suicide ideation assessments among medical, nursing, and pharmacy students. *Journal of Interprofessional Care, 31*(4), 537–539. https://doi.org/10.1080/13561820.2017.1301900

Moustakas, C. (1994). *Phenomenological research methods* (1st ed.). Sage Publications.

Murray, M., Sundin, D., & Cope, V. (2018). New graduate registered nurses' knowledge of patient safety and practice: A literature review. *Journal of Clinical Nursing, 27*(1-2), 31-47. https://doi.org/10.1111/jocn.13785

Oermann, M. H., Kardong-Edgren, S., & Rizzolo, M.A. (2016). Towards an evidence-based methodology for high-stakes evaluation of nursing students' clinical performance using simulation. *Teaching and Learning in Nursing, 11*, 133-137. http://dx.doi.org/10.1016/j.teln.2016.04.001

Oliveira Silva, G., Fonseca, L. M. M., Siqueira, K. M., Góes, F. D. S. N., Ribeiro, L. M., & Aredes, N. (2023). The simulation design in health and nursing: A scoping review. *Nursing Open, 10*(4), 1966-1984. https://doi.org/10.1002/nop2.1466

O'Shea, E. R., Pagano, M., Campbell, S. H., & Caso, G. (2011). A descriptive analysis of nursing student communication behaviors. *Clinical Simulation in Nursing, 9*(1), e5-e12, 10.1016/j.ecns.2011.05.013

Pagano, M. P., O'Shea, E. R., Campbell, S. H., Currie, L. M., Chamberlin, E., & Pates, C. A. (2015). Validating the Health Communication Assessment Tool© (HCAT). *Clinical Simulation in Nursing*, *11*(9), 402–410. https://doi.org/10.1016/j.ecns.2015.06.001

Palese, A., Grassetti, L., Destrebecq, A., Mansutti, I., Dimonte, V., Altini, P., Bevilacqua, A., Brugnolli, A., Dal Ponte, A., De Biasio, L., Fascì, A., Grosso, S., Mantovan, F., Marognolli, O., Nicotera, R., Randon, G., Tollini, M., Canzan, F., Saiani, L., …Gonella, S. (2019). Nursing students' involvement in shift-to-shift handovers: Findings from a national study. *Nurse Education Today, 75.* 13–21. https://doi.org/10.1016/j.nedt.2019.01.001

Patient hand-offs: The gap where mistakes are made. (2017). *Patient Safety Monitor Journal, 18*(12), 1-6. www.proquest.com/trade-journals/patient-hand-offs-gap-where-mistakes-are-made/docview/1964427629/se-2?accountid=12832

Petrucci, C., La Cerra, C., Caponnetto, V., Franconi, I., Gaxhja, E., Rubbi, I., & Lancia, L. (2017). Literature-based analysis of the potentials and the limitations of using simulation in nursing education. In *Methodologies and intelligent systems for technology enhanced learning* (pp. 57-64). Springer. https://doi-org.unco.idm.oclc.org/10.1007/978-3-319-60819-8_7

Polit, D. F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Wolters Kluwer, Lippincott, Williams & Williams.

Rafiee, G., Moattari, M., Nikbakht, A. N., Kojuri, J., & Mousavinasab, M. (2014). Problems and challenges of nursing students' clinical evaluation: A qualitative study. Iranian Journal of *Nursing and Midwifery Research, 19*(1), 41-49.

Rasmussen, P., Henderson, A., McCallum, J., & Nicola, A. (2021). Professional identity in nursing: A mixed method research study. *Nurse Education in Practice, 52.* https://doi.org/10.1016/j.nepr.2021.103039

Reising, D. L., Carr, D. E., Tieman, S., Feather, R., & Ozdogan, Z. (2015). Psychometric testing of a simulation rubric for measuring interprofessional communication. *Nursing Education Perspectives*, *36*(5), 311–316. https://doi.org/10.5480/15-1659

Risk Management Foundation. (2015). *CRICO strategies. Malpractice risk in communication failures*. https://cdn2.hubspot.net/hubfs/217557/Documents%20-%20CBS%20Report%20PDFs/Malpractice%20Risks%20in%20Communication%20Failures%202015.pdf

Roman, P., Rodriguez-Arrastia, M., Molina-Torres, G., Márquez-Hernández, V. V., & Gutiérrez-Puertas, L. (2020). The escape room as evaluation method : A qualitative study of nursing students ' experiences. *Medical Teacher*, *42*(4), 403–410. https://doi.org/10.1080/0142159X.2019.1687865

Rose, D. (2013). I've heard report, now what do I do? Avatars prepare novice students for patient handoffs. *Nurse Educator*, *38*(2), 54-55. https://doi.org/10.1097/NNE.0b013e31828299d1

Ross, J. (2018). Effective communication improves patient safety. *Journal of Perianesthesia Nursing*, *33*(2), 223–225. https://doi.org/10.1016/j.jopan.2018.01.003

Ross, J. (2020). The exacerbation of burnout during COVID-19: A major concern for nurse safety. *Journal of Perianesthesia Nursing*, *35*(4), 439-440. https://doi.org/10.1016/j.jopan.2020.04.001

Rusch, L. M., McCafferty, K., Schoening, A. M., Hercinger, M., & Manz, J. (2018, January). Impact of the dedicated education unit teaching model on the perceived competencies and professional attributes of nursing students. *Nurse Education in Practice*, *33*, 90–93. https://doi.org/10.1016/j.nepr.2018.09.002

Shafakhah, M., Zarshenas, L., Sharif, F., & Sabet Sarvestani, R. (2015). Evaluation of nursing students' communication abilities in clinical courses in hospitals. *Global Journal Portal of Health Science, 7(*4), 323–328. https://doi.org/10.5539/gjhs.v7n4p323

Shorey, S., Ang, E., Ng, E. D., Yap, J., Siew, L., & Lau, T. (2020, March). Communication skills training using virtual reality : A descriptive qualitative study. *Nurse Education Today*, *94*, 1-10. https://doi.org/10.1016/j.nedt.2020.104592

Shorey, S., Siew, A. L., & Ang, E. (2018, February). Experiences of nursing undergraduates on a redesigned blended communication module : A descriptive qualitative study. *Nurse Education Today, 61*, 77–82. https://doi.org/10.1016/j.nedt.2017.11.012

Sowko, L. A., Fennimore, L. A., & Drahnak, D. M. (2019). Teaching workplace interprofessional communication to undergraduate nursing students. *Journal of Nursing Education, 58*(9), 538–542. https://doi.org/10.3928/01484834-20190819-08

Sweeney, N., Rollins, M. C., Gantt, L., Swanson, M., & Ravitz, J. (2020). Development and reliability testing of the Sweeney-Clark Simulation Evaluation Rubric©. *Clinical Simulation in Nursing, 41*, 22–32. https://doi.org/10.1016/j.ecns.2019.04.002

Thomas, C. M., & Kellgren, M. (2017). Benner's novice to expert model: An application for simulation facilitators. *Nursing Science Quarterly, 30(*3), 227–234. https://doi.org/10.1177/0894318417708410

Thomas, C. M., Bertram, E., & Johnson, D. (2009). The SBAR communication technique: Teaching nursing students professional communication skills. *Nurse Educator*, *34*(4), 176–180. https://doi.org/10.1097/NNE.0b013e3181aaba54

Todd, M., Manz, J. A., Hawkins, K. S., Parsons, M. E., & Hercinger, M. (2008). The development of a quantitative evaluation tool for simulations in nursing education. *International Journal of Nursing Education Scholarship, 5(*1). https://doi.org/10.2202/1548-923X.1705

Torabizadeh, C., Ghodsbin, F., Javanmardifard, S., Shirazi, F., Amirkhani, M., & Bijani, M. (2018). The barriers and challenges of applying new strategies in the clinical evaluation of nursing students from the viewpoints of clinical teachers. *Iranian Journal of Nursing and Midwifery Research*, *23*(4), 305-310. https://doi.org/10.4103/ijnmr.IJNMR_17_17

Uhm, J. Y., Ko, Y. J., & Kim, S. (2019, April). Implementation of an SBAR communication program based on experiential learning theory in a pediatric nursing practicum: A quasi-experimental study. *Nurse Education Today, 80,* 78–84. https://doi.org/10.1016/j.nedt.2019.05.034

van Ruler, B. (2018). Communication theory: An underrated pillar on which strategic communication rests. *International Journal of Strategic Communication, 12*(4), 367-381. https://doi.org/10.1080/1553118X.2018.1452240

Wieke Noviyanti, L., Ahsan, A., & Sudartya, T. S. (2021). Exploring the relationship between nurses' communication satisfaction and patient safety culture. *Journal of Public Health Research, 10*(2). https://doi.org/10.4081/jphr.2021.2225

Xie, J., Ding, S., Wang, C., & Liu, A. (2013). An evaluation of nursing students' communication ability during practical clinical training. *Nurse Education Today, 33(*8), 823–827. http://dx.doi.org/10.1016/j.nedt.2012.02.011

Yeh, V. (2021, February). Teaching SBAR using story: Online and in clinical learning. *Quality and Safety Education for Nurses*. https://qsen.org/teaching-sbar-using-story-online-and-in-clinical-learning/

Yeh, V. J.-H. (2018). *Deliberate practice with mastery learning: Using an online approach to develop nursing students' interprofessional critical incident reporting skills*. https://core.ac.uk/download/pdf/210605085.pdf

Yen, P. Y., Kellye, M., Lopetegui, M., Saha, A., Loversidge, J., Chipps, E. M., Gallagher-Ford, L., & Buck, J. (2018). Nurses' time allocation and multitasking of nursing activities: A time motion study. *AMIA ... Annual Symposium Proceedings. AMIA Symposium, 2018*, 1137–1146.

Young, J., Daulton, B., & Griffith, C. (2022). The effectiveness of an educational intervention to enhance undergraduate nursing students' competence with interprofessional collaboration. *Nursing Forum*, *57*(1), 69–77. https://doi.org/10.1111/nuf.12655

# APPENDIX A

## REQUEST TO CONDUCT RESEARCH FOR DISSERTATION

Dear Dr. ,

My name is Christine Brockway and I am a PhD Nursing Education candidate at the University of Northern Colorado. I am preparing to conduct my doctoral research starting this fall and am looking for potential Schools of Nursing willing to allow me to seek study participation from their faculty and students. The research I wish to conduct for my Doctoral dissertation involves nursing faculty evaluation of effective student communication. I am asking nursing faculty who lead simulation or clinical experiences to use the ISBAR Nurse-to-Physician Communication Rubric to score their nursing students SBAR report. The purpose of the study is to determine if a tool that has been used effectively in simulation can also be applied in a clinical setting to evaluate communication, as well as to better understand the experience of evaluating student communication. Identifying a standard tool that can be used for communication evaluation in the clinical setting will help nursing educators better prepare new graduate nurses for practice.

This project will be conducted under the supervision of Dr. Michael Aldridge, Associate Professor in the School of Nursing at the University of Northern Colorado, to start in Fall 2022 with the goal of completing data collection by the end of Spring 2023.

I am hereby seeking your consent to approach nursing faculty and then students to seek participants for my research. I would either come to the school to present my request to the faculty or send out an email request to them- whichever you would prefer. Faculty who consent to work with me would have a time commitment of 30 -120 minutes total for the whole semester, either fall, summer, or spring. Students who consent to be scored would have 10-15 minutes for the activity during their usual simulation and clinical experiences for a total of 20-30 minutes. I will also be asking for focus group volunteers from both student participants and faculty participants after the scoring is completed for a one-time session of up to one hour to collect qualitative data about the experience. There will be nominal compensation for faculty who are willing to participate, an Amazon gift card will be offered to faculty who complete the quantitative portion of the study. Faculty and student participants in the qualitative focus groups will be entered in a drawing for an additional Amazon gift card.

I can provide a copy of my proposal which includes copies of the study tool as well as consent forms to be used in the research process once my proposal has been approved. I will also provide you with the approval letter from the UNC IRB.

Upon completion of the study, I will provide the Department with a copy of my full research report. If you require any further information, please do not hesitate to contact me at broc7271@bears.unco.edu. Thank you for your time and consideration in this matter.

Yours sincerely,

Christine Brockway, RN, MSN, CNE

University of Northern Colorado

Nursing Education PhD candidate

# APPENDIX B

## CONSENT FORM FOR FACULTY TO PARTICIPATE IN QUANTITATIVE PORTION OF STUDY

UNIVERSITY OF NORTHERN COLORADO

**Informed Consent Form for Participation in Research**

**Title of Research Study:** Evaluating Effective Communication in Nursing Students

**Researcher(s):** Christine Brockway, PhD Candidate

email: broc7271@bears.unco.edu

**Research Advisor:** Dr. Michael Aldridge

Phone Number: (970)351-1699 email: Michael.aldridge@unco.edu

**Procedures:**

This study is examining how to evaluate effective communication in nursing students. As a participant in this research, you will be asked to review three exemplar videos on how to use the ISBAR Nurse-to-Physician Communication Rubric. Each video is less than five minutes. After the tutorial you will be asked to listen to a brief report, use the rubric to score the report, and then email the researcher with your evaluation. Once student participants volunteer, you will then use the rubric to score nursing students giving their usual end of shift report in either the clinical or simulation setting. Students will sign a separate consent to participate in the study. You will then enter their scores into a Qualtrics survey. The total time to score a student and enter a score should take about 15 minutes. Total time for the study will depend on the number of students that you score.

You will also have the opportunity to participate in a separate focus group about your experiences evaluating nursing students' communication skills. If you choose to participate in that part of the study you will sign a separate consent.

You are able to take part in this study if you meet the following inclusion criteria: 1) being employed as a nursing faculty, either full or part time or adjunct nursing faculty, 2) leading either a clinical group or simulation experience or both in Spring 2023, Summer 2023, or Fall 2023 semesters. You are not able to participate in this study if you only teach in theory or classroom settings.

If you agree to participate in this research study, we will request that you complete the following items:

- Provide demographic information, such as age, race, sex, academic preparation, job role, setting, and number of years as a pre-licensure nursing student or nurse, etc.
- Review the training video
- Use the rubric to score an exemplar video

We will take steps to preserve your confidentiality. Only the researcher will have access to original responses and information. You will be assigned a subject number and only the researcher will know the name connected with the subject number. When results of this study are presented no names or identifying information will be used. All data will be password protected and only accessible to the primary researcher.

Risks to you are minimal. You may feel anxious about scoring a student, but these scores will have no bearing on their grade or your faculty rating. The benefits to you include gaining practice using a standardized rubric in a practical setting and experience rating communication. Upon completion of study data entry, Amazon gift cards for $25 will be emailed to faculty participants with complete Qualtrics entries.

> Thank you for agreeing to participate in our research. Additionally, this research is for residents of the United States over the age of 18; if you are not a resident of the United States and/or under the age of 18, please do not complete this survey.

***Note:*** Amazon Mechanical Turk, Qualtrics, and Inquisit have specific privacy policies of their own. You should be aware that these web services may be able to link your responses to your ID in ways that are not bound by this consent form and the data confidentiality procedures used in this study. If you have concerns you should consult these services directly.

**Questions:** If you have any questions about this research project, please feel free to contact Christine Brockway at broc7271@bears.unco.edu. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Research Compliance Manager, University of Northern Colorado at nicole.morse@unco.edu or 970-351-1910.

**Voluntary Participation: Please understand that your participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled.**

**Please take all the time you need to read through this document and decide whether you would like to participate in this research study.**

If you decide to participate, your completion of the research procedures indicates your consent. You may print this form and keep it for your records.

# APPENDIX C

## CONSENT FOR STUDENT PARTICIPATION

UNIVERSITY OF NORTHERN COLORADO

**Informed Consent Form for Participation in Research**

**Title of Research Study:** Evaluating Effective Communication in Nursing Students

**Researcher(s):** Christine Brockway, PhD Candidate

email: broc7271@bears.unco.edu

**Research Advisor:** Dr. Michael Aldridge

Phone Number: (970)351-1699 email: Michael.aldridge@unco.edu

**Procedures:**

This study examines how to evaluate effective communication in nursing students. As a participant in this research, you will be asked to deliver your usual end of shift report in SBAR format in both the clinical and simulation setting. Faculty in each setting will score your SBAR using the ISBAR Nurse-to-Physician Communication Rubric.

You will also have the opportunity to participate in a separate focus group about your experiences evaluating nursing students' communication skills. If you choose to participate in that part of the study you will sign a separate consent

We will take steps to preserve your confidentiality. You will be assigned a subject number and only the researcher will know the name connected with the subject number. When results of this study are presented no names or identifying information will be used. All data will be password protected and only accessible to the primary researcher.

Risks to you are minimal. You may feel anxious about being scored, but these scores will have no bearing on your grade. The benefits to you include feedback on your skill and experience using SBAR.

**Questions:** If you have any questions about this research project, please feel free to contact Christine Brockway at broc7271@bears.unco.edu. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Research Compliance Manager, University of Northern Colorado at nicole.morse@unco.edu or 970-351-1910.

**Voluntary Participation: Please understand that your participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide**

**to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled.**

**Please take all the time you need to read through this document and decide whether you would like to participate in this research study.**

If you decide to participate, your completion of the research procedures indicates your consent. Please keep this form for your records.

# APPENDIX D

## INSTRUCTIONAL EMAIL FOR PARTICIPATING FACULTY

Dear Nursing Faculty,

Thank you for agreeing to participate in this study examining evaluation of communication for nursing students. You will be using the ISBAR Nurse-to-Physician Communication Rubric to score your nursing students as they deliver the end of shift report. Before getting started with scoring, there are three exemplar videos for you to review. These videos provide examples of three different levels of report and how they should be scored. Following that there is a practice report for you to score. Listen to the practice report and note your score for each section. Reply to this email with your scores for each of the sections.

Here is the link to the training video. The video is 6 and a half minutes long.

https://unwsp.zoom.us/rec/share/_nC6Goc_8lOnpI0zI-GJCG1ZTwdDiBwECG4SrN3IX5hYG0luJYbLfY8EYlqltKMh.6CoS8UiJtkWjOm8q?startTime=1663898050000

Passcode: Hr7wc+GL

**Please view the rubric. You will notice that each component of ISBAR contains 3 criteria. In an ideal performance, the student will present all 15 criteria in a concise, organized manner. For each criterion addressed, the student will obtain one point. The minimum score possible is a 0 and the maximum score possible is a 15. When the student is speaking, the rater should place a mark in the hollow box next to the criteria as the student communicates. Please wait until after the communication finishes to tabulate the total score. Keep in mind for the purpose of this study, the student may not achieve the maximum score as the rubric is designed for Nurse to Physician communication, which may include extra criteria. Only give a student a score based on what they actually say in report.**

The informational packet you received from our initial meeting has a copy of your consent form as well as contact information for the researcher. You should also have received consent forms for the students attached to copies of the ISBAR Nurse-to-Physician Communication Rubric to hand out to your students so they can be familiar with the structure of the tool. You will need to set up a short meeting with the students and the researcher so that the researcher can obtain consent from the students.If the meeting is virtual, you are asked to hand out the forms to students for their review. .Both students and faculty will be given an opportunity to be part of a focus group after the scoring is completed and all will be entered in a drawing for an Amazon gift card.

The link to enter final scores for each student is provided here:

https://unco.co1.qualtrics.com/jfe/form/SV_6P4Bkt74G8Z1S4e

# APPENDIX E

## INTERPROFESSIONAL SITUATION, BACKGROUND, ASSESSMENT, RECOMMENDATION NURSE-TO-PHYSICIAN COMMUNICATION RUBRIC

Student code:

Student level in program:

| Quantitative Rating | Ineffective (0) | Marginal (1) | Developing Competence (2) | Exceptional (3) | Score |
|---|---|---|---|---|---|
| Identify<br>☐Name<br>☐Position/Professional Title<br>☐Where he/she is calling from | RN student provided 0 of the 3 criteria | RN student provided 1 of the 3 criteria | RN student provided 2 of the 3 criteria | RN student provided 3 of the 3 criteria | |
| | | | | | Score |
| Situation<br>☐Patient by name and age<br>☐Diagnosis or chief complaint<br>☐Reason for the call/problem | RN student provided 0 of the 3 criteria | RN student provided 1 of the 3 criteria | RN student provided 2 of the 3 criteria | RN student provided 3 of the 3 criteria | |
| | | | | | Score |
| Background & Assessment<br>☐Relevant Past Medical History<br>☐Relevant assessment data<br>☐Recent interventions for the patient | RN student provided 0 of the 3 criteria | RN student provided 1 of the 3 criteria | RN student provided 2 of the 3 criteria | RN student provided 3 of the 3 criteria | |
| | | | | | Score |
| Recommendation & Repeat<br>☐Suggests potential reason for condition or<br>suggests interventions | RN student provided 0 of the 3 criteria | RN student provided 1 of the 3 criteria | RN student provided 2 of the 3 criteria | RN student provided 3 of the 3 criteria | |

| | | | | | |
|---|---|---|---|---|---|
| ☐Provides timeframe/urgency for action<br>☐Repeats back all orders; clarifying if needed | | | | | |
| | | | | | Score |
| Order & Accuracy<br>☐Correct Order/Sequence<br>☐Accurate Data Reported<br>☐Concise | RN student provided 0 of the 3 criteria | RN student provided 1 of the 3 criteria | RN student provided 2 of the 3 criteria | RN student provided 3 of the 3 criteria | |
| Total Score is out of 15 possible points<br>A passing score is 13 points or higher | | | | | **Total Score** |

*Note*. © Foronda, C., Yeh, V., & Bauman, E., 2020. May be used freely with citation of corresponding manuscript in *Clinical Simulation in Nursing.* Adapted from the CliniSpace™ ISBAR Rating Sheet developed by Innovation in Learning Inc. & Clinical Playground, LLC, 2011, with permission (unpublished) and ISBAR Interprofessional Communication Rubric (Foronda & Bauman, 2015). SBAR format and tool originally developed by the United States military and adapted for healthcare by Kaiser Permanente (Institute for Healthcare Improvement, 2015). Please retain this footer in the spirit of appropriate recognition.

# APPENDIX F

## CONSENT FOR FOCUS GROUPS

UNIVERSITY OF NORTHERN COLORADO

**Informed Consent Form for Participation in Research**

**Title of Research Study:** Evaluating Effective Communication in Nursing Students

**Researcher(s):** Christine Brockway, PhD Candidate

email: broc7271@bears.unco.edu

**Research Advisor:** Dr. Michael Aldridge

Phone Number: (970)351-1699 email: Michael.aldridge@unco.edu

**Procedures:**

I am a doctoral candidate at the University of Northern Colorado and am studying the process of evaluating effective communication with nursing students. During this focus group, you will be invited to share your experiences regarding SBAR report evaluation and the impact of the surrounding setting. The focus group will be audio recorded and the conversation will be transcribed. The transcripts will be analyzed to identify themes for communication evaluation, possible barriers, and factors that contribute to evaluation. Focus groups will take approximately 60 minutes. You and all other participants will be assigned a pseudonym for all analysis and reporting purposes. Digital recordings, field notes, and interview transcripts will be secured appropriately in password-protected computers for the duration of the project.

If you agree to participate in this research study, we will ask you questions about your perceptions and experiences regarding communication evaluation in the clinical and simulation settings.

Your responses will only be shared with members of the research team and the research advisor. By participating in this study, you have given us permission to release information to these persons. Although confidentiality cannot be guaranteed, every effort will be made to maintain your confidentiality. The results of this study may be published in a professional journal, but the publication will not contain information that will identify you. The research data will be kept in a secure location, and only the researchers will have access to the data. After transcription, identifying information will be removed.

We do not foresee any risks to you as a result of your participation in this study beyond those that you might encounter in conversations with fellow peers. If this occurs, contacting the Counseling Center at your institution is recommended. Furthermore, the following national hotline numbers can be used as additional resources:

- National Suicide Preventions Lifeline: 1-800-273-TALK (8255)/ Spanish: 1-800-799-4889
- National Alliance on Mental Illness (NAMI): 1-800-950-NAMI (6264)
- You can type 211 and be connected to resources including those for mental health

There is no cost to participate in this study. If you agree to participate in this focus group your name will be entered into a drawing for an Amazon gift card. Although we do not anticipate direct benefits from participating in this study, your participation will provide valuable information to aid in positively informing and changing communication practices, including educational initiatives, to enhance hand-off report in nursing.

**Questions:** If you have any questions about this research project, please feel free to contact Christine Brockway at broc7271@bears.unco.edu. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Research Compliance Manager, University of Northern Colorado at nicole.morse@unco.edu or 970-351-1910.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. If you are a student, your decision to participate in this focus group will not influence your grade in your nursing courses. Please take your time to read and thoroughly review this document and decide whether you would like to participate in this research study. If you decide to participate, your completion of the research procedures indicates your consent. Please keep or print this form for your records. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Office of Research & Sponsored Programs, University of Northern Colorado, Greeley, CO; 970-351-1910 or nicole.morse@unco.edu.

# APPENDIX G

## NURSING FACULTY DEMOGRAPHIC QUESTIONNAIRE

1. What is your age?

   18-24 25-30 31-35 36-40 41-45 46-50 50+

2. What is your gender?

   Male Female Non-binary prefer not to answer

3. What level of education have you completed?

   Associate Degree Bachelor's Degree Master's Degree PhD

4. What is your race? (you may pick more than one)

   White Black/African American Asian American Indian or Alaska Native Native Hawaiian or Pacific Islander Hispanic or Latino Other

5. How long have you been employed as a nursing faculty?

   0-1 years 2-3 years 4-6 years 7-9 years 10+years

# APPENDIX H

## SEMI-STRUCTURED INTERVIEW GUIDE

"Welcome to this zoom meeting. My name is Christine Brockway and I am a doctoral candidate conducting this research through the University of Northern Colorado. I am excited to learn more about your experience so far. Communication has been a hot topic in healthcare for a while now and your participation in the first part of this study will help us identify a potential tool to help nursing faculty evaluate communication in nursing students. It is important for new grad nurses to know how to give a good hand-off report and feel comfortable with that skill since they use it every day. This focus group should last between 45 and 60 minutes and the aim is to understand more about your experience with communication evaluation. My research advisor will be reviewing the findings but pseudonyms will be used to help protect your privacy. The findings from this study will be published in my final paper and a copy of these findings can be provided for you.

Do you have any questions?

As we start could each of you tell me a little bit about yourself?

1. How long have you been in the nursing program?
2. (if a student) What semester are you in the program?
3. (if a faculty) How long have you taught with this program?

Now I will ask you some questions about your experience with the ISBAR Nurse-to-Physician Rubric

Interview questions for student focus group

1. Tell me about what it is like being evaluated in a clinical setting.
2. Tell me about what it is like being evaluated in a simulation setting.
3. Tell me about any differences you perceive in being able to give report in the simulation setting and the clinical setting.
4. Did having a different instructor rate you in each setting affect the scoring? Tell me more about this.. what about those of you who had the same instructor rate in both settings- what was that like?
5. What factors made giving report feel easier? Any thoughts about what would make it easier?
6. What factors made the giving report feel harder?
7. Describe any barriers you noticed in being able to communicate in either setting?
8. Describe any benefits you perceived in being evaluated on your hand-off communication skills?
9. You likely scored better in one setting than the other- why do you think that was?
10. Is there anything else you'd like to tell me about your experiences?

Interview questions for faculty focus group

1. Tell me about what it is like to evaluate the hand-off communication of students in clinical.
2. For those of you who did the evaluation in simulation, what was that like?
3. What do you think might make evaluation easier in the setting you were in?
4. What might have impeded your ability to evaluate student communication?
5. What makes your evaluation of students' communication skills more accurate? Less accurate?
6. Is there anything else you'd like to tell me about your experiences with evaluating students?
7. What made the tool easy to use? What made it hard to use? How could this tool be used in the future to assess student competency in communication?
8. If you were able to score students in more than one setting, why do you think it may have been easier to score students in one setting over the other?
9. Is there anything else you would like to tell me about your experiences scoring students' communication skills?

List of Probes (if needed)

- "Tell me more about that"
- "What is an example of that?
- "What do you mean by "phrase/word?"
- "What was that like for you?"
- "How did that feel?"

# APPENDIX I

# INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

| | |
|---|---|
| Date: | 01/25/2023 |
| Principal Investigator: | Christine Brockway |
| Committee Action: | **IRB EXEMPT DETERMINATION – New Protocol** |
| Action Date: | 01/25/2023 |
| Protocol Number: | 2211046538 |
| Protocol Title: | EVALUATING EFFECTIVE COMMUNICATION OF BACCALAUREATE NURSING STUDENTS |
| Expiration Date: | |



The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(701) (702) for research involving

Category 1 (2018): RESEARCH CONDUCTED IN EDUCATIONAL SETTINGS. Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7).

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

You may begin conducting your research as outlined in your protocol. Your study does not require further review from the IRB, unless changes need to be made to your approved protocol.

**As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if and when:**

- You wish to deviate from the described protocol and would like to formally submit a modification request. Prior IRB approval must be obtained before any changes can be implemented (except to eliminate an immediate hazard to research participants).
- You make changes to the research personnel working on this study (add or drop research staff on this protocol).
- At the end of the study or before you leave The University of Northern Colorado and are no longer a student or employee, to request your protocol be closed. *You cannot continue to reference UNC on any documents (including the informed consent form) or conduct the study under the auspices of UNC if you are no longer a student/employee of this university.
- You have received or have been made aware of any complaints, problems, or adverse events that are related or possibly related to participation in the research.

If you have any questions, please contact the Research Compliance Manager, Nicole Morse, at 970-351-1910 or via e-mail at nicole.morse@unco.edu. Additional information concerning the requirements for the protection of human subjects may be found at the Office of Human Research Protection website - http://hhs.gov/ohrp/ and https://www.unco.edu/research/research-integrity-and-compliance/institutional-review-board/.

Sincerely,

Nicole Morse
Research Compliance Manager

University of Northern Colorado: FWA00000784