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The Current Practice of Nursing Clinical Simulation Debriefing: A Multiple Case Study

Maria L. Overstreet
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To the Graduate Council:

I am submitting herewith a dissertation written by Maria L. Overstreet entitled "The Current Practice of Nursing Clinical Simulation Debriefing: A Multiple Case Study." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Nursing.

<div align="right">Marian Roman, Major Professor</div>

We have read this dissertation and recommend its acceptance:

Tami Wyatt, Kenneth D. Phillips, Ralph Brockett

<div align="right">Accepted for the Council:</div>

<div align="right">Carolyn R. Hodges</div>

<div align="right">Vice Provost and Dean of the Graduate School</div>

(Original signatures are on file with official student records.)

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The Current Practice of Nursing Clinical Simulation Debriefing:
A Multiple Case Study

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Maria L. Overstreet
December 2009

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To my family, your devotion and patience during the past few years have allowed my indulgence and seclusion knowing you would be there in a moment's call. As always, thank you for your love and support.

ABSTRACT

Experts have identified simulation debriefing as the crucial or pivotal point to learning (Baldwin, 2007; Gaba, Howard, Fish, Smith, & Sowb, 2001), and the "heart and soul" of simulation (Rall, Manser, & Howard, 2000, p. 517). No research studies exist that support how best to perform this crucial activity, particularly as it relates to nursing clinical simulation (NCS) debriefing.

My aim in this study was to explore and describe the current practice of NCS debriefing. I studied the phenomenon as it naturally occurred, a group exercise, and interaction between the educator, student, and environment. The research question was the following: How is NCS debriefing currently practiced?

No data exist regarding the proposed study; therefore, a purposive sample of four individual cases was proposed as an adequate number to acquire sufficient intercollegiate variation. I chose study sites from the three geographic locations of Tennessee: West, Middle, and East.

Creating individual case descriptions was the first analytical method used to begin cross case analysis. I then reduced the data using several techniques: categorical aggregation, time-ordered displays, content analysis, and pattern matching. Iterative comparison of data resulted in further reduction. The videotapes served as bases throughout the entire analytical process and were considered the primary source if any dispute or disagreement among sources occurred.

After cases were analyzed individually, a cross case analysis revealed patterns or potential typologies of instructor participants. The final cross case synthesis of the emerged patterns produced seven patterns; four patterns matched those of the extant literature, (communication,

time, structure, and emotion), and three new patterns emerged: accentuate the positive, higher order thinking, and experience counts.

Debriefing provides students the opportunity to reflect on their experiential learning exercises and to hypothesize how they might perform differently next time. Debriefing also offers students a reality check, a way to see themselves through the eyes of the teacher or their peers, something the participants in this study (i.e., students and educators) valued and sought.

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER 1

Experts have identified debriefing, a post-experience teaching and learning exercise, as the crucial or pivotal point to learning (Baldwin, 2007; Gaba, Howard, Fish, Smith, & Sowb, 2001), and the "heart and soul" of simulation (Rall, Manser, & Howard, 2000, p. 517). Nurse researchers recently have begun study of nursing clinical simulation (NCS) as an educational tool. Simulation, in the context of healthcare, is defined as using mannequins to represent live patients so students may practice (Laerdal Medical Corporation Homepage, n.d.). Clinical simulation more recently is defined by level of fidelity: low, medium, or high (Bradley, 2006). Fidelity represents the ability of a simulation to replicate life-likeness; therefore, the greater the representation to real life, the higher the fidelity.

High fidelity simulation (HFS) has been used to enhance learners' knowledge, skills, and attitudes. Yet, little attention has been given to debriefing, that is, the activity following the hands-on simulation exercise. Debriefing can take many forms, and no one specific method has been identified as the most acceptable or most appropriate way to perform this educational activity. No research studies exist that support how best to perform this crucial activity, particularly as it relates to NCS debriefing. Thus, it is imperative to begin by exploring and describing the current practice of NCS debriefing.

Purpose

In this study, my research aim was to explore and describe the current practice of NCS debriefing. This exercise often occurs as a group experience; thus, it is a complex social as well as educational phenomenon. I, therefore, studied the phenomenon as it naturally occurred, including study of educators, students, environment, and interaction among these entities.

Research Question

The research question was the following: How is NCS debriefing currently practiced? The educator guiding the debriefing activity is a primary focus; however, debriefing is an interactional process constructed by both educator and learner. Thus, learners' responses were also included as integral to a description of the process.

Rationale for Studying NCS Debriefing

Debriefing has been addressed minimally and generally with an overall simplicity. Several authors have superficially mentioned the importance of NCS debriefing (Jeffries, 2007; Johnson-Russell, 2007; Lasater, 2007). Baldwin (2007) discussed a debriefing session following an emergency pediatric NCS and refers to debriefing as a critical part of the exercise; yet does not specify what the debriefing entails or the anticipated outcome of debriefing for students. One seminal study has provided empirical evidence of the importance of debriefing as compared with no debriefing (Savoldelli, Naik, Park, Joo, Chow, & Hamstra, 2006). At this initial stage of development it is important to ascertain the current state of debriefing practice. After the current practice has been explored and described, researchers and educators will have a foundation upon which to expand their research and practice, study theory supporting the practice, explore the purposes of specific methods, or study the outcomes of the process.

Theoretical Perspective

Through a constructivist paradigm, I view the world as having many truths determined subjectively by individuals. Ontologically, I believe numerous realities exist and subjective reality is influenced endlessly by multiple entities, such as culture, values, and environment. My educational views align with constructivist; I follow a pedagogy that allows learners to interact

with their environment and construct their knowledge or view of the world. Dewey's (1938) theory of experiential learning posits that learners interact in and with the environment and make meaning of the experience from past, present, and future. Kolb (1984) and Schön (1987), followers of Dewey's experiential learning theory, contribute structure and detail with their views of reflection, a piece of Dewey's theory. I perceive the basic tenets of experiential learning (Dewey, 1938), reflective observation (Kolb, 1984), and reflective practice (Schön, 1987) to be manifested in NCS and debriefing. I discuss further in chapter three how these concepts serve as the underpinning for the initial data analysis.

In the tradition of qualitative inquiry, I will now state, or bracket, my assumptions, my own beliefs, and my values about debriefing.

1. Holding true to constructivists, I believe the learner may make meaning from experience; thus, discussion during a debriefing exercise should reflect learners' derived meaning of the experience.

2. Through my years of experience as an educator, I am comfortable bringing forth emotionally charged questions for learners to explore how they might respond if the situation occurs with or to them.

3. From my experience with simulation, I believe learners need to know the objectives of the experience prior to simulation, which allows learners a time to practice new skills or concepts without repercussions or grading of performance.

4. I believe all learners should be encouraged to verbalize during debriefing, which demonstrates my value of their thoughts, feelings, and actions.

Design and Methodology

Qualitative research is a method of inquiry used to explore phenomena through identifying idiosyncratic patterns of behaviors (Madjar & Walton, 2001). Field and Morse (1985) described qualitative research as a method of choice when little is known about a phenomenon. Scant literature has addressed NCS debriefing and an exhaustive search found 15 scholarly works; five are data-based studies that inform NCS educators of evidence-based practices. I have experiential knowledge of my specific NCS debriefing practice and scant knowledge of what a few other educators do during debriefing or what informed their debriefing practice. I have studied NCS debriefing through a qualitative lens to assist in exploring and describing the content and process of current NCS debriefing practices.

Yin (2003) described case study design as useful "empirical inquiry that investigates a contemporary phenomenon within its real-life context" (p. 13), especially when "multiple sources of evidence exist" (p. 14). I chose to use case study design to assist in constructing a detailed view of the content and process of NCS debriefing within the context it is currently practiced. NCS debriefing is a complex contemporary phenomenon containing multiple sources of evidence as well as the perceptions of both educators and students.

Data Collection

A hallmark of case study research design is the use of multiple sources of evidence: documents, archival records, interviews, direct observation, participant observation, or physical artifacts (Yin, 2003). My aim was to explore and describe the current practice of debriefing; thus I explored the phenomenon as it was practiced. I observed actual debriefing sessions and studied the videotapes of the sessions. I interviewed the educator participants and obtained completed

questionnaires from both educator participants as well as student participants. I also reviewed

any documents that the educators used or referred to during the debriefing. In chapter three I

describe the data collection and analysis procedure in detail.

Data Analysis

Data analysis was an iterative process with two distinct phases. First, each case was

studied as a single case. After cases were analyzed individually, a cross-case analysis ensued in

search for patterns or potential typologies of instructor participants. Data were studied through

different matrices to discover replicating patterns. Communication, time/timing, structure, and

emotion were four concepts derived from a critical analysis of the literature and formed the

initial matrix of data analysis. As cases were reviewed this matrix underwent revision and

distillation; both convergence and divergence of findings between and among cases emerged. An

external analyst, experienced in case study research, served as a safeguard to rigor and to

increase credibility of findings. I describe the analysis process in detail in chapter three.

Strengths and Limitations

Qualitative traditions of inquiry lend themselves to naturalistic as well as analytic

generalizations, leading to greater understanding of phenomena (Denzin & Lincoln, 2000;

Merriam, 1998). Naturalistic generalization is a human's tendency to generalize inductively to

other similar cases in one's own setting, which is a practice very cogent to healthcare and

practice professions. Analytic generalization in qualitative inquiry, as described by Yin (2003),

involves comparing results to theory. In case study, Yin supports comparison of findings to a

rival hypothesis or theory as well as a chosen theory. Patterns may emerge during data analysis

that support the original theoretical framework and rival theories may challenge those of Dewey,

Kolb, and Schön. A rival theory or hypothesis may become increasingly evident during the cross case analysis of data.

Trustworthiness is used in qualitative research when discussing credibility, dependability, and confirmability of findings (Lincoln & Guba, 1985; Polit & Beck, 2004). Strategies such as triangulation, peer examination, and knowing one's own biases at the onset of research are used to enhance trustworthiness (Merriam, 1998; Polit & Beck, 2004). All three strategies, along with safeguards, were used to enhance this study's credibility.

Geography, economics, access, and time were all considerations in an attempt to produce a realistic and holistic view of current debriefing practice through a limited number of highly diverse cases. My position in the Tennessee educational nursing community allowed access to several of the gatekeepers of the private and state institutions, which allowed for purposeful sampling to capture extensive variation in a small number of cases.

Significance to Nursing

Findings from these four cases present provocative ideas for future research regarding the debriefing process in NCS as well as how nursing education is retooling itself for a new century of clinical education. From this foundational work, subsequent research can address the value or specific aspects and move the state of the science toward defining and testing best practices.

In the following chapters I will explore and describe the current practice of NCS debriefing. In chapter 2, I review the literature of debriefing from three main bodies of literature: education, medicine, and nursing. Chapter 3 contains information regarding the methodology and design for this research. I provide a thumbnail view of each case in chapter 4 and discuss across case findings in chapter 5. I conclude with chapter 6 and present lessons learned from these

findings. A recommendation for current practice of nurse educators includes gaining more experience with teaching methods of debriefing and videotape viewing of self debriefing to inform own practice as well as perform reflection of practice.

CHAPTER 2

Literature Review

Nursing clinical simulation equipment is becoming widespread, with a 20% increase in sales every year since early 2000. This translates into 12,000 to 15,000 simulators, with varying fidelity, sold for use in nursing education venues (J. Pahlow, Northeast Director of Sales, Laerdal Medical Corporation, personal communication, July 29, 2008). Yet, little attention is given to the postexperience teaching and learning encounter (i.e., debriefing), which is referred to in the literature as the crucial or pivotal point to learning and the heart and soul of simulation (Baldwin, 2007; Gaba, Howard, Fish, Smith, & Sowb, 2001; Rall, Manser, & Howard, 2000).

Simulation has been shown to improve students skill performance, alter attitudes, and enhance knowledge (Jeffries & Rizzolo, 2006; Lasater, 2007; Radhakrishnan, Roche, & Cunningham 2007; Seropian, Brown, Gavilanes, & Driggers, 2004); however, what actually occurs during NCS debriefing is unknown. As a nurse educator, I have witnessed thousands of students' reactions during debriefing and have seen student behaviors suggesting evidence of confidence building, growth in valuing others beliefs and culture, and growth in ability to perform self and peer evaluation. Conversely, I have seen students' reactions to debriefing experiences suggest that self confidence was obviously dented and students' abilities were not enhanced in any of the three domains familiar to educators: cognitive, psychomotor, and affective (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956). I have searched for literature about debriefing to learn how better to facilitate NCS debriefing; yet, there is scant, primarily anecdotal or opinion, information. The current practices of NCS debriefing are unknown so this is where I begin my research.

In this chapter, I discuss three areas of related literature: education, medicine, and nursing. Experiential learning, reflective observation, and reflective practice have shaped my views of nursing education, specifically NCS debriefing. This study was guided philosophically and theoretically by these theories and concepts that emphasize reflective aspects of growth. I critically analyzed literature of debriefing. I begin with the history of simulation and debriefing.

A Brief History of Simulation and Debriefing

History of Simulation

Beginning during World War II, simulation was used to train pilots for difficult maneuvers in an attempt to preserve valuable equipment, such as airplanes, from disastrous ends (Hamman & Rutherford, 2005; Scherer, Bruce, Graves, & Erdley, 2003). Currently, private, commercial, and military pilots continue mandatory flight simulations to gain knowledge, skill, and experience in managing critical disastrous situations (Hotchkiss & Mendoza, 2001).

In addition to training pilots with simulation technology, the military has used simulation to assist in the training of front line medical personnel (Roberts, While, & Fitzpatrick, 1992; Seropian, Brown, Gavilanes, & Driggers, 2004). It was not until the 1960s that advanced technology of simulation reached the healthcare field, specifically medicine. Asmund Laerdal developed Resusci-Anne®, a torso mannequin, and helped revolutionize training healthcare professionals in cardiopulmonary resuscitation (Bradley, 2006). In 1960, Abrahamson and Denson developed a full-body simulator, Sim One®, and used this reactive simulator to assist the development of psychomotor and decision making skills with anesthesia students (Hotchkiss & Mendoza, 2001).

Simulation has been conducted at various levels of fidelity throughout the years in nursing education to aid in skill acquisition, including using fruit to practice injections (injecting oranges), practicing on other nursing students, and using static mannequins or low fidelity simulation devices (Tanner, 2006). As the awareness of high fidelity simulation (HFS) continues to grow, nurse educators have realized benefits to its use, such as creating specific patient situations for students to practice in an environment that does not allow for patient or student harm.

History of Debriefing

The military is a common origin for both simulation and debriefing. The term debriefing had its beginning in the armed forces. The United States Army's chief historian during WWII, Brigadier General Marshall, is known for beginning what is termed historical group debriefings (HGD). His intent was to learn about soldiers' encounters vicariously through group discussions where they recounted the events of combat, their feelings, and their decisions (Fillion, Clements, Averill, & Vigil, 2002; MacDonald, 2003). An unexpected finding was the soldiers appeared to feel psychological benefits following HGD, what Marshall termed a *spiritual purge* (Marshall, 1947), which symbolized cleansing of one's actions during combat. Currently, the term debriefing continues to carry a military connotation in the context of apprising a leader, such as the President of the United States, with current happenings. This type of debriefing is intended as a reporting of events or occurrences to facilitate informed decision making.

In 1983, Mitchell, a psychologist who worked with emergency services personnel, developed a debriefing method called critical incident stress debriefing (CISD). Unlike HGD, this type of debriefing is primarily for therapeutic effects. Fillion, Clements, Averill, and Vigil

(2002) proposed a method called peer defusing that combines HGD and CISD to assist soldiers exiting combat to return to a normal life. Their proposed method included the recounting of events as well as discussion of feelings. However, peers are used as the medium for exchange rather than professional therapists.

Currently, CISD is still being used, researched, and questioned as an appropriate method for debriefing after traumatic events. Although Mitchell (1983) and Fillion, Clements, Averill, and Vigil (2002) had different intents than Marshall (1947), the basic mechanisms of recounting events, discussion of actions or decisions, and discussion of feelings are similar six decades later.

Dyregrov (1989, 1997) adapted Mitchell's format for CISD, emphasizing process and flexibility. Process debriefing (PD), according to Dyregrov, must be flexible depending on the type of group being debriefed, particularly regarding time and meeting routine. Support for flexibility in time constraints and structure is echoed by Armstrong, O'Callahan, and Marmar (1991). Armstrong et al. (1991) recount a debriefing model implemented for Red Cross disaster personnel following the 1989 San Francisco earthquake. In review of that debriefing work, Armstrong et al. suggested that 12-15 workers meet for 2-hour sessions for more thorough work. This small group size would allow for intimate exploration of workers' thoughts and feelings. The groups would meet once a week in a quiet environment away from the work situation to decrease distractions. These authors concurred with Dyregrov that two factors important in debriefing are time and timing, that is, the length of time debriefing occurs as well as the proximity to the event being debriefed.

Few randomized controlled trials have been conducted to test the efficacy of debriefing for therapeutic purposes. Nonetheless, CISD and PD are practiced. The term debriefing

continues to evolve, preserving bits of military and psychology nuances and informational as well as emotional undertones.

Literature of Debriefing

A small amount of research exists on postsimulation debriefing practices, specifically NCS debriefing. Thus, I broadened my literature search to include works from education and healthcare literature. The total number of scholarly works in this review is 15: five from education and 10 from healthcare. Only five of these works are data based; the other ten are expert opinions. I will begin with discussion of education literature.

Education Literature of Debriefing

None of the works from education literature are evidence-based research studies. They provide important theoretical and conceptual information worthy of mention to this study.

Twenty five years ago, Lederman (1984) discussed the critical nature of debriefing in the classroom. Lederman differentiates educational from psychological debriefing due to the emphasis on the learning derived from experience. She proposed a more accurate term for educational debriefing, "postexperience analytic discussion process" (Lederman, 1984. p. 415), which she refined from her earlier term "cognitive assimilation of experience" (Lederman, p. 419). The objectives of the process are to assist learners in new ways of seeing, perceiving, and making sense of experiences.

To assist the learner in making sense of an experience, Lederman speaks to specific skills educators must master, including a sense of timing. Lederman describes timing as knowing when to select the right time for a discussion. Lederman and Ruben (1984) provide structure to

debriefing through a list of questions created to ensure guided discussion of specific pieces of experiences.

Like Lederman and Ruben (1984), Pearson and Smith (1986) who are also educators, provide structure for the debriefing process with three segments represented in question format: "What happened?", "How did the participants feel?", and "What does it mean?" (p. 158). These questions reflect aspects of military, psychological, and educational debriefing. The sequencing and content of these questions provide a specific structure for a debriefing experience. The authors posit that assisting learners to answer these three questions requires educators with strong interpersonal and interventionist skills and the skill of timing, defined as the ability to choose an exact moment for emphasizing action for optimal effect (Timing, 2008). The length of time for debriefing suggested by Pearson and Smith is to be no less than the time given for the experiential learning activity, typically requiring more time. Similar to Lederman (1984), Pearson and Smith emphasize communication with the learner, structure for the experience, and skill of the educator.

Sims (2001) concurs that education debriefing is a cognitive activity. He prefers the term "post-experience analysis" (Sims, 2001, p. 179) and agrees debriefing is the neglected stage of experiential learning. Sims utilized Kolb's model of learning to illustrate his use of debriefing while teaching a business ethics course. Kolb's (1984) experiential learning cycle provided a structure to link specific questions for debriefing. Sim's questions are focused on the same three areas as Lederman (1984) and Pearson and Smith (1986), that is, communication, feelings, and meaning derived from the experience.

Factors Sims (2001) identified as influential to the length of time for debriefing include

"purpose, complexity, intensity, student responsiveness, and format" (p. 182). Sims did not offer

a specific length of time for debriefing; however, he did allude to the loss of richness of the

activity if adequate time is not allowed.

Petranek (2000) suggested the next vital step in the experiential learning process is

written debriefing, that is, reflective activity after time spent processing and gathering thoughts.

Petranek, a sociology educator, has worked with students for 25 years and uses written

debriefing to extend the experiential learning activity and assist learner reflection. He

emphasized (a) the importance of reflection to learning and (b) a typical oral debriefing does not

allow enough time for valuable reflection. The primary ingredient for valuable reflection,

according to Petranek, is time elapsed.

In contrast to Petranek's (2000) view of time for reflection is another group of educators,

Rudolph, Simon, Dufresne, and Raemer (2006), who insist on debriefing directly following a

simulation exercise. Simon, Raemer, and Rudolph (2008) have developed their debriefing

practice to acknowledge the importance of two aspects: timing and relationships. Timing for

these authors is immediacy, that is, not allowing for breaks between simulation and debriefing.

Relationships between the educator and learner are defined with the concepts of trust and respect

(Simon, Raemer, & Rudolph, 2008). These two concepts are consistent with psychological

debriefing techniques.

Rudolph, Simon, Rivard, Dufresne, and Raemer (2007) utilize an educational learning

theory, double-loop learning (Argyris & Schön 1978) to base their practice of debriefing. They

developed a communication technique, a*dvocacy and inquiry*, to assist educators to discover a

learner's frames or mental model, which drove their actions. Rudolph et al. (2007) have performed over 2000 debriefings in healthcare education and state their practice of advocacy and inquiry has inadvertently stimulated their own self reflection as well as instrumented behavior changes for trainees.

In summary, four concepts emerged from all five educational reports as important to the practice of debriefing: communication, time/timing, emotion, and structure. Communication in debriefing is defined as discussion of events or recall of events during an experiential learning exercise, which is succinctly stated by Pearson and Smith (1986) as a question to the learner, "What happened?" (p. 158).

Time emerged as a controversial factor in debriefing. Time can be defined by how long a debriefing lasts, when a debriefing occurs in relation to the experiential learning, who speaks when and for how long, and the role of silence. Pearson and Smith (1986) are the only authors to qualify how much time should be spent in debriefing. Timing was referred to as a particular skill educators use for emphasis at an exact moment in time.

Attention to a learner's affective domain is a third theme from this literature. Again, all the authors speak to the need of learners to describe or discuss their feelings or emotions following an experiential learning exercise. They acknowledge the importance not as a psychological therapeutic effect but as a meaning making effect reflective of Dewey's philosophy of experiential learning.

The fourth concept, structure for a debriefing, is defined as a pattern of organization or how the experience is anticipated to flow. Lederman (1984), Pearson and Smith (1986), Sims (2001), and Petranek (2000) all have a structure or organization to debriefing. In opposition to

such a finite structure, Rudolph, Simon, Rivard, Dufresne, and Raemer (2007) primarily allow the learner to drive the debriefing. The immediacy for reflection that Rudolph et al. strive to ascertain creates the beginning structure for their debriefings, signifying a potential relationship between or among the concepts time and structure.

Thus, works from expert educators provide four concepts for educational debriefings: communication, time/timing, emotion, and structure. There appears to be an interweaving or relationship among these concepts. For example, to allow for discussion of emotions or feelings, a greater length of time may be required. Also, structure and time also appear to have a relationship: the more rigid the structure the less time required. It remains unclear if there are relationships between and among these four concepts.

<div align="center">Medical Research on Debriefing</div>

Scant research is available in the medical literature about studies concerning the debriefing phase of simulation exercises. Opinion articles refer to debriefing as critical, crucial, and pivotal points in the experiential learning process. Of the six articles reviewed, three are data-based research, and one of these takes place in the actual clinical setting.

A seminal study about the value of debriefing after medical clinical simulation was conducted by Savoldelli, Naik, Park, Joo, Chow, and Hamstra (2006). They used a randomized control design comparing two types of debriefing compared with no debriefing following a simulation experience. The two experimental groups received a verbal or a verbal plus video-assisted debriefing wherein participants viewed their actual performance.

The instrument used for scoring performances of the 42 anesthesia residents had established reliability and validity. The intraclass correlation coefficient was used for

measurement of the interrater reliability of 0.64, a somewhat low range, is worthy of mention affirming that even in a very structured environment with a valid and reliable tool there can continue to be variability between and among trained raters seemingly because of the wide range of possible human behaviors that can occur.

The subjects in the experimental groups performed significantly different than the control groups as analyzed using a one-way between-subjects ANOVA ($F(2,39) = 6.10, p < .005$). Post hoc comparisons revealed improvement of scores in subjects receiving feedback. The subjects in the experimental groups incorporated comments from debriefing for their next simulation and scored higher than the control groups who received no debriefing. There was no postexperience discussion of the control group's performance and their scores did not improve on the second simulation.

The findings from research by Savoldelli, Naik, Park, Joo, Chow, and Hamstra (2006) supported what many have thought about debriefing but never tested: Debriefing was important; skill performance had a significant improvement with verbal and verbal plus video-assisted debriefing as compared with no debriefing. By requiring each group to adhere to strict protocols during the debriefings, the results could have been more generalizable to other teaching centers. A major limitation to that study is the variation in the amount of time allowed for the verbal and verbal plus video-assisted debriefings; no time limit was created. Also, each of the debriefing facilitators used their own styles of debriefing adding confounding variables. There were neither guidelines, definitions, or limitations on time spent debriefing, nor any differences in the amount of time in a verbal debriefing versus a verbal plus video-assisted debriefing. Nevertheless, it seems that debriefing was helpful regardless of these variances.

Clay, Que, Petrusa, Sebastian, and Govert (2007) developed an assessment tool based on clinical best practices that would enhance the learning experience for intensive care medical residents, prompt self-reflection, and assist in documentation of performance. The researchers attended to multiple checks for validity and reliability throughout the study. Eighteen resident physicians took part by using at least one of the five developed debriefing cards, which were checklists of best practice procedures written on a hand-held size card used to facilitate communication of performance to their attending physician (teacher, evaluator). The researchers discovered the greater the number of cards used by a resident over the test period the higher the evaluation received. Subjects who used more cards described them as useful learning tools. The debriefing cards provided structure to both the physician in training and the evaluator. The theme of timing arose in that study in the form of promptness of feedback to the subject.

The use of simulation and debriefing to teach metacognitive skills was attempted by Bond et al. (2004). Metacognition was defined by the authors as "thinking about thinking" (Bond, 2004, p. 439). Fifteen medical residents, in their emergency medicine rotation, participated in a qualitative study focused on the use of simulation and debriefing as a teaching tool for metacognition and error avoidance. The design for that study used a survey and interviews to obtain data (no information on these instruments was included). A software product, NVivo, was used to assist researchers to organize as well as categorize 225 transcript responses. Intercoder reliability analysis on 64 of the passages had a kappa value of 1.00, meaning all four coders were in perfect agreement.

Of the 15 medical resident subjects, eight were in the third postgraduate year and seven were in the second postgraduate year. The groups participated in simulation exercises and a

debriefing exercise described as a 5-minute oral discussion and a 15-minute videotape regarding metacognitive strategies. The researchers discovered third-year residents were able to articulate what is meant by metacognitive strategies following the debriefing exercise. However, the second year residents on average continued to focus on acquiring knowledge. The residents overall ranked simulation and debriefing second only to in vivo patient care. A recurrent theme identified was that mistakes elicit reflection. As such, the authors spoke of the need for additional study of this method of education.

Time spent and timing continues to be areas of interest. No study has indicated how much time should be allowed for a debriefing session.

Nursing Research of Debriefing

Several writers have addressed the need for reflection during or after simulation; however, only one nursing study indicates empirical evidence of this need. Jeffries and Rizzolo, in conjunction with the National League for Nursing (NLN) and Laerdal Medical (2006), conducted a national, three-year, multisite, multimethod study. The aims of that research endeavor were to (a) develop and test models of simulation, (b) develop a core group of nurse educators in use of simulation, (c) add to the body of knowledge in simulation and education, and (d) demonstrate the value of collaboration.

Random assignment of 403 students occurred with three groups using, respectively, a paper and pencil teaching case example group, a low fidelity simulation group, and high fidelity simulation group. Measures used were adapted or created specifically to quantify presence and importance of design features of simulation and educational practices as well as to measure changes in student self-confidence, knowledge, and perception of performance after the learning

experience. Six instruments' (except the self-perceived judgment performance scale) test/retest

reliability was analyzed using Cronbach's alpha, which ranged from 0.86 to 0.96. Content

validity was established by experts in simulation.

A framework for simulation was designed, simulations were created, and uniformity of

instructors' implementation of the simulations was addressed. Jeffries and Rizzolo attended to

the importance of debriefing by creating a script of questions to guide the debriefing sessions as

well as establishing a time limit of 20 minutes for the debriefing sessions, which were two

features missing from the study by Savoldelli, Naik, Park, Joo, Chow, and Hamstra (2006).

A major finding specific to debriefing was that the student subjects identified debriefing

as the most important design feature of simulations. Students' self-confidence ratings increased

with active learning followed by reflective exercises. Other findings supported hypotheses that

feedback facilitated learning and that simulations provided an opportunity for students to apply

and synthesize knowledge. Self-Perceived Judgment of Performance Scale was adapted from the

Judgment Performance Scale developed by Facione and Facione (1998). Scores on this

instrument showed no significant difference among groups regarding their self-evaluations of

performance; however, students have been shown to self-evaluate according to the contextual

nature of the exercise (Gaba, 2002). Gaba explains how students self-evaluate according to

specific objectives met or not met independent of the complexity of the exercise.

Following that three-year study, Jeffries (2007) edited a book detailing various concepts

involved in simulation, theoretical framework, evaluation of simulation, and guided reflection.

Decker (2007) presented the beginning rationale for the use of educational concepts from

experiential learning theory for use with NCS debriefing, referring specifically to Dewey, Kolb,

and Schön. She presented two tables outlining facilitator responsibilities for guided reflection, thereby establishing the beginning of evidence-based practice for NCS debriefing, an exercise Decker refers to as deep and often provocative thought.

Lasater (2007) studied simulation and clinical judgment, sharing Lederman's (1984) view of debriefing as an integral element wherein a student is being led through a discussion. Although Lasater's research was not about debriefing, she comments on the necessity of assisting students to cope with their emotions following simulation, thereby addressing the affective domain of learning during debriefing.

The importance of debriefing following a simulation exercise is echoed in both nursing and medical literature. Two authors, Baldwin (2007) and Johnson-Russell (2007), remarked about what they believed to be important to debriefing. Baldwin (2007) offered structure to the dimension of time by first allowing for immediate reflection with a short discussion following a simulation exercise. Next, she allowed for additional passage of time to occur for the learner to reflect on the exercise before drawing conclusions. A strict structure was imposed by Baldwin by asking students to write about two specific areas of their performance: strengths and weaknesses. By restricting topics to be addressed, strengths and weaknesses, Baldwin limited students' written reflection through not encouraging students to write about what was important to them in their experience, which is non-reflective of constructivist beliefs of personal meaning making from experience. What was important for students' learning or growth remains unknown in this format.

Contrary to Baldwin's strict format Johnson-Russell (2007) presented a more loose structure to debriefing process and outlined four stages: "introduction, personal reactions,

discussion of events, and summary" (p. 11). She addressed the affective domain of learning during personal reactions stage and placed it before the review of the events. The concept of meaning making was described as taking place in the summary stage of debriefing. Baldwin and Johnson-Russell reflect major concepts of education as well as medical literature of debriefing. Johnson-Russell also includes a psychological component in her beliefs of debriefing.

<div style="text-align:center">Summary</div>

Debriefing has been dubbed the heart and soul of simulation (Rall, Manser, & Howard, 2000). Other simulation debriefing authors agree and refer to debriefing as the crucial or pivotal point in simulation (Baldwin, 2007; Gaba, Howard, Fish, Smith, & Sowb, 2001; Henneman, Cunningham, Roche, & Cumin, 2007), but there is little evidence of data-based investigation in debriefing practices. Four aspects of the debriefing process (communication, time/timing, structure, and emotion) are reiterated by multiple authors as important during debriefing and require further investigation. Nursing clinical simulation is burgeoning and we know little of the real world practices. What do practicing educators believe to be important to the debriefing process? Do we see evidence of the four concepts, communication, time/timing, structure, and emotion, in everyday debriefing sessions?

The next chapter includes the methodology and design I chose to investigate the current practice of NCS debriefing with an eye toward these four concepts. I chose a specific design for exploring and describing NCS debriefing practices, consistent with my philosophical underpinnings as a constructivist, and to include context by gathering data from actual observations in real time, not solely self-reports or self-administered scales.

CHAPTER 3

Theory, Design and Method

Philosophical and theoretical frameworks for this study include a constructionist view of education and concepts of experiential learning, reflective observation, and reflective practice, based in the philosophy of Dewey and theorists Kolb and Schön. The views of constructivists differ in consideration of reality, experience, and individual or social priority (Merriam, Caffarella, & Baumgartner, 2007). My constructivist views are consistent with those of Dewey regarding how knowledge is constructed, that is, from individual experiences and making meaning of those experiences. As a constructivist, I believe that learning is a process of individual meaning making from experiences.

Experiential Learning

Experiential learning (Dewey, 1938), or learning by doing, is rooted in the practice of apprenticeships where repetition of practicing skills produced masters in a craft. As a constructivist, Dewey believed education occurred through experience; however, not every experience results in education or learning. The learner must interact with the environment, *interaction*, and make meaning of the experience from past, present, and/or future, *continuity* (Dewey, 1938). According to Dewey, the learner should experience interaction in and with the environment in a situation relevant to their practice, *situational context*.

Experiential learning is an integral part of nursing education, a practice profession. Students are expected to acquire knowledge from reading and classroom lecture. Knowledge and experience are gained through practice of nursing skills in the laboratory and in clinical encounters with live patients; both of these activities are experiential. However, as Dewey states,

learning may not always occur from an experience. Debriefing, with a reflective component, provides an opportunity to link knowledge and experience or, in this case, knowledge, skill, and meaning derived by the student.

I chose Dewey's theory of experiential learning as an overarching guide to my research. Dewey's thesis, interaction in and with the environment and continuity or making meaning from the experience by reflecting on similar past experiences or discussing future implications, creates an easily understood theoretical approach to NCS and debriefing. Simulation provides the situational context for the learning that can occur and the environment where students interact. Debriefing provides the venue where continuity or meaning making of simulated experience can be captured, because reflection can be structured and built into debriefing.

<div align="center">Reflection</div>

Educational theorists have created models or frameworks to emphasize certain aspects of experiential learning they viewed as essential. As a follower of Dewey's constructivist views, Kolb (1984) created an experiential learning model representing four cyclic stages learners venture through to understand experiences: "concrete experience, reflective observation, abstract conceptualization, and active experimentation" (p. 30). Noteworthy of debriefing is Kolb's reflective observation stage wherein the learner discusses the experience, ponders what went well and what needs improvement, seeks affirmation from others, or learns alternative methods of problem solving. Kolb posits that learners gain insight and understanding after this cognitive process, salient with Dewey's meaning making.

Schön (1987), another experiential learning theorist, was interested in learning through reflection as it relates to practice professions. He further deconstructed experiential learning

through isolating reflection itself and expanding on its meaning. He perceived two methods of reflection in praxis: *reflection in action* and *reflection on action* (Schön, 1987, p. 54). Schön described reflection in action as thinking while performing, that is, responding to surprise or confusion during an experience. By reflection in action a learner may devise a new solution to a problem while working.

Schön (1987) described reflection on action as the ability to pose questions to self (or others) following an event, which perhaps leads to questioning one's practices and need for change. Reflection on action requires time to consider alternatives and entertain various approaches; thus, the necessity of extended time to thoroughly think through reasons for own actions and exploration of alternative solutions.

Clinical nursing simulation experiences can allow for both reflection in action and reflection on action. Reflection on action may occur during the postexperience teaching and learning encounter (i.e., debriefing). Currently, the actual practice of nursing clinical simulation debriefing is not discussed in detail in the literature; there are no published reports as to what methods of debriefing are used or if reflection on action is a goal of the debriefing process.

Dewey's theory of experiential learning (1938) was used as an overarching guide to this research, as explicated by Kolb's stage of reflective observation (1984) and Schön's theory of reflective practice (1987). I engaged in reflective observation and looked for evidence of students and instructors engaging in reflective discussion on action during debriefing.

Aim of Study

The opportunity existed to explore and describe current practices of debriefing in nursing simulation. The aim of this study was to explore and describe the current practice of NCS

debriefing in nursing schools in Tennessee that were in various stages of adoption of this innovation. The research question was the following: How is NCS debriefing currently practiced? The use of direct observation in real time, review of a videotape of the observed debriefing, content of semistructured interview, and written questionnaires provided a multifaceted, detailed view of the current practice of debriefing within the context it was practiced in four cases.

The focus of the research was the activity of debriefing; however, individual responses were integral to the process. Focal points were process and content. Process was operationalized as time spent in certain aspects of exchange, such as how much time did the educator dominate the conversation? Process also was driven by structure, such as a strict organizational structure possibly hindering full exploration of students' questions, reflections, or feelings. Content was operationalized by what is communicated during the debriefing experience. The content included the dialogue and questions and answers educators and students discuss. Both process (structure, time) and content (cognitive and emotional) can contribute to or hinder reflection and meaning making, and, according to Dewey's theory, might facilitate or impede learning.

An extensive review of the literature of clinical simulation in nursing, medical, and educational literature reveals little research about debriefing following HFS, particularly about NCS. To study an area where little is known, Madjar and Walton (2001) described qualitative research as a method of inquiry used to help better understand experiences and phenomena through creating an awareness of "idiosyncrasies and patterns in human behavior and by providing descriptions and theories of the processes involved" (p. 38). Qualitative research is also known to assist in discovering data that were not known to exist (Madjar & Walton, 2001). I

chose to study NCS debriefing through a qualitative perspective to assist in exploring the process and content of NCS debriefing practice.

Three important aspects of NCS debriefing led to my choice of qualitative case study design: little is known about NCS debriefing, the real-life context is integral to the study of debriefing, and multiple sources of data exist in debriefing. Case study fosters an in-depth multidimensional study of the particular in an attempt to see the complex interactions of persons and environment in a situation. Qualitative case study design supports research where little is known about the phenomenon (Madjar & Walton, 2001), and where context is integral and multiple sources of data are to be studied (Yin, 2003). This design fits the research question and aims for three reasons:

1. Phenomenon of interest. Debriefing is an interaction between educator and student within a social context. Case study design allows for the direct observation of this interaction as well as engagement of subjects with interview and questionnaire to explore their thoughts and feelings about the interaction.

2. Type of inquiry. To study the phenomenon of debriefing, qualitative inquiry assists the research to proceed with a more humanistic approach, acknowledging various domains during the process, such as those familiar to education, cognitive, psychosocial, and affective domains (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956) with various forms of qualitative inquiry: observation, videotape, interview, questionnaire, document retrieval, and field notes.

3. Congruency of philosophical and theoretical ideology with constructivists. An experiential approach to observing and gathering data in essence is experiential learning about experiential learning.

Sample

  In this study, I sought to explore and describe a "contemporary phenomenon" over which I had "no control over events," which are two prime indicators for use of case study design (Yin, 2003, p.1). Case study design allows for the study of single or multiple cases. I chose multiple cases because little is known about NCS debriefing and I wanted to answer a broad question of how debriefing is currently being practiced; therefore, the more cases, the wider the lens. I chose to use study sites within Tennessee primarily because of ease of entrée. The boundary of each case is important in case study research (Stake, 2006), and Creswell (2003) states the cases are bound by "time and activity" (p. 15). Boundary for individual cases in this study included educator(s) and student(s) involved in the debriefing, environment where debriefing occurred, and exchange between participants. A primary focus was on the educator and the teaching processes; however, the process of exchange with the students and among students was inextricably bound to a study of teaching learning processes.

  My first-hand experience and knowledge of the phenomenon helped decide the number of cases to be studied (Stake, 2006; Yin, 2008). Purposive sampling is used in qualitative study to obtain a greater variety of opportunities for intense investigation (Denzin & Lincoln, 2000). A concerted effort was made to explore three major geographic regions of Tennessee to increase the probability of what Miles and Huberman (1994) refer to as maximum variation. No data exist regarding the proposed question of study; therefore, a purposive sample of four individual cases was proposed as an adequate number to acquire sufficient intercollegiate variation. Maximum variation of sampling allowed for greater possibility of a broader picture of the current practice of debriefing.

Participant Inclusion/Exclusion Criteria

Of the 24 professional nursing schools in Tennessee four were targeted as potential study sites due to location, variation, and ease of entrée. There was deliberate action to choose study sites from the typical three geographic locations of Tennessee: West, Middle, and East. The fourth case was from the northern portion of East Tennessee, an area politically and culturally distinct from the remainder of East Tennessee. Exclusion criteria in the study were any professional nursing schools wherein the investigator supervised nurse educators, or instructed or assigned students' grades in NCS.

Each case was studied in its naturalistic setting, that is, during an NCS debriefing activity. Sites included the NCS laboratory or an adjacent classroom on a university campus. The rooms for the debriefing varied by size, types of furniture, arrangement of seating, storage for additional classroom equipment, and open and closed window blinds.

Educator participants could have any specialty of practice, teach any semester of a professional nursing program, and have varying years in nursing practice and teaching experience. Student participants could be in any nursing course currently using NCS. All potential student participants in a group had to agree to participate or the group was not included.

Gaining Access/Entrée

Access to research participants is a process dependent much on the characteristics of the researcher, participants, and the focus of the study (Carey, McKechnie, & McKenzie, 2001). In this study, participants were asked to allow observation and recording of a learning activity and to communicate their thoughts and emotions about the activity. The focus of the research was not the participant but rather the activity of debriefing; however, individual responses were integral

to the process. Trust is a defining factor in gaining access (Carey, McKechnie, & McKenzie, 2001). I had discussions with key persons at multiple schools in Tennessee and developed trusting relationships. It was these initial contact persons who assisted in removing barriers to entrée. To maintain confidentiality for the participants, I removed any identifying information from this work. There were concerns students might not agree to being observed in such a situation (see Appendix A); however, not one potential participant, student, or educator declined.

Letters of Support

Interest in pursuing participation in this research was elicited with telephone conversations to deans and directors of schools of nursing in Tennessee, beginning July 1, 2008. I also received oral communications from multiple deans, directors, and educators expressing a desire to participate in this research study. Once I received letters of support from deans and directors of universities (see Appendix B), I then contacted educators and set dates and times for data collection. I maintained a log of communication, the beginning of my chain of evidence. According to Yin (2003), the chain of evidence serves to increase the reliability of information in a case study. I removed the log from this work to maintain confidentiality of participants as well as universities.

Human Subjects

Informed consent

Following Human Subjects Protection approval from The University of Tennessee, Institutional Review Board (IRB) (see Appendix C), I obtained permission to observe and videotape the debriefings from the dean or director of the respective schools of nursing. No university required a separate review by their human subjects/IRB. Participants, both educators

and students, who chose to participate signed informed consent forms for participation and

verified separately for the use of videotape or audiotape recordings to be viewed or heard by the

researcher/observer, chair and members of the dissertation committee, and transcriber (see

Appendix D and E). Participants received a copy of the informed consent with contact

information for the researcher, chair, and governing IRB.

Voluntary Participation

Participation in the study was voluntary. Participants did not receive remuneration for

their time. Both student and educator participants received the opportunity to experience nursing

research from the participant view. Results of the research process will not be individually

shared with the participants; however, all participants were given written notification of how to

access the completed dissertation on the informed consent form.

Confidentiality

Because the information of each participant and university is confidential, the participants

and representative universities are not revealed in this study. Participants' names and affiliated

institution remain in strictest confidence with the researcher. Cases were assigned an

identification number and access to this identifying information was restricted to the researcher,

dissertation committee and chair, transcriber, and IRB. The key to identification is stored in a

locked cabinet in my home. No one else had access to this document. Each participant's

identification will be safeguarded by shredding identifying documents (any document with a

participant's name, the document containing the key to assigning case numbers to universities,

and the log of communication) as soon as the chair acknowledges successful completion of the

dissertation and calls for document disposal. Informed consents will be kept at the College of

Nursing in a locked file cabinet for three years after the completion of this study, defined as successful defense of the dissertation.

Observation was of simulation and debriefing. I videotaped only the postsimulation debriefing session. All participants were reassured their identity would be held in strictest confidence. The videotape and audiotape recordings will be used only for purposes of the study and continue to be stored in a locked cabinet in my home and password protected on my computer. I am the only person with direct access to the tapings. The video recordings were seen by none other than myself and my chair; they will be used for no other purpose.

Unanticipated Effects: None occurred

Participants could withdraw from the research at any time; however, none did. There were no anticipated harmful effects from participation in this study. No participants experienced any unanticipated incident. No student reported or evidenced extreme distress during the taping or questionnaire process. Any incident would have been reported the IRB at both the research site and the research institution governing. No calls or inquiries have been received by the Chair or the IRB at the time of this writing.

Safeguards against Coercion

No grade involvement was connected to participation in the study; therefore, student participants had no grade coercion connected to the study. Prior to informed consent procedures, I gave each potential student participant blank paper and asked for a written yes or no for desire to participate in the study. The papers were then folded to obscure the answer. I then reviewed the answers. All potential participants had written yes; therefore, the informed consent procedures commenced.

As a group, potential student participants were read the consent form, had time to read it, were asked if they had any questions, and signed for informed consent without the educator participant present. Without the educator present, each potential student participant should not feel coerced to partake in the study or receive repercussions for not participating. Student participants willingly signed the consent forms as acknowledgment of comprehension and consent. Consent was also acknowledged by signature for videotaping or audiotaping, practices familiar to many students during simulation for critique and learning purposes. The same consent procedure applied to educator participants. If one or more participants refused, that site would not have been used for that group of students.

Dissemination of Results

Future anticipated dissemination of the study results will maintain strict confidence in security of participant names and affiliated institutions. Although identification may be possible to the state of Tennessee and geographic regions, none was documented in field notes or in the description of each case, even the Chair did not know which case was from which assenting institution although she had access.

Videotape and Audiotape Security

Videotape and audiotape recordings collected during the study remain in a locked cabinet at my home and on my password protected computer, where only I have access. All video and audio media collected will be shredded or deleted depending upon the media three years after successful completion of the study.

Data Collection Procedures

Data collection followed a set protocol for all cases (see Appendix A). After I received

signed informed consents, I observed the simulation activity. Following the simulation, I

observed and videotaped the debriefing activity and started field notes. Interviews and

questionnaires followed to assure viewing of the debriefing was not influenced by any

questionnaire data, such as beliefs of importance of debriefing or experience of the educator.

Upon completion of the debriefing activity, a written questionnaire concerning thoughts and

feelings about the exercise was completed by student participants (see Appendix F). After

students left, I conducted and recorded a face-to-face semi-structured interview separately with

each educator in a private area (see Appendix G). At the completion of each interview, the

educator was asked to share any documents or notes used to inform their debriefing practice,

only one offered a document. Each educator was asked to complete a written questionnaire

concerning their thoughts and feelings about the debriefing (see Appendix H). After all these

interactional aspects were completed, I left the building and completed field notes.

Data collection in case study research can become an iterative process wherein each case

informs subsequent data collected. Each case may inform data collection until the entire process

is complete (Gillham, 2000, p. 25). For example, as each individual case was reviewed after

collection, the results could prompt a rephrasing or addition of an interview query; such a change

must be considered carefully. Yin advises the use of multiple case study design follow a logic of

" replication" (Yin, 2003, p. 53); thus, individual cases should serve as multiple experiments. My

intent was to alter my process as little as possible to capture variations among educator

participants. After review of first two cases, instruments seemed sufficient to capture breadth and depth of data and no revisions were made.

Yin (2003) describes three principles imperative for data collection in case study design: "multiple sources of evidence, a case study database, and a chain of evidence" (pp. 97-105). Multiple sources of evidence allows for a broader range of investigation (Yin, 2003). In this study video, audio, questionnaire, and interview data were collected. A case study database is imperative to organize data and document accuracy of events during data collection. Data sources were catalogued so bits or bites could be retrieved. This process could be aided by software, such as IMovie, MS Word, or Transana, to catalog video clips (Spiers, 2004). I chose to use NVivo 8.0 software to assist with cataloguing and organizing the vast amount of video, audio, and text data. According to Yin (2003), a database increases reliability and provides for the maintenance of a chain of evidence. If there had been any alteration in the data collection procedure, documentation would have been added to the database regarding how, when, and why changes transpired.

<div align="center">Collection and Analysis</div>

Collection and individual case analysis may co-occur, as previously suggested. After the first and second cases were collected, discussion ensued with the chair of the dissertation committee (Chair) to review adherence to study protocol, (see Appendix A) credibility of data collected, and initial discoveries from individual cases. Both data-based validity and trustworthiness of early analytical threads were goals of this review. Adjustments could have been made at this time depending upon data review. In qualitative iterative studies questions may vary as the work progresses (Swanson, 2001). After discussion via telephone with the Chair, it

was agreed to maintain adherence to interview and questionnaire questions. Yin (2003) suggests the use of replication logic for multiple case study so that the researcher will maintain consistency, adherence to protocol, among the cases.

The Chair served as independent reviewer of all data, viewed videotapes independently, and discussed my preliminary findings after each case was conducted. After each additional case was observed, contact with the Chair again occurred to discuss researcher adherence to scheduled research protocol, review of audit trail, and any striking discoveries. These were all techniques Meadows and Morse (2001) suggest to safeguard researcher bias and assist in the rigor of the study.

Another technique was used to safeguard researcher bias. Prior to data collection, I videotaped my performance of a NCS debriefing, viewed my own performance to discover bias, and evaluated my own biases. In addition, the Chair viewed my performance and read an evaluation of my own bias. Then the Chair and I discussed my identified biases, and she suggested a few observations of her own. The viewing of this personal videotape served as a practice viewing of data for both the researcher and Chair, and offered insight in the data analysis process as well.

<div align="center">Data Analysis</div>

Data analysis in this study had two distinct phases: individual case analysis and cross case analysis. Each individual case was reviewed for evidence of reflection and the observance of any of the initial four concepts present in the literature, communication, structure, time/timing, and emotion. These aspects were then checked for convergence or divergence of the different data sources. Then, a cross case search for patterns or potential typologies of educator

participants ensued. The researcher was guided during the data analysis by the research protocol as well as through discussions with the Chair.

The Chair, experienced with case study research, served as mentor for the development of the design. She also had a role in the trustworthiness of the data analysis. Although I was the main analyst of the data, the Chair served as a second check of data independently, following my initial pattern discoveries. I discussed my findings with the Chair, verifying all data sources and that all data were considered. Alternative meaning to the data were discussed with the Chair and any conflict was resolved with the videotape data as primacy. Behavioral evidence had to be in the video. Any speculation or inferred meaning was compared to videotape for confirmation or disputation of evidence of any inferred meanings.

Various matrices were used in attempts to discover similarities and differences among the four individual cases. Four concepts identified from a critical analysis of the literature (time/timing, communication, structure, and emotion) formed the initial data analysis matrix. Other matrices to sort and display the data were categories of process and content including quotes, non-verbal action, talk time, silent time, document content used by an educator, leader of debriefing, and student engagement. Each viewing of the data through various lenses reduced data to grouped pieces based on these first level preordained categories and any subsequent emerging categories.

The videotapes were the first pieces of data analyzed. Each case's videotape was viewed multiple times with distinct intent. The first intent was to take a grand tour for general observation purposes and tone of the debriefing. The next viewing was to time certain aspects of the process; I timed how long the educators talked as well as the students. The remaining time

was subtracted and accounted for as silence. In other viewings I studied the types of questions asked by the educators, which led to analysis of types of teaching strategies used. I counted feedback remarks and calculated frequency counts by educator and student and then by positive and negative.

The videotapes remained the lead source of information throughout the entire analytical process and served as the primary source if any dispute or disagreement among sources occurred. The remainder of data sources (interview, questionnaire, and field notes) was analyzed within cases. The educator semi-structured interviews were transcribed and read to begin the analysis of convergence/divergence within cases of videotape and interview transcripts. The next step was to transpose educator and student questionnaire answers into Statistical Package for the Social Sciences (SPSS) and determine frequencies. A statistical consultant from the Office of Information Technology (OIT) at the University of Tennessee, Knoxville (UTK) was used to assist in determining the appropriateness of frequency calculations and specific statistical test as well as use of graphic representation of data. Sharon Husch, PhD, adjunct faculty in the Department of Statistics, Operations, and Management Science at UTK, served as a second statistical reviewer. A third statistical reviewer, Mary Dietrich, PhD, from outside the UTK system, was consulted for review of the appropriateness of frequencies and graphs and to determine specific statistical tests for data of three questions from the student questionnaire.

After each individual case analysis was complete, I began writing a description of each case, which is a suggestion by Yin (2003) to assist in identification of broad similarities or differences among cases. These individual case specific similarities and differences helped

illuminate the next matrix and movement to the cross case analysis. A thumbnail overview of

each individual case is provided in Chapter 4.

<div style="text-align:center">Cross Case Analysis</div>

Iterative viewing of the data through various lenses began the reduction of the data.

Creating individual case descriptions was the first analytical method used to begin cross case

analysis. From these individual case descriptions I reduced the data using several techniques:

categorical aggregation, time-ordered displays, content analysis, and pattern matching. Repeated

viewing and comparing continued to reduce and collapse data. I began to cluster data under

broader categories. Stake (1995) refers to this process as categorical aggregation, that is,

repeatedly scrutinizing data until categories surface. I repeatedly viewed the videotapes, read the

transcripts, reviewed the quantitative data, and held several discussions with the Chair following

her viewing and reviewing data. The convergence or triangulation of data from multiple sources

provided support for the categories as they emerged.

Time-ordered displays of data helped to materialize and cluster even more categories.

Time-ordered displays help cluster data by time and or sequence (Miles & Huberman, 1994).

The timing and sequencing of events in debriefing led to linking certain events and development

of patterns. An example is a *swoop*, a term I coined to describe a formation of curved lines that

were used as I transposed the videotape text. On paper a swoop pattern emerged when I

documented a question from the educator, the student response, and then a subsequent expansion

on the topic by the educator, followed up with another question without changing the topic.

Drawing the sequence enabled me to visually display in picture form what had occurred in that

moment of the debriefing. Support for patterns such as this emerged with time-ordered displays of data.

The software NVivo8 assisted in maintaining a database as well as helping to categorize data. As I began to code data for content, content analysis, I reduced text data or words to a matrix of codes (Ryan & Bernard, 2003). NVivo8 uses tree nodes, parent nodes, and child nodes in reference to categories. This software also allows addition of color to each piece of data categorized letting the user call up by color all data reflective of that category.

In qualitative inquiry the instrument of analysis is the investigator (Denzin & Lincoln, 2000; Merriam, 1998). Direct interpretation of data served as another method of analysis. As the "bricoleur" (Denzin & Lincoln, p. 1020) I interpreted the meaning of data. I structured the derived concepts and patterns into a final matrix presentation of data. It was this final matrix where pattern matching across cases materialized and the triangulation of data sources from observation, videotaping, interview, and questionnaire merged to formalize cross case patterns.

Yin (2003) described pattern matching as one of the "most desirable techniques" of analysis in case study. The strength of patterns emerged from data are enhanced by a good match between empirically determined and predicted patterns. I began to see pattern matching between emerged patterns of empirical data and the original four concepts derived from the literature, communication, structure, time/timing, and emotion. The final cross case synthesis of the emerged patterns produced seven patterns, four patterns matching those of the literature and three new patterns.

By the end of analysis, I had formed a montage in my mind of each case individually and as a whole. A montage blends sounds, images, and understandings to form a new picture. Denzin

and Lincoln (2000) described how a montage is created "the quilter stitches, edits, and puts slices of reality together" (p. 5). I believe the emerged patterns, described in chapter five, are like a quilt that were stitched together from multiple sources of data, the threads and patches of the quilt.

Safeguards to Rigor

In qualitative research there is no attempt to generalize findings based on random assignment or selection or normal distribution. Rather, the study is of the particular that may inform about the complexity of experience within context. Through observing actual NCS debriefings, I observed human behaviors in their contextual settings. Contextual and human factors are not controlled in case study; rather they are part of the desired data. Human factors could have presented a problem in both data collection and analysis, and safeguards to the rigor of the analysis were built into this design; some of these have been mentioned.

Credibility and Trustworthiness

Validity of findings is important in qualitative research, but only internal validity can be safeguarded. Merriam and Caffarella (1999) described internal validity in case study research as "the findings are able to capture reality" (p. 201). In naturalistic inquiry validity is supported by the study's credibility and trustworthiness, terms used when referring to rigor and validity (Lincoln & Guba, 1985).

Trustworthiness of case study findings may be enhanced through the use of several strategies, such as triangulation, peer examination, and knowing one's own biases at onset of study (Merriam, Caffarella, & Baumgartner, 2007). Through data triangulation, credibility is enhanced from multiple sources converging on the same patterns. Peer examination fosters

credibility of findings in that colleagues support or fail to support findings as they too examine

data. In this study the Chair served as a peer reviewer. An audit trail was kept and reviewed by

the Chair to assure that data were not selectively ignored, but that all data were reviewed.

Triangulation

Triangulation, a process used to analyze multiple perceptions in an attempt to clarify

meaning (Denzin & Lincoln, 2000), is well suited for case study designs. This case study

attempted to formulate a multifaceted picture of each educator participant's current practice and

the influences that may be informing debriefing practices, such as years of experience as a

teacher or as a nurse, and beliefs regarding theory bases informing teaching. Through the use of

triangulation as part of data analysis, study credibility was enhanced with the convergence of

data from multiple sources on the same patterns; data from videotape, interview, and student

questionnaire come together on the same pattern.

Identification of Bias

As mentioned earlier, I self-evaluated a videotape of a recent NCS debriefing I facilitated

as a type of bracketing interview. I reviewed the videotape, documented what I believed as

important, and discussed my findings with the Chair to aid in identification of my biases of

debriefing. These videotape findings were not included in the study data; however, the findings

did inform the analysis procedures. The process of watching the videotape and transcribing

assisted in the determination of software to use to manage the vast amount of data as well as

being able to compare notes with the Chair. Moreover, the Chair served as peer reviewer for data

analysis as well as a beginning to establish trustworthiness of pattern identification.

Additional Threats to Credibility

The Hawthorne effect (Brink & Wood, 1998) and halo effect (Polit & Beck, 2004) are acknowledged as potential threats to the credibility of the study findings. Subjects may have performed differently related to participating in a research study or being videotaped and audiotaped. Also, I could have unknowingly inferred conclusions prematurely during observation. Case study design does not lend to random assignment of groups of subjects to assist in controlling for the Hawthorne effect nor does the design lend itself to multiple direct observers. However, during NCS a student may have the expectation of having been videotaped, so the Hawthorne effect may be dampened through exposure. Peer review served as a check for halo effect as debriefing videotape findings were explored.

Another threat to credibility of data existed in the viewing and listening to each subject's videotape and audiotape. If the researcher is the only observer, the analyses gleaned from the data are questionable. Triangulation of analysts is a suggested method in case study research to corroborate findings or conclusions (Yin, 2003). The Chair reviewed video and audio tape and documents as a check on this risk to internal validity.

<div align="center">Strengths and Limitations</div>

A limitation for any small study of this type is the lack of generalization of study results beyond the borders of the four cases. However, naturalistic as well as analytic generalizations are important in the greater understanding of phenomena. With naturalistic generalization, the reader becomes aware of things as if they had experienced them, referred to as vicarious experience through narrative (Denzin & Lincoln, 2000). In case study design, the detailed, narrative description of individual cases can imply a feeling, information, or even an attitude familiar to a

reader from a different background. Although this study is oriented to nursing, naturalistic generalization may occur to other disciplines using debriefing activities.

Analytic generalization may occur in an attempt to gain better understanding or better theorizing of phenomena (Denzin & Lincoln, 2000). Yin (2000) described analytic generalization as the "process of comparing the study results to a known theory" (p. 32). Patterns emerged that supported the theoretical framework and concepts of Dewey, Kolb, and Schön. No rival theory emerged as a better fit during the cross case analysis of data. Interestingly, the concepts from the theoretical frame became increasingly applicable as analysis went deeper.

<p align="center">Summary</p>

This is a qualitative study supported with an element of quantitative research, frequency counts, aimed to explore and describe the current phenomenon of NCS debriefing as it was currently practiced. Case study design required repetitive procedures for data collection from multiple cases. Four cases were studied, which included 6 educators and 23 students. Multiple sources of data were collected, including observation, videotape, and interview.

The findings provide a snapshot of the debriefing methods used by nurse educators in Tennessee. These findings serve as a foundation for further inquiry into what is currently practiced. The role of reflection on practice as evidenced in these cases will contribute to the body of knowledge of experiential learning, reflective observation, and reflective practice. These findings, as well as unexpected findings, move us closer to the next steps, which may include best practice methods of debriefing with NCS

.

CHAPTER 4

Findings: Individual Cases

Data analysis in this study involved two distinct phases. First, all cases were analyzed individually and then a cross-case analysis ensued. Individual cases were analyzed by reviewing the videotaped debriefing process for evidence of reflection on action and for any of the initial four concepts present in the literature: communication, structure, time/timing, and emotion. Findings from the video analysis were then checked for convergence or divergence of the different data sources. I was guided during data analysis by the research protocol as well as through discussions with the Chair.

Cross case synthesis is an analysis technique that Yin (2003) specifies as relevant for multiple case study. This type of analysis is not typically numeric in nature. It is more representative of a typology of individual cases, looking broader and not simply analyzing individual features. A cross case synthesis only may ensue following the individual case analysis. As patterns emerged from the data collected from the individual cases, matrices for the cross-case synthesis began to develop.

An overview of the individual case is necessary to fully appreciate the patterns, which emerged from the data sources. Therefore, this chapter is a discussion of findings with thumbnails of each individual case. The patterns that emerged from cross case analysis are discussed in Chapter 5.

Case 1: "Using Storytelling"

The simulation began with a 30-minute preparation period in which six students were paired in groups of two. Each dyad was given a simulated patient's chart that contained

information such as medical history, admission orders, an abbreviated nurse report, medications, and objectives for the simulation. Students were allowed to ask questions of the educator or to use their books to look up information they did not know. The median age of the students was 22 years, which ranged from 19 to 28 years. One student was male. Five students were Caucasian and one was African American. Two students had a previous degree, and one student had a license in another health-related occupation. All six students were working toward an Associate Degree in Nursing (AD), were at the end of the first of two years, and this simulation occurred near the end of the second semester.

The content of the three simulations was medical and surgical patient conditions. Each dyad performed a simulation exercise for approximately 30 minutes. Although the patient diagnoses were different and each scenario had its own challenges with medications and patient situations, all scenarios necessitated a decision to call the physician and communicate patient needs.

The debriefing was conducted in the same room as the simulation exercise. The patient mannequin was the focal point; students were seated in small individual desks in a semicircle approximately 15 feet from the patient bed (see Figure 4-1). The educator stood beside the patient. Props on the mannequin, signs above the bed, intravenous fluids infusing in the mannequin arm, and medication cart were all indicators of patient care needs and responsibilities of the nurse. The environment during debriefing resembled impromptu teaching at a patient's bedside, such as rounds made by medical students.
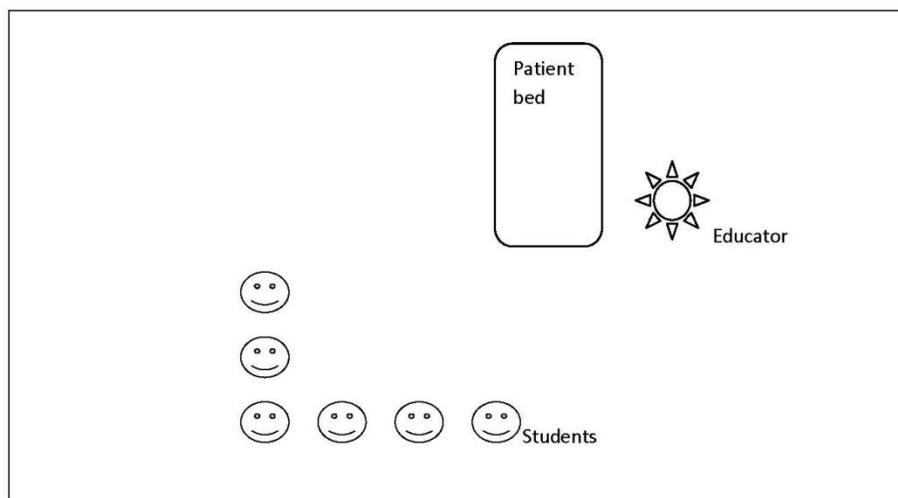
Figure 4-1 Case 1Room Arrangement

The educator had practiced as a registered nurse (RN) for 23 years. She had a Bachelor of

Science in Nursing (BSN) degree and was currently working toward a Master of Science in

Nursing (MSN) degree with specialty in nursing education, and she had completed some

education courses. Her practice specialty was nursing administration. She had taught primarily

in the clinical setting and had been at the particular university for approximately three years. She

had taught using simulation and debriefing for almost two years. She ascribed to a nursing theory

as basis for teaching and practice. Her tone, body language, eye contact, and content were

congruent, warm, and receptive to student participation. Her use of personal storytelling,

describing in detail her own patient care and life experiences, emphasized particular aspects of

the simulation content through offering students another visual of a similar patient or life

situation, which was a vicarious experience for students. While detailing her experiences, her

tone and affect became more animated as she described her inner thoughts and feelings in the moment of patient care. As she shared her personal stories, the student participants were mesmerized. Their attention was unwavering. Each of three simulations lasted 30 minutes for a total of 90 minutes and each debriefing lasted approximately 25 minutes for a total of 75 minutes.

Feedback was offered to students via several methods. A standard format for peer feedback directed to the two student performers was first. Then, the two performers critiqued themselves. Next, the educator began her critique with positive feedback and linked the performance to what actually occurred in real practice. The educator then offered suggestions for improvement. Another method of feedback was when the educator looked to her notes and said "I thought you handled the diet well…," and then continued to offer the two student performers examples of what they said. Her attentiveness to detail during the simulation signaled that she had been watching intently and was interested in their learning and improvement.

The flow of communication was predominantly directed by the educator. However, there was communication from student to student and student to educator. Interestingly, when a student offered feedback, there was minimal eye contact with the intended peer recipient; often the student looked at the educator. During the 25-minute debriefing, student participants talked approximately five minutes, had two minutes of silence, and then 18 minutes of educator talk (see Figure 4-2). Because of the sequencing of Case 1 simulation and debriefing, two students performed simulation and then the entire group was debriefed. I chose to study one of the three simulation/debriefing exercises in place of analyzing all three. The total time in simulation and debriefing for this group of six students for this day was 75 minutes simulation and 90 minutes

debriefing. The end of each debriefing contained a volley of questions directed by the educator, giving the appearance of a tennis match. As soon as one question was answered another was served. For a moment, I was lost in time and had returned to the student role trying to recall answers and I began to feel vicarious anxiety. The students fared well, sometimes getting the answer correct and other times not. The educator engaged for a moment in what I call the 'fishing game' where the educator tried to indirectly get the student to respond to a question with a specific answer. When a student answered incorrectly, the educator rephrased the question until she was satisfied with the answer chosen. Although there may be multiple answers to the question at hand, she seemed to have one answer in mind and rejected all other answers until the specific answer was named.
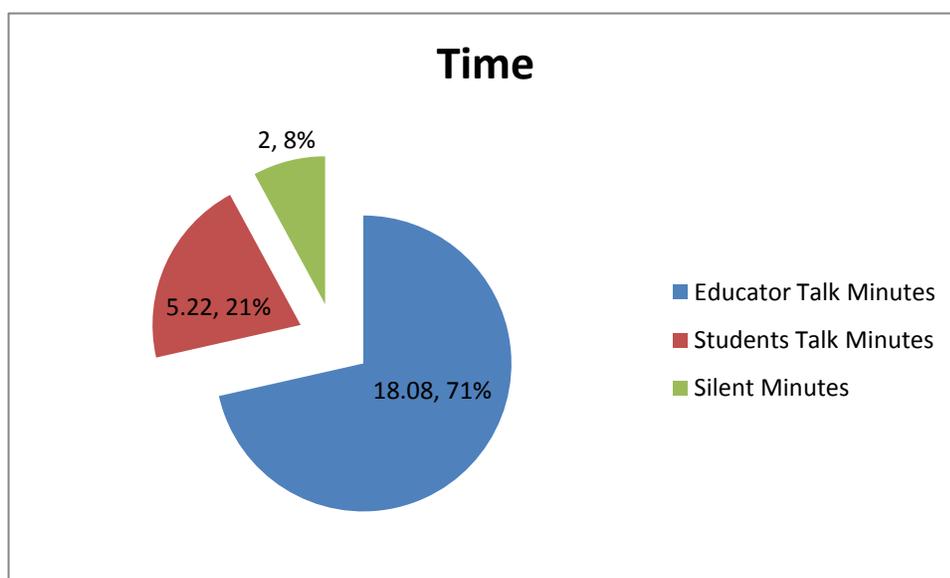

Figure 4-2 Case 1 Debriefing Time

The tone of this debriefing session was one of being natural, sincere, and not forcing an event. Structure was dominated by the educator participant, with an adherence to a specific sequence of questions. The students quickly learned the routine and became anticipatory of questions. The instructor's recounting of actual patient events from her own history (storytelling) occurred multiple times throughout the debriefing.

The student participants were engaged in learning before, during, and after the simulation. During the presimulation time, they asked questions to the educator and while in simulation they performed patient care. During debriefing, the students offered feedback to their peers and were attentive to the educator's use of storytelling. The students' responses on my student questionnaire were congruent with what I observed. For example, in reply to the item "What did today's debriefing mean to you?" one student said the debriefing "increased our chances of responding appropriately to the situation in real life." Another said, "I had tons of questions and it (referring to debriefing) answered them all." Other students echoed the message of debriefing as a place to make meaning to the events of simulation; one student said, "… helping me understand better what the complications were and what was appropriate to do…." Another student said, "it (referring to debriefing) helped me put things together…, I can learn from others' advice and comments."

<div align="center">Case 2: "The Therapeutic Milieu"</div>

Students began to gather, conversation was light, and laughter was in the air. The mood was light and playful. These students were near completion of their psychiatric nursing rotation. They had experienced one other psychiatric simulation at the beginning of this semester with the goal of acquainting them with situations they may encounter with patients while in a psychiatric

healthcare setting; therefore, the concept of simulation and debriefing was not foreign to them and they quickly got started.

The presimulation time was brief and students were instructed about the rules for this exercise. There were seven students, with a median age of 22 years, the range being 20 to 35 years. All students were female, one was African American, and the other six were Caucasian. These students are working towards a bachelor's degree in nursing, scheduled to graduate in May 2010. Two students had previous degrees and none had employment in a healthcare related role.

This was a psychiatric nursing simulation exercise; the content for this simulation was therapeutic communication with the patient. Students took turns simulating the voice of the mannequin patient in response to another student's discourse. Although the patient diagnoses were different, each scenario had its own challenges with therapeutic communication skills. After all students performed a patient interview, the simulation ended. The simulation practicing communication techniques lasted 105 minutes for seven students, which was approximately 15 minutes per student simulated patient interview.

Again the simulation lab was used for both simulation and debriefing. Students and educators were seated in chairs and gathered in a closed circle to initiate the debriefing, which was suggestive of group therapy sessions in a psychiatric setting (see Figure 4-3). The mannequin was not within the circle but was out of direct view. There were two educators; one had been the students' clinical instructor for the psychiatric mental health clinical experience. She was new to teaching as well as simulation. However, she brought to simulation her knowledge of students' interactions in the clinical setting.
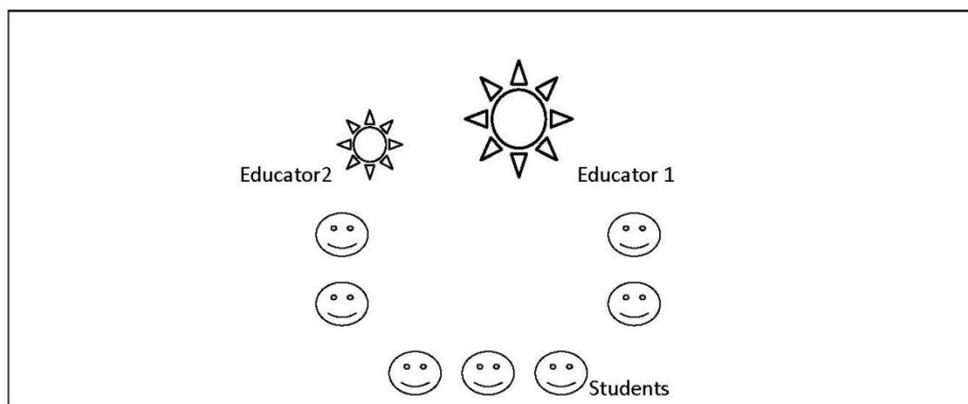
Figure 4-3 Case 2 Room Arrangement

The educator leading the simulation and debriefing (Educator 1) had practiced as an RN in psychiatric mental health for 14 years. She had a MSN degree and had taken two courses in education. She had taught in clinical settings seven years and classroom settings for five years; she had been at this university for three years. She had taught using simulation for the past two years. She had more teaching experience and was mentoring Educator 2 during these exercises. Educator 1 had attended two conferences and an individual training session to learn about simulation and debriefing.

Educator 2 was also prepared at the master's degree level and had practiced as a psychiatric mental health nurse for slightly over four years. Her teaching experience was recent, the past six months, and she had taken no education courses. Both ascribed to a nursing theory as guide to teaching and debriefing practice. Both educators were skilled at communication

techniques, as was evident in the congruency of their content, tone, body language, and eye contact.

Educator 1 structured the debriefing discussion so that peers provided positive feedback to each other. Debriefing was a work session for students as they were the main source for providing positive peer feedback; their comments were integral to the process. It was only after their comments that the educators offered first positive and then constructive improvement feedback and suggested possibilities for how one might alter the performance next time. The process was that students went around the circle, each offering positive comments to the designated recipients. The remarks were very specific, suggesting they had paid close attention during the respective scenarios.

Educators' contributions also followed a pattern: after the peers finished with offering positive feedback, the student performer was then asked to identify anything they would do differently. Then, Educator 2 was asked by Educator 1 to provide her critique of items for the student performer to work on. Finally, Educator 1 offered her suggestions on how to improve.

The pattern was rapidly integrated by the students and the debriefing moved along quickly with no time elapsed as silent. The total time of debriefing, 47 minutes, was spent with dialogue; Educators talked 24 minutes and students talked 23 minutes (see Figure 4-4).

The flow of communication was determined by the structure for the debriefing, established by Educator 1. Each person in the debriefing had the opportunity for equal time to voice their thoughts (see Figure 4-4). The closed circle arrangement of the participants during debriefing contributed to students looking at each other as they offered feedback (see Figure 4-3).

Time

0, 0%

23, 49%

24.37, 51%

■ Educator Talk Minutes

■ Student Talk Minutes

■ Silent Minutes
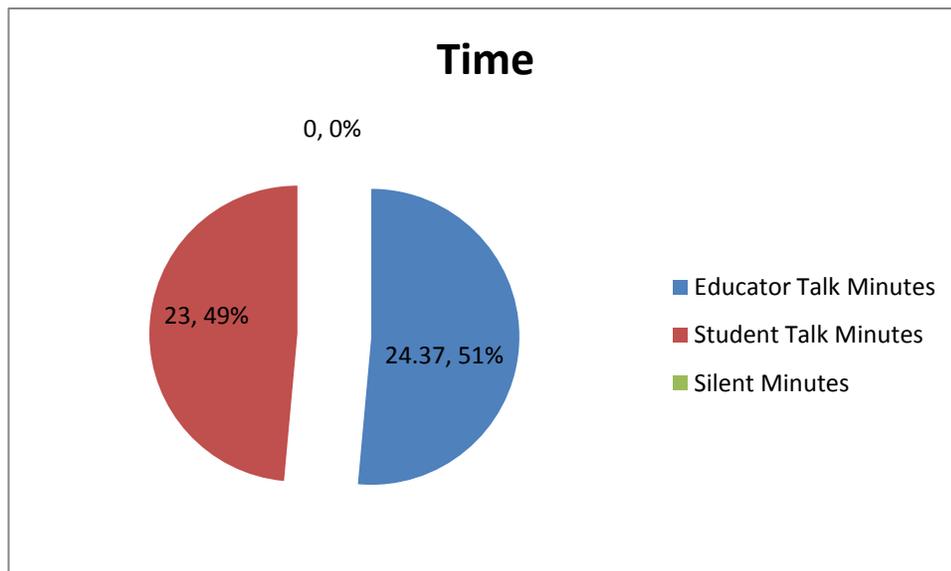
Figure 4-4 Case 2 Debriefing Time

Educator 1 looked down at her paperwork as the students provided peer feedback, facilitating student –student eye contact by diverting her eyes. The educators were the only ones designated to offer less than positive criticism; however, there were a few instances when a student felt comfortable to assist another and volunteered information.

During the 47-minute debriefing, there was an awkward moment when Educator 1 addressed a student prefacing her comment by saying, "I am going to put you on the spot…" The student responded but I continued to wonder whether the situation was resolved for the student. Toward the end of the debriefing, the student returned to the educator's comment and asked for more clarification. Educator 1 responded and addressed the student's concerns. Self-awareness, or learning about oneself, had been referred to multiple times by the educator. The student's awakening of her own bias was stimulated by the educator reflecting what she saw in

the student's performance of attitude. This student was presented with the idea that she was not aware of her bias toward addictions and, through her discussion in the debriefing group setting, her self-awareness was raised.

This debriefing as a whole was about self-discovery. The nature of the debriefing was therapeutic, sincere, unforced, and supportive. It was heavy in process and was driven structurally by the educator; yet, individualism was embraced. It seemed to be a safe and trusting place to discuss behaviors without the fear of reprisal, a classroom therapeutic milieu.

Learning took place during debriefing. Students linked recollection of their own recent experience in the clinical setting as did the clinical instructor, Educator 2, by recalling events and conversations with actual patients. Student responses to the questionnaire item "What did today's debriefing mean to you?" support the growth of insight and self-affirmation of learning with comments such as "It (meaning debriefing) showed me what I have learned through this clinical experience and things I need to work on;" and "I thought it helped me realize I am doing well and that even though I still need some help I'm well on my way to being better than I was."

Case 3: "The Critical, Critical Care Nurse"

Time for presimulation was brief and the primary educator, Educator 1, informed the three students of rules for this simulation. All students were to act in performance as one nurse. One educator managed the fluctuation in vital signs for the mannequin and was the voice of the patient while the other educator portrayed the role of ancillary staff.

There were three students, one was 21 and the other two were 38 and 39 years old. One student was male and all were Caucasian. These students were working toward a bachelor's

degree in nursing, and were scheduled to graduate May 2010. Two students had a previous degree and all three were licensed in another health-related occupation.

The content for this simulation was a patient with a medical condition, cardiac in nature, and the setting was the Emergency Department. The students were responsible for making many decisions at the patient's bedside and were allowed to confer with each other as to the care of the patient.

The visual realism for this simulation was minimal. Visible to the students was Educator 1 who was seated beside the simulator's computer as she altered mannequin values. The voice of the patient came directly from Educator 1, and students looked to her, not the patient, as they asked questions to the simulated patient. The physical environment had few props to suggest an emergency department; it was evidently a classroom setting. Extraneous equipment and posters also distracted from realism. Students were responsible for using their imagination to make the simulation exercise believable. The time spent in simulation was a total of 50 minutes.

The simulation laboratory was also the site for debriefing. The room's purpose had been a classroom, now converted to hold patient beds and equipment, as well as being a simulation room. During debriefing, students were seated in a row of chairs approximately 10 feet across from Educator 1 who was seated next to the bed of the simulated patient. Educator 2 chose to stand nearby, against the wall next to the door. She stood throughout the debriefing (see Figure 4-5).

Both educators had worked with these students in the classroom setting and in adult health clinical experiences. Therefore, they had prior knowledge of the students' performances,

both in the classroom and with actual patients. This situation seemed to lend itself easily to linking students' experiences, knowledge, skills, and attitudes.

Educator 1 had practiced as a RN in critical care almost 18 years. She had a MSN degree and had not taken any education courses. She had taught in the clinical setting for four years and the classroom setting for three years. She had taught simulation for only four months. She did not ascribe to a nursing theory for teaching or practice. Educator 1 was self-taught in simulation and debriefing.

Educator 2 had practiced as a RN in orthopedic and neurology settings for 10 years and had a MSN degree. She had taught in the classroom and clinical setting for approximately five years, all at this university. She had used simulation for one year and had been involved in debriefing for four months.
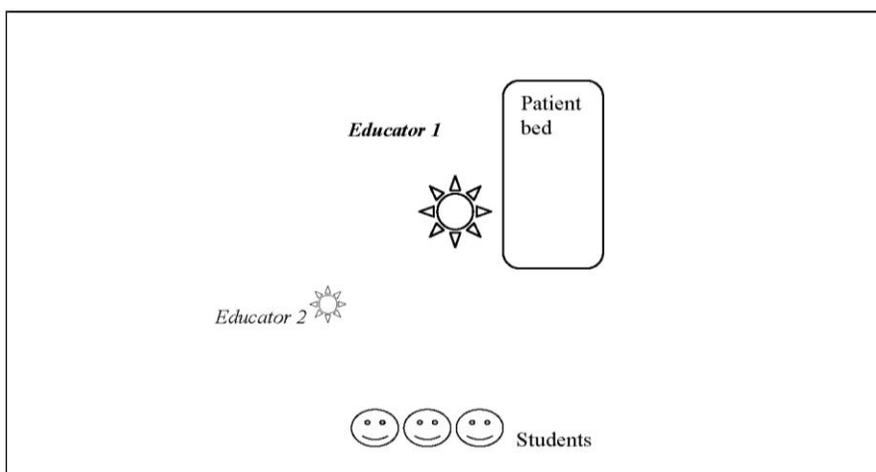

Figure 4-5 Case 3 Room Arrangement

Educator 2 did not ascribe to any nursing theory for teaching or practice. Neither educator had attended any conferences or training sessions on simulation or debriefing. Both educators were seasoned clinicians. They were sharp and quick to identify activity or intervention in need of improvement as performed by students during simulation. Both educators attended to detail and were unwavering in expectations of performing correctly. The debriefing lasted 28 minutes.

Educator 1 set the tone, flow, content, and structure of the debriefing. The flow was rapid and choppy, and was directional from educator to student. The structure was dominated by an accounting of events observed or not observed during the simulation. This activity was definitely on the educator's terms. Educator 1 asked questions and the expectation was clear: students were to have the answers. Rarely did educator 1 make eye contact with students, she read from her papers/notes taken during simulation. She sat slumped over her paperwork, leaned on the patient bed, and seldom smiled. Her lack of eye contact while questioning students, rushed delivery, and body language contributed to a sense of her having a less than positive view of students' performance.

One minute into the debriefing, a statement from Educator 1 confirmed that there was disappointment on her part. Educator 1 began, "You finally did some vital signs on her (the simulated patient) and which no one got a temperature."

A student quickly disputed her allegation asserting the temperature was known. Educator 1 turned to Educator 2 and asked for supportive evidence of the student's statement saying, "Did you see it?" The event diffused when the student described how the temperature was seen on the monitor screen. Questions to the group continued as Educator 1 recalled events

from the simulation. At one point, she asked this group of junior students to predict what the physician would do next. The total time of debriefing was 28 minutes; educators talked 20 minutes, students talked 2.5 minutes, and there was approximately 5.5 minutes of silence (see Figure 4-6). The students never volunteered information nor disputed Educator 1 again.

Educator 2 definitely stayed on the sidelines. For the most part, she spoke only in response to students' comments or questions from Educator 1. Educator 2 had a receptive tone, her message was typically positive, and she used body language to speak to the students. She more resembled a cheerleader for the students when answers were correctly given to Educator 1, with silent hand gestures such as thumbs up. She did, however, offer her own "pet peeve" when asked by Educator 1 for student performance critique. Educator 2 seemed to be attempting to support both teams in the encounter.

Time

5.39, 19%

2.47, 9%

20.13, 72%

- Educator Talk Minutes
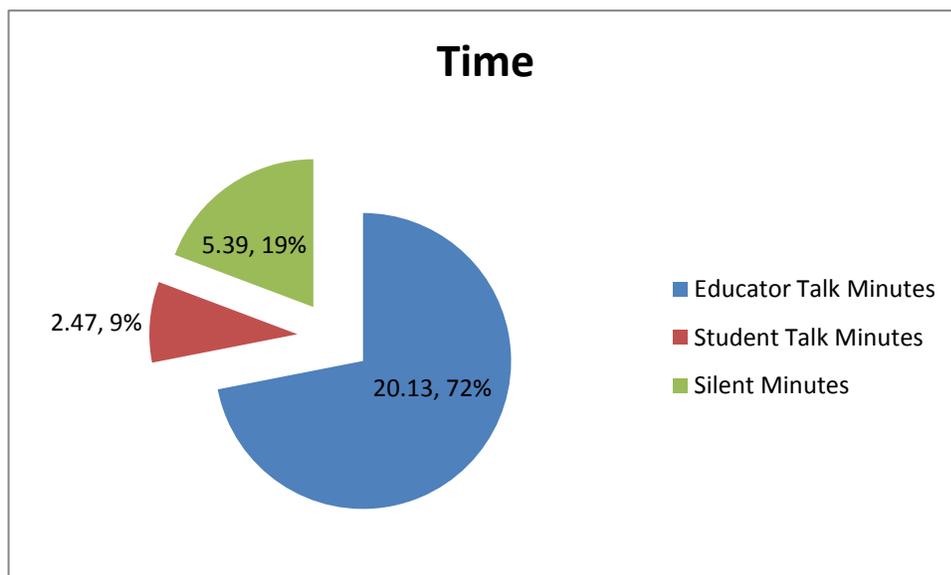- Student Talk Minutes
- Silent Minutes

Figure 4-6 Case 3 Debriefing Time

During the 28-minute debriefing, there were several awkward moments of students'
performance being recalled and retraced to account for accuracy versus inaccuracy. Feedback
came only from the educators, primarily Educator 1. No peer feedback was encouraged.
Debriefing time was filled with questions: 93 questions in 28 minutes, that is, 3.3 questions per
minute. Educator 1 engaged in the "fishing game." For example, she asked, "What would have
been another possibility you could have done with her being short of breath?" When no answer
came after approximately one second, she rephrased the question, and then again rephrased the
question.

The debriefing was heavy in process and structure driven by the educator and
individualism was not embraced. Students volunteered very little and offered very little in
response. Typical answers from students were either one word or short phrases or nodding of
head.

In this case, the students' responses on the questionnaire seemed incongruent with what
was observed. The majority of their answers were of a positive nature. While observing and
watching the videotape, the students' posture, leaning back away from Educator 1, crossed arms
or legs, and head down displayed defeat. In response to "What did today's debriefing mean to
you?" one student wrote: "It showed that I still have a lot to learn when it comes to nursing care
in emergency situations." Another student wrote that the debriefing meant the student had areas
to improve: "…look at areas of improvement and understanding." When asked about their
overall feeling about debriefing these students written responds included: "it was very
informative," "good," and "pointed out things that are missed." The lessons the students

identified as learned today included the areas pointed out as missed by the educator such as "get patient history first," "listen closely, read all information, practice good assessment skill."

Case 4: "Preparing for The Future"

Because of the complexity of this simulation, a more lengthy presimulation discussion of rules began the exercise. The simulated environment was very much what one would see when entering an emergency department patient care area and intensive care unit. The simulated patient was surrounded with machines and tubes and procedure trays and carts full of medications. Phones rang, alarms buzzed, and people entered and exited the patient room to obtain blood and transport equipment. It was frenzied at times, and I began to feel vicarious anxiety.

This simulation involved an older patient who arrived at the hospital with a severe illness and was seen by students in the emergency department as well as an intensive care unit. During the simulation, the patient went into respiratory and cardiac failure and eventually died. The students tried to resuscitate the patient; however, their best attempts could not save him.

This group of seven students had a median age of 22 years with a range of only one year. One student was African American, six were Caucasian, and one was male. None of the students had a previous degree and none had a health related license. These students were working toward a BSN degree and were at the end of the junior year, with graduation scheduled for May 2010.

The content for this simulation was a medical scenario. An overwhelming infection was the immediate acute condition that led to hospitalization, but the patient also had an underlying progressive disease (dementia), which confounded care. Although all students participated in the simulation, each student was assigned a separate role in the care of the patient. For example, one

student performed skills, another communicated with the physician, and another processed medical orders. However, all students were engaged in making decisions and frequently conferred with each other. They were to function as a team.

The total amount of time spent in simulation was 90 minutes. It was a busy and intense 90 minutes, culminating in the patient's death.

In this case, the simulation and the debriefing took place in separate rooms. Although the debriefing occurred in a simulation suite, the room was separate from the simulation site. The debriefing room was large, open, and had multiple patient beds and mannequins. The center of the room was designed similarly to a classroom with a rectangular table and chairs for the students and educator (see Figure 4-7). The Educator was positioned at the head of the table along with a smart board and LCD which she used several times. The environment closely resembled a classroom with the educator as center of attention.

The educator had 38 years experience as a RN, with a current specialty in palliative care. She had 34 years experience teaching in the classroom and clinical setting. She had been teaching at this institution for 5 years, and 2 years had been with using simulation. Her highest degree was a Doctor Nursing Practice (DNP), and she had taken two education courses. She had attended two conferences on simulation and had observed others performing simulation. She did not ascribe to a particular nursing theory for practice, teaching, or debriefing.

This educator was comfortable in her role. Her tone was calm, her body language was open and interested, and she delivered her message with harmonious language. She embedded mini-lectures within the debriefing to expand on concepts such as resuscitation efforts in patients and living wills.
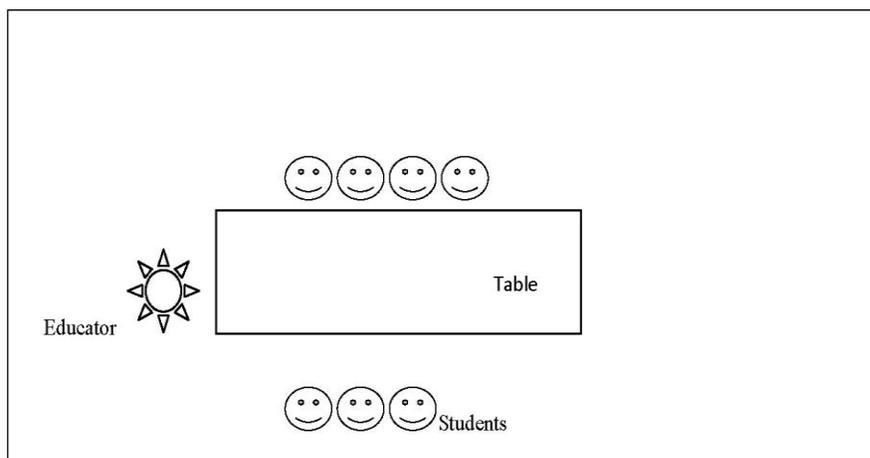
Figure 4-7 Case 4 Room Arrangement

She recounted major parts of the simulation activity and offered direction where needed to correct misinformation. She also used storytelling to emphasize concepts. Emotion was not ignored or misplaced. She acknowledged the role of emotion and used it to accentuate students' decision making process. For example, the educator posed a thought provoking question to the group. Then, she added emotion to the question through the use of more personal language, "What would you do if this were your Daddy?" The students were glued to her. Their eyes did not leave her. They listened intently to multiple ways of how the Educator would phrase a response to the family about end-of-life situations. The debriefing lasted 38 minutes.

Feedback was offered from the educator as a part of, not the sole aspect of, the debriefing. Positive feedback flowed easily from the educator to the student. She prefaced constructive feedback with, "I would have liked for you to…" and then finished with the

behavior she wanted the student to have performed. She related the feedback to a behavior and offered the student an alternative performance, which presented the student a visual of how to perform differently. The educator did not encourage peer- to-peer feedback.

Early in the debriefing the educator addressed a question one student had asked immediately upon leaving the simulation exercise, "Was he (the simulated patient) supposed to die?" The educator reassured the group they were not responsible for facilitating the patient's death. I heard and felt sighs of relief. The students could now relax, let go of this grave responsibility, and continue to learn.

The flow of communication was dominated by the educator. Students were willing to answer and ask questions. During the 38-minutes debriefing, the educator asked 51 questions, and received 64 student responses and 5 student questions. The layout of the debriefing environment facilitated the educator being the center of attention. The students were positioned on either side of her and several times their focus was directed to her at the smart board.

The eventual outcome for the patient despite students' interventions positioned the debriefing for a rich discussion. The total time in debriefing was 38 minutes; the educator talked for 30 minutes (see Figure 4-8). The debriefing drifted from discussion to lecture to thought to questions and answers. Situations and events from the simulation were used to stimulate discussion as well as small lectures. There was not an intense structure, no outline for who had to give feedback, and no calling upon students for specific answers to questions. It was more an insightful time driven by the educator who asked and reworded thought provoking questions and sometimes offered suggestions about how she might answer the question in real life, which was a reflective exercise.

Time

- 2.5, 7%
- 5.05, 13%
- 30.35, 80%

■ Educator Talk Minutes
■ Student Talk Minutes
■ Silent Minutes
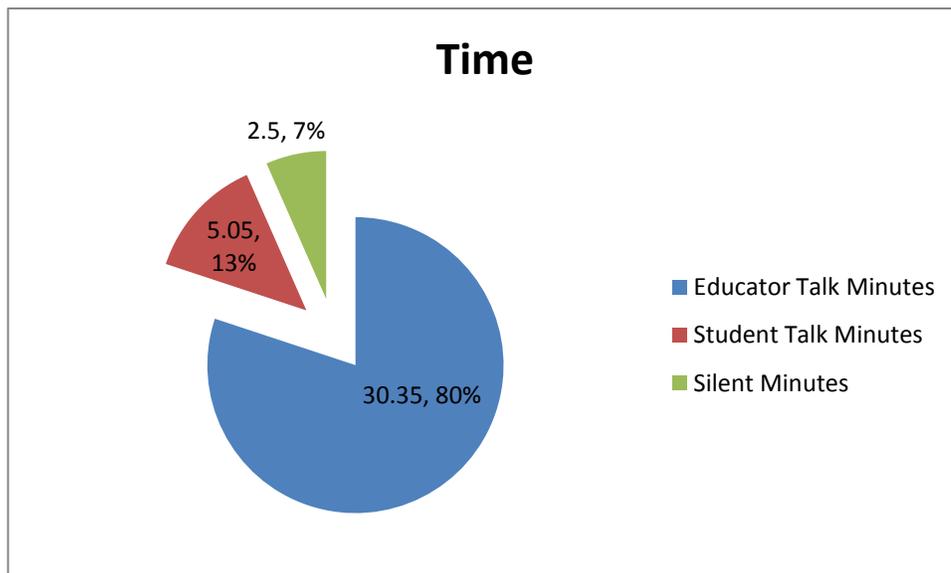
Figure 4-8 Case 4 Debriefing Time

The fishing game did appear. The educator engaged in rhetorical questions, rephrased questions, again rephrased questions, and eventually had the question answered. At times, it was difficult to ascertain if the question was meant to be answered or was stated solely for reflection. If a student wanted to ask a question they did; they asked five questions. If they did not know the answer, they said so without self-reproach. Often students bounced about an answer among themselves until they thought it was correct and then the educator either confirmed the answer or offered greater insight.

Although the content for this simulation and debriefing was grave, the death of a patient, the tone of the debriefing was uplifting, natural, sincere, and honest. The educator forced an event to occur in the simulation, the patient died, which set the stage for the content of the debriefing. She also allowed emotion and facilitated emotion into the debriefing discussion.

Again, the use of storytelling and reflective questioning by the educator facilitated the student learning.

Learning occurred during and after the simulation. The answers from the students to the question "What was the lesson(s) to be learned from the simulation today?" varied in response seemingly according to their diverse role assignment during the simulation. One student claimed the lesson to be learned was "prioritizing care." Another student pointed to "focus on your patient, not always on the machines…," and another student indicated organizational needs when saying "get all my labs before I call the M.D."

Other insightful comments from this group reinforced that learning occurred during the debriefing exercise. This group identified what debriefing meant to them with comments such as "it helped me to pull the entire scenario together…," "…to better gauge my knowledge and skill level and to seek further clarification." One particular student expressed a concern to the educator at the very end of the simulation, the situation was discussed in debriefing, and the student's comment on the questionnaire reflected how she was reassured after debriefing, "I thought that I had really messed up in simulation and that the bad outcome was my fault. The debriefing helped me to see what I could do better, and eased my mind that the bad outcome was inevitable and not my fault."

As evident in just these thumbnail summaries, these individual cases provide similarities and differences of how debriefing is currently being practiced and lend themselves to cross case comparisons (see Table 4-1). The four concepts from the literature as well as other emerging concepts will be further explored across cases.

Table 4.1 Educator Demographics, Questionnaire Answers, NCS Content and Setting.

	Case 1	Case 2	Case 2	Case 3	Case 3	Case 4
	Educator 1	Educator 1	Educator 2	Educator 1	Educator 2	Educator 1
Years as RN	23	14	4	18	10	38
Years Teaching in Clinical	3	7	0.5	4	5	34
Years Teaching in Classroom	0	5	0.5	3	5	34
Years Teaching in Simulation	2	2	0.5	0.5	1	2
Years Teaching in Debriefing	2	2	0.5	0.5	0.5	3
Years Teaching at this University	3	3	0.5	4	5	5.5
Highest Degree	BSN	MSN	MSN	MSN	MSN	DNP
Taken Education Courses	Yes	Yes	No	No	No	Yes
Read about Debriefing	Yes	No	No	Yes	No	Yes
Attended conference/workshop on simulation/debriefing	Yes	Yes	Yes	No	No	Yes
How learned debriefing method used today	Trial & error, Jeffries book, internet search	Conferences and individual teaching session	Life experiences	Talking with students in clinical	Trial and error, watching others	Reading, doing, and making adjustment
NCS scenario setting	Medical & Surgical	Psychiatric		Emergency Department		Emergency Department & Intensive Care Unit
NCS content	Medical and surgical diagnosis	Therapeutic communication		Cardiac diagnosis, urgent		Sepsis, Alzheimer disease, and patient death
Number of Students	6	7		3		7

CHAPTER 5

Findings: Across Cases

I witnessed patterns emerge. Patterns matched original concepts derived from a targeted directed analysis based in the literature: communication, time/timing, structure, and emotion as well as formed new patterns. The original four concepts were foundational in the construction of a beginning matrix of data patterns. A second matrix was assembled from new patterns materialized from the triangulation of data sources. This additional matrix consisted of three patterns: *Accentuate the Positive*, *Higher Order Thinking*, and *Experience Counts*. The initial matrix and the three new individual patterns interlace to form a representation of current NCS debriefing practice.

Initial Matrix

Structure, communication, time, and emotion emerged from the data with strength and reinforced the original matrix of concepts derived from the literature review of debriefing, that is, each of the initial patterns was supported in the literature of debriefing. Frequency counts of behavior, events, or occurrences confirmed these aspects to be present in multiple cases and support these foundational patterns.

Structure

Each case was heavy with structure. Although no one case contained the same structure, they all had structure. The structure of Case 1 was questions, peer feedback, and educator feedback. Positive peer feedback and positive and negative educator feedback were incorporated in the structure of Case 2. Knowledge questions and educator feedback formed the structure of Case 3. Case 4 was the case with a less defined, more diffuse structure, although far from

unplanned or impromptu. Case 4's structure included various teaching methods: questioning, recall of events, storytelling, fishing game, and mini-lecture.

Case 1 Educator was the only one employing a written structure. She gave me the document that reflected verbatim the questions she asked during debriefing. Occasionally, she veered from the questioning structure but never left any one question unasked. Questions asked by Case 1 and 4 Educators mirrored the overall types of questions gleaned from the education literature, as summarized by Pearson and Smith (1986) as "What happened?", "How did the participants feel?, and "What does it mean?" (p. 158).

Case 1 and 4 Educators were on opposing poles of strict and loose structure, respectively; yet, they both were able to cover these three overarching areas, content, feelings, and meanings with a flow that linked current and past experiences. Neither debriefing was solely about the questions. Case 4 Educator employed an ostensibly loose structure, yet it was clear she was able to handle the looseness without losing control and attended to all objectives at some time in the debriefing period. Her structure seemed to follow Johnson-Russell's (2007) suggestions of four stages (introduction, feelings, discussion of events, and summary), although she gave no reference to any one educational or nursing theory. Case 1 Educator had read the book edited by Jeffries (2007) and had purposely incorporated suggestions of deriving debriefing questions from the objectives of the simulation as suggested in that volume as well as the earlier work by Lederman and Ruben (1984). Both Educators from Case 1 and 4 had used a format discussed in the literature, although only Case 1 Educator did so consciously.

Structure also refers to the physical environment; the setting and seating arrangements were described in Chapter 4. The structure for seating in Case 2 was reflective of the structure

Decker (2007) suggests, circular. Case 2 talk time ratio demonstrated more equality between

participants with a ratio student to educator of 1:1. However, equality of talk time did not equate

to depth and breadth of learning or meaning making. The very rigid format seemed to dampen

the thoroughness of exploring the questions, which Lederman and Ruben (1984), Pearson and

Smith (1986), and Sims (2001) believed important to explore following an experiential learning

exercise: recall events, discuss feelings, and explore meaning. Although Case 2 was full of

positive feedback, there was little to no mention of feelings or meaning for the students.

Structure also includes the incorporation of specific teaching methods within the

debriefing encounter, such as the use of structure with debriefing cards to facilitate recall of

behaviors when debriefed by an evaluator (Clay, Que, Petrusa, Sebastian, & Govert, 2007). I

studied pattern frequencies of obvious techniques from the video data and text transcription,

noting when and how the techniques were inserted, which led me to identify what I labeled as

links and swoops. A link is the connection the educator makes between a discussed event with

real practice or personal life. Storytelling is a teaching method that offers a student another way

of seeing or knowing a concept. Both educators in Cases 1 and 4 used storytelling at opportune

times to expand on concepts being discussed. Because these events occurred at opportune times,

links exemplify the skill of timing as discussed in the literature of education by Lederman (1984)

and Pearson and Smith (1986).

Swoops, as mentioned in the analysis section, are so named because they were denoted

by curved lines as I hand coded the videotape text. On paper a pattern emerged when a question

from educator, prompted a student response which then prompted the educator to expand on the

topic and followed up with more questions without changing the topic (see Figure 5-1). The

curved line, swoop, denotes my hand-written transcription of videotape text. The swoop

originated at the student response and curved downward to the educator follow up response. In

Case 4 the Educator swooped eight times; Case 2, with its tight structure, had no swoop marks in
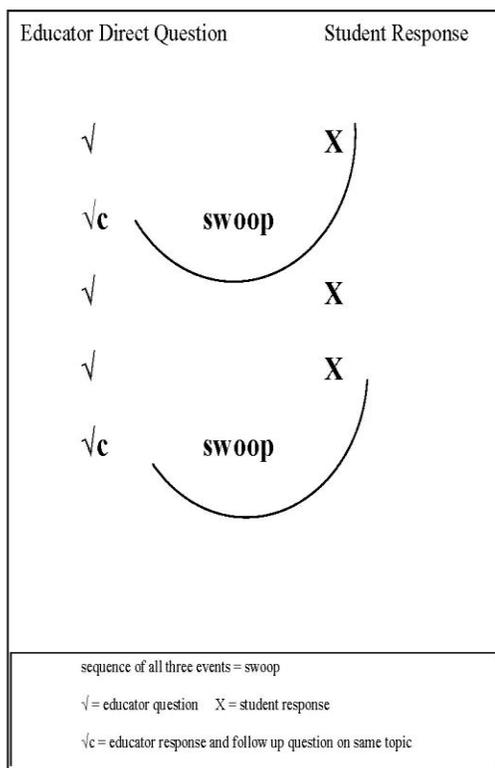
the analysis.

Figure 5.1 Swoop, an emerged pattern from videotape converted to text.

Communication

Communication is defined as "a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior" (Communication, 2009). Communication in the literature of debriefing was defined as a discussion of events, that is, a recall of happenings from the experiential exercise. The symbols, signs, and behavior of communication measured in this study included listening and language. Listening is defined as "to hear something with thoughtful attention" (Listening, 2009). One method of measurement of listening was by the number of swoops or purposeful response and engagement of student performed by an educator. Language is defined as the "words, their pronunciation, and the methods of combining them used and understood by a community" (Language, 2009). Language in this review was exemplified with quotations of participants and expanded to include descriptions of tone and body language.

One measure of an educator's active listening was by the number of swoops an educator utilized during the debriefing time. According to Decker (2007), a skill a debriefing facilitator must have is being able to listen attentively. Educators in Cases 1 and 4 utilized swoops or listening behaviors six and eight times, respectively. Educator 1 in Case 2 did not routinely incorporate this type of format of listening in the debriefing. Each person in Case 2 provided feedback; however, the feedback was often left not connected. On two occasions, Educator 1 in Case 2 acknowledged prior feedback from peers and Educator 2 by saying, "I agree with what everyone else has said." By saying this, she acknowledged and confirmed peer and Educator 2's feedback as on target, and was considered an indication of listening. The type of rigid structure

Case 2 Educator 1 chose to maintain in the debriefing did not demonstrate evidence of listening as defined by swoop.

Educator 1 Case 3 asked 93 questions in 28 minutes; obviously there was not much time for responding to a student answer, expanding with comment, and following up with a question on the same topic. Her hurried manner allowed little time to listen and respond reflectively. No swoops appeared in the mark-up of that text.

Evidence of students' listening is an equally important marker for communication occurring. Case 2, with the prescribed format of each student to give positive feedback on each others' performances, was the best example of students' behaviors of listening. During my real-time observations, I noted that students would recall events or specific words their peer had used during simulation and they did so without note taking. My observation was confirmed by Case 2 Educator 2 during her interview. She confirmed my observation and added, "What stands out to me is how the peers can go back to their other peers and tell them what they may improve on, what they did well on." Not only was Case 2 Educator 2 impressed with the students' listening skills, she was also impressed with their ability to communicate what they saw and give direction to what might work better next time; a concept salient with Kolb's reflective observation stage of experiential learning cycle.

Video data for observed listening behaviors were triangulated with data from student responses and my real time observations. Students from Case 1 said, "I had tons of questions and it (the debriefing) answered them all…" To answer a question communication must ensue that

includes listening. Case 4 students said the debriefing session allowed for them to "…seek further clarification," and to "…ask questions and get feedback."

The students were the listeners in Case 3; they listened to the Educator's questions as evidenced through direct observation of behavior as well as review of videotape of behavior. The students of Case 3 posed only one question. Their answers to the 93 questions were reflective of Educator 1's communication style, short and succinct.

Language is a choice educators make when communicating. Language is not only words spoken but also tone used with pronunciation as well as the display of body language while speaking or in silence. Body language in this study included the posture and facial expressions displayed by the educators as viewed from videotape data. Across cases, Case 3 was an outlier with language. The lead educator's use of language in Case 3 was characterized by short, choppy sentences. When pointing out missed or inaccurate student performance, she would follow up on the few student responses with the word "why" or "what else," and used the fishing game seven times. At 23 minutes into the 28-minute debriefing, one of the silent students offered a response to a question. Educator 1 Case 3 responded quickly, "Right, what else?"

Video data are essential to capturing tone and context; the transcript alone provides none of these communication details. The response of the educator was abrupt. Her body language was congruent with the choice of words, tone, and presentation. She gave few nonverbal cues to being open. She sat crouched over leaning on the patient bed, many times reading directly from her papers, and offered little eye contact until her question was completed and she was waiting for an answer from the students.

The language choices of educators in Cases 1, 2 and 4 were congruent in their text, tone, and body language, described as more open and fostered dialogue. For example, Case 1 Educator, when offering feedback, looked directly at the student or dyad, smiled, and stated, "I thought you did handle the diet well; you addressed what he (the patient) could have." She offered students examples of what they actually said, validating the behavior and offering evidence that she herself had been listening. Case 4 Educator also offered feedback in a typical pattern while maintaining direct eye contact with students. She had overall pleasantry to her manner, gleaned from my direct observation and replay of video. Case 4 Educator often smiled, sometimes laughed, and displayed open body language. She would begin with "I would have liked for you all to have…" and completed the sentence with the behavior she wanted to see the student demonstrate. Case 4 Educator was practicing what Kolb (1984) and Schön (1987) described as a stage of reflective observation or the practice of reflection on action through which a learner may find out alternative solutions to problematic situations through discussion with others.

Timing emerged as another component of communication. Recognizing a teachable moment and taking advantage of it are two important facets of timing (Lederman, 1984; Pearson & Smith, 1986). Storytelling is a form of communication that incorporates visual and emotional elements meant to assist a student in comprehending the transference of a learned concept. The educators in Case 1 and Case 4 used storytelling to expand discussion of events during debriefing. Case 1 Educator shared her own personal encounter with a family member experiencing multiple pulmonary emboli. She was vivid in detail and the students were enthralled; all eyes were on her. She ended her story with reiteration of how real this life

threatening event can be. One student then asked, "If it (recognition of a patient with a possible pulmonary embolus) is an emergency and you are trying to get it (a spiral computerized tomography scan) done, what do you do?" This student already had begun to synthesize the lesson and plan for her response should an emergency such as this occur in her practice or life. Case 4 Educator offered examples of her personal experiences, as a professional, with families making life and death decisions. These students were also glued to her every word, appearing very attentive and seeming to recognize the importance of the story.

Educators in Cases 2 and 3 did not use storytelling. However, Case 2 Educator 1 did use timing. At only one time, within her 50% of the dialogue, she seized an opportunity, comparable to Pearson and Smith's (1986) description of timing, choosing an exact moment to emphasize action. She prompted a student in a self-awareness moment, much like she might have in her role as a psychiatric mental health provider. Case 3 Educator 1 seemed to be missing the skill of timing; her focus was driven in a linear agenda in quest of knowing student's knowledge that had not been satisfactorily demonstrated in the simulation, as she had acknowledged in her very first interview response.

Dyregrov (1989), Rudolph, Simon, Rivard, Dufresne, and Raemer (2007), and Baldwin (2007) all referred to timing of debriefing in the context of immediacy to the experienced event. Rudolph et al. supported the importance of immediacy, and beginning debriefings without delay following a simulation so as not to lose the intensity of any emotion from the event. In all four cases, the debriefing occurred immediately after the experiential learning exercise. If emotion is to be captured, it would follow to discuss the emotional aspect first, something to be articulated in the structure of the debriefing. If performing a debriefing with this aspect of timing in mind,

Pearson and Smith's (1986) and Johnson-Russell's (2007) suggestions to visit emotion of the learner second are misplaced.

Time

Time spent in debriefing may best be represented visually, that is, by a clock. Time measured as minutes consistently emerged as salient patterns. In looking across cases, time was consistent in many ways (see Figure 5-2). In the literature, the number of minutes in debriefing was referred to with overall generality. Pearson and Smith (1986) described the amount of time for debriefing to be none less than the experiential learning exercise. Sims (2001) took Pearson and Smith's lead and added confounders to be aware of when trying to determine the length of time in debriefing, such as the complexity and intensity of the experiential exercise.
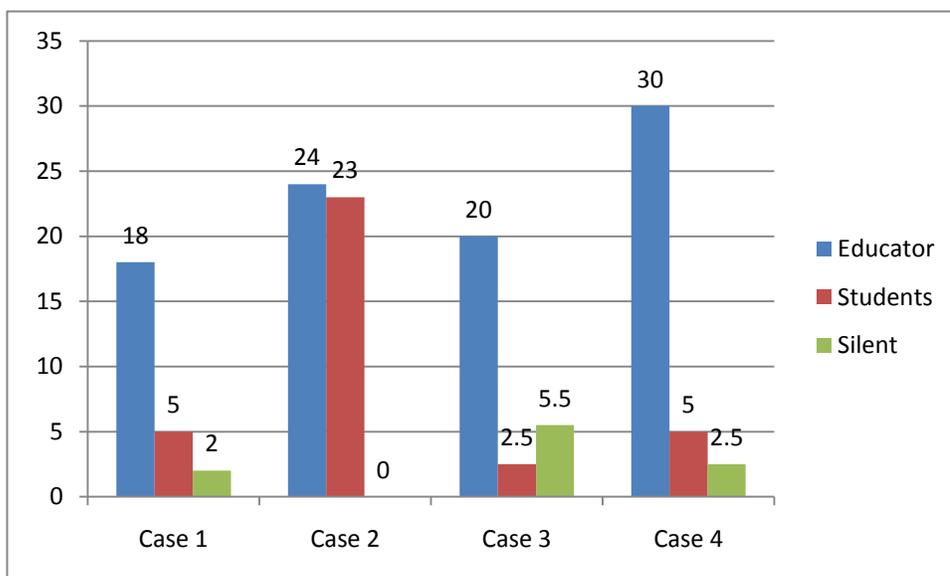

Figure 5-2 Debriefing Time by Case

From the nursing literature, Decker (2007) stated that an adequate time for debriefing is 20 to 30 minutes with no discussion about the complexity or intensity issues referred to by Sims. The amount of time for debriefing in these cases ranged from 25 to 47 minutes.

Educator talk time ranged from 18 to 30 minutes and silent time, wherein no one talked, ranged from 0 to 5 minutes. The outlier for talk time was student talk time in Case 2. Students talked for nearly equal time -- one to another, and as a group. Their total time was nearly equal to Educator's talk time. This time allocation was built into the structure used in Case 2, an example of the relationship between time and structure.

I discovered how important looking at time visually was as represented by charts and graphs. Looking only at the minutes, as in figure 2, visually draws attention to the amount of educator talk time and the consistency of educator talk time among Cases 1, 2, and 3, with Case 4 as an outlier. In Case 4, debriefing time was comprised of 5 minutes of student talk time and 30 minutes of educator talk time, a ratio of 1:6 (see Figure 5-3). I found it important with comparisons to use ratio of minutes to be able to visually represent the outlier for student talk time of Case 2. However, to see time as simply a quantity is an over simplification. Time in conjunction with structure and communication provide a different picture. Observing, viewing videotape, and counting minutes of actual talk time provided hard data to the meaning of time in debriefing. Case 2 was an outlier for talk time, mandated by a strict structure demanding participation from students and educators.
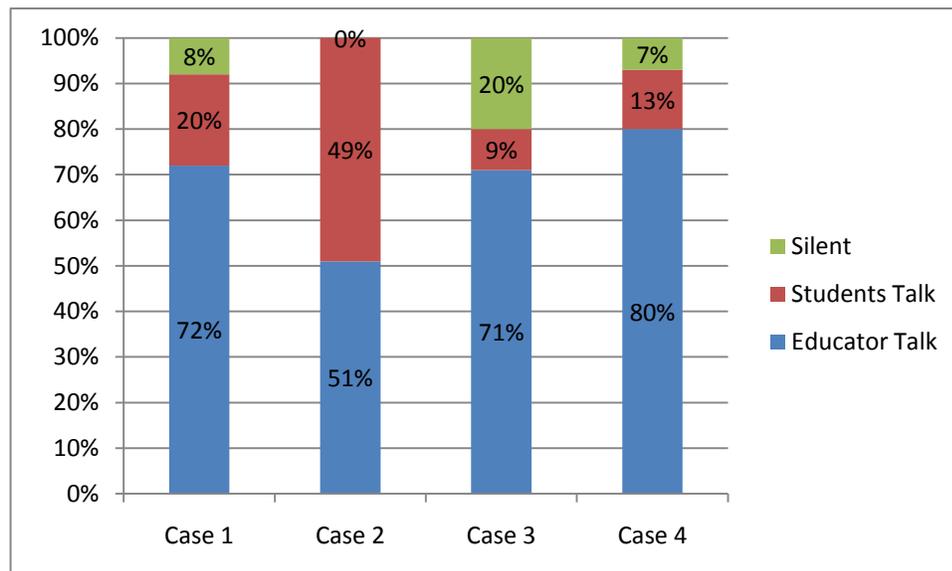
Figure 5-3 Percentage of Time by Case

I questioned if silent time was indicative of reflection or if student talk time was representative of time for thoughtful, through answers during debriefings. Case 3 had the longest silent time, no talking for a total of 5 minutes. For example, in Case 3, students answered 57 times for a total of 2.5 minutes, an average of 2.6 seconds per answer. Their answers were single words or short phrases, "get patient history first," "listen closely, read all information…" All their answers were very concrete and reinforced improvement of a skill to be performed. The data sources did not support the conclusion of silent time as reflective time during debriefing. Silence did not seem to correlate with reflection, at least based on student's comments afterward; all were rather factual with little integration or synthesis of lessons learned. This might be related to this student group's demographic composition. On average, these students were more mature in age and life experiences, held jobs in healthcare, and were even more familiar with the

educator who taught them in classroom, clinical, and now simulation. They also comprised a smaller group; three compared to the other groups of six and seven.

Emotion

Relationships may exist between structure, communication, time, and emotion. Emotion consisted of any content during debriefing that involved the affective domain. Case 4 educator was comfortable bringing forth emotion in discussion, reflective of her practice with end-of-life process. For example, she addressed early in debriefing the student who asked if the patient was supposed to die. Case 4 Educator said,

> Could you all have done something different that would have changed
> his (meaning the simulated patient) outcome? Because you (pointing to
> one student) asked was he supposed to die? Is there something that could
> have been done differently on this gentleman?

Another student responded quickly, thinking out loud as she accounted for what was done and came to the conclusion that it probably would not have made a difference. The Educator then swooped and used that opportunity as an entrée to ask, "How many people survive septic shock?" Another student responded correctly and the Educator quickly replied and then returned to the here and now with a critique of the group's performance and what might have been performed more quickly in the simulation. She then reassured students the patient outcome would have been the same. The emotion was high during this discussion; however, it needed to occur. The emotional release demonstrated by the students as sighs and relaxed posture was felt and heard. The use of swoop brought forth emotion. Case 4 Educator weaved emotion and cognitive back and forth, linking to real life and clinical practice. At one point she shifted the perspective to purposely elicit emotion, saying, "What if this were your Daddy?" The student

release of emotion in Case 4 was powerful and demonstrated how real the experiential learning exercise can be.

Literature of debriefing from military, psychology, education, and nursing agree that emotion should be a piece of debriefing. Mitchell (1983) and Dyregrov (1989) described the psychological aspect of having the person describe their feelings. Educationalists addressed emotion through the structure of a question such as how did the experience feel? Decker (2007), Lasater (2007), and Johnson-Russell (2007), all nurses, referred to emotion in debriefing as an area students need help to explore.

The affective domain is also prevalent in Case 3; however, emotion was addressed differently. Students were informed about their performance primarily with negative feedback, 18 negative feedback comments opposed to 10 positive and 5 mixed. The atmosphere was thick with negative emotion including words, body language, and silence. It seemed the silence was spent waiting for another round of questions to come forth as the educator reviewed her notes. Students were silent, not even talking among themselves or looking at each other. I describe the emotion as disappointment which was confirmed by Case 3 Educator 1 during her interview. She stated, "…I was kind of surprised at some of the things that they (meaning the students) did. I would have assumed they would have been a better group and had identified more of a problem that we had created for them." She continued, "I was thinking their knowledge base was a little more than what it may have been." Educator 1 had experience with this group of students. She had led them through clinical experiences as well as lectured in their classroom. She had prior knowledge of the students' abilities and her expectations of performance in simulation had not been met; thus, her disappointment, which may have influenced her demeanor and delivery.

However, none of the students' responses offered evidence that they found her to have been hard on them or disappointed.

An experiential learning exercise, such as NCS, may stimulate many different emotions of student and educator alike. According to literature of multiple disciplines, emotion is an integral piece to debriefing and should be incorporated in the structure of the discussion.

New Patterns

After I was emerged within the data displays and frequency counts, I watched the videotapes multiple times and returned to the videotape knowing the video replay would resolve many divergent findings. Upon watching the action repeatedly, a typology became apparent. These became new patterns across cases that transcended the previous concepts drawn from literature. Accentuate the Positive, Higher Order Thinking, and Experience Counts were patterns demonstrated not only across the case boundaries but transcended the ascribed roles of student and teacher.

Accentuate the Positive

Each case offered evidence of the pattern Accentuate the Positive, but not always congruently or across domains. The educators unanimously stated they perceived the students to have left the debriefing more positive, as the educators did. However, a closer look at the data presented a more complicated picture.

All six educators perceived themselves as having focused on the positive: positive behavior, positive feedback, positive environment. Case 1 Educator said, "I try to end it (debriefing) in a positive by asking the students a couple of things they learned today that they didn't know before, so they don't feel that it was a waste of their time." Case 2 Educator said, "I

think they (the students) enjoy getting the feedback. I think they really do strive to do better and they like to hear the positives too. So, that is why we only allow the other students to give positive feedback." She went on to describe why it is important for their students to feel positive about coming to simulation, "Cause we want them to leave feeling positive about simulation and not being terrified and being embarrassed 'cause we are using simulation in every single course." The educator in Case 4 stated she tried to take notes during simulation so that during debriefing she would be sure to "give positive feedback (so) that it is not always, well you didn't do that right and you should have done this."

An exception to accentuate the positive occurred with Case 3 Educator 1. She stated early in her interview she felt a sense of disappointment in her students' performance; nevertheless, her perception of her own performance was of having been positive. I reviewed all data sources (field notes, videotape, student questionnaires, interview transcript) and checked for convergence with the videotape. The data did not converge. Educator 1 wanted to provide a positive atmosphere with positive comments; however, she was unaware that she had displayed negative behaviors, language, and feedback.

During the debriefing she had recounted events of the simulation adding negative commentary. For example, she said, "You (referring to the three students collectively) just kind of said 'Well, she (the patient) is having pain.' You finally did some vital signs on her and no one got a temperature on her." Another example was when Educator 1 read the physician orders and said, "vital signs every 15 minutes." She stopped and looked at the students and said, "a little lacking there" and then asked the group the question, "So, why is it important to take the vital signs prior to giving nitroglycerin?" These two isolated statements are not isolated events. The

educator's choice of words, tone, and body language are all part of her message of disappointment.

Were the students aware of the disappointment? That question remains unanswered. The students' responses did not converge with negative or positive. Their body language during debriefing and after the camera was turned off did not indicate any harmful effects of the negative atmosphere. Again, these students were older than other groups, so their maturity in age and life experience and their experience with this teacher in classroom and clinical and simulation may have influenced the behavior or lack of response I saw in their postures and noted in the 5 minutes of silence.

Case 3, Educator 2's views of the group of students contrast Educator 1's views. Educator 2 stated in her interview that she thought during debriefing students were "…in a state of shock a lot of times" and went on to say, "…being in my shoes, it is nowhere near as stressful as real life. But in their shoes, this is probably pretty stressful for them." She believed being positive during debriefing would "help to decrease the (students') stress." Educator 2 stated she tried to keep a positive attitude because "we don't want them (the students) to feel like we are just coming down on their faults." During the debriefing, her body language was positive and she gave hand signals, such as motioning the students to continue with their answer or raising her arms above her head, as if to say a cheer that signified her acceptance and appreciation of the students trying to answer. One time she stated the students did a good job when they "diluted the Phenergan and flushed it afterwards." Once, in place of the students not answering a question from Educator 1, Educator 2 volunteered an answer for them. She also gave an example of how

to obtain a patient history by asking questions of the patient while performing another task, something the students nodded as an acceptable task they might attempt.

Student responses across Cases 1, 2 and 4 indicated a need for positive reinforcement. Students responded to the question "What did today's debriefing mean to you?" with overwhelming positive answers. The students answered by statements such as the following: "It was important to helping me understand better what the complications were and what was appropriate to do."

"It really helped me understand what I did wrong and how I could have done it better."

"It was feedback I needed to hear. It helps me identify positives and negatives."

"It gave me some feedback on what I need to work on a little more…"

"I thought it helped me realize I am doing well and that even though I still need some help. I'm well on my way to being better than I was."

"We are always able to ask questions and get feedback."

"I was able to use the debriefing session to better gauge my knowledge and skill level and to seek further clarification."

Case 3 student responses to this question reflected the critique of Case 3 Educator 1 with answers such as, "It showed I still have a lot to learn…", and "good time to recap, evaluate, and look at areas of improvement and understanding."

Students said the debriefing assisted in attaining clarification, allowed time for asking questions, helped release emotion, and allowed time for feedback, "…positives and negatives." It is not known what the student meant by positives and negatives. Other responses from students about feedback discuss polar opposites such as positive and negative and strengths and

weaknesses. One student from Case 2 articulated the purpose of debriefing was "to discuss people's strengths and areas that need to be worked on in a positive constructive manner." This student's response was reflective of the type of debriefing she had just experienced, a discussion filled with positive feedback.

Baldwin (2007) acknowledged learners' positives and negatives of performance by having the learner perform reflective writing on their identification of their own strengths and weaknesses. In response to a question about what students would like to share with me about debriefing, several students pointed to debriefing as a place to learn about their strengths and weaknesses and about positives and negatives and how to improve. For example, a student from Case 1 wrote, "…it just instills confidence and shows you your strengths and weaknesses like nothing else in school."

A student from Case 2 said, "Getting positives and negative feedback from instructors/peers is invaluable." Another student from Case 2 stated, "Debriefing is a positive way to find out strengths and weaknesses." Case 4 students continued with the sentiment of Cases 1 and 2. One student from Case 4 said, "I enjoy receiving constructive criticism as well as appraisal for things that I did well during simulation."

The extant literature of education, medical, and nursing does not support the pattern Accentuate the Positive. The literature of these disciplines does, however, offer some valuable insight. Savoldelli, Naik, Park, Joo, Chow, and Hamstra (2006) demonstrated a significance difference in learners' performance when feedback was given following a simulation activity versus no feedback. It is not clear if the feedback was framed in a positive, negative, or neutral

manner. However, the fact remains learners incorporated the feedback to improve their performance on a subsequent simulation.

Decker (2007) suggested that a debriefing facilitator be supportive to learners. Supportive is a vague term and it remains unclear the purpose of the support or if it crosses educational domains of affective, cognitive, and psychomotor. Is it support that is to be offered or is it simply to be supportive of learning in general?

Higher Order Thinking: Putting it all Together

Data sources converged and all participants, students and educators, believed debriefing exercises to be important to the meaning making of the simulation experience. Educators used communication techniques, such as linking, swooping, and storytelling, to assist students in reflection and integration. Student comments from Cases 1 and 4 stated that debriefing helped to "…pull everything together and make sense of it all", "debriefing just put all the pieces of the puzzle together", and "I think it (debriefing) is the most important part of the simlab."

The students' comments about importance of debriefing to the meaning making of the simulation experience reflect the literature of education and nursing. Lederman (1984) described the objective of debriefing as two-fold: to assist the learner in new ways of seeing and meaning making. Across all four cases, students and educators tried to make meaning from the simulation experience, all in their own way.

Case 1 Educator relied on a heavy structure of questions derived from simulation experts to assist her in a predetermined goal of connecting theory to practice. She made a decision early on when structuring her simulation: how she would debrief. Case 1 Educator told of how much energy she put into the debriefing and was exhausted afterwards. She described this as good

because "…I see the students connect theory to practice and the light bulb comes on and they actually figure out how to put everything they have been learning in lecture into practice and that is exciting to see at the end."

Case 4 Educator performed a debriefing full of student assisted learning and helped students make sense of the knowledge, skills, and attitudes. She took questions from students, information from the simulation, and examples from her professional and personal life experiences and tied them all together at just the right moment, an exemplar of timing as described by Lederman (1984) and Pearson and Smith (1986). Case 4 Educator referred to timing as a teachable moment. She told of what she identified as working well for her style of debriefing,

> One of the things that I try to do and I know that some people say you
> shouldn't do teaching during debriefing, but I find myself that it is very
> difficult not to take if there is a teachable moment to do that. And I think
> it is very helpful for the students that if there is[sic] problems or
> questions that have come up, that we talk about it at that point and if
> there needs to be that teachable moment that we do it.

Although Cases 2 and 3 had fewer examples in video and interview of putting it all together as did Cases 1 and 4, those two contained data suggestive of importance of meaning making and putting it all together.

Case 2 Educator 1 was married to her structure of debriefing that kept students as active contributors but at a superficial level, not integrating or linking, not building to any one big lesson during that portion. However, in closing the debriefing Case 2 Educator 1 insisted on

discussing particular skills students improved during the semester and she tried to tie together their thoughts from the beginning of the semester to the here and now. This activity offered the students an opportunity to reflect on their own growth, an important aspect to building self-confidence and according to Schön a method for becoming a reflective practitioner, and the use of past and present as Dewey defined continuity.

Case 3 Educator 1 also tried to help students tie together the knowledge from the simulation content. She questioned the students relentlessly. In interview, she stated she used questions to stimulate their thinking, "There was [sic] questions that made them think about what they had seen other than giving them the answers. So, it seemed to make a little bit more sense on why things were done and how it was done and kind of what they should have looked at." She does not want to give the student the answer; therefore, she engaged in the fishing game seeming to deconstruct what she said she had actually tried to create.

Higher Order Thinking: Decision Making and Critical Thinking

Decision making and critical thinking are two key cognitive skills salient with nursing. Nurse educators continue to search for the latest methods to assist students in learning how to make better decisions and to think critically. In their randomized controlled trials, Jeffries and Rizzolo (2006) found simulations provided opportunity for nursing students to apply and synthesize knowledge, two higher order cognitive functions.

All the simulations that were debriefed in these cases were complex situations rather than psychomotor skills demonstration and goals were for students to be put to the test of assessment and make decisions at the simulated patient's bedside. Debriefings resonated with discussion reflective of the type of simulation performed.

Case 2 debriefing was the most highly skill focused; the skill was not psychomotor but therapeutic communication. Therefore, the debriefing followed with few questions and lots of feedback on skill performance. Cases 1 and 3 debriefings contained dialogue about either how decisions had been made during the exercise or how to make certain decisions. Although student initiated questions were few, they did ask about the "how to" of decision making such as the example of a student question from Case 1 regarding how to take care of a patient during an emergency situation.

Case 4 (the one in which the elderly patient died) was a multifaceted simulation, including skill, knowledge, and attitude. The debriefing of Case 4 included minimal discussion of actual skill performance, as well as more knowledge questions for students to ponder, and was overlaid with attention to attitude, that is, how students felt. Case 4 Educator posed questions to students in debriefing reflective of her interest in uncovering student decision making processes. She gave her impression of an event during simulation and then picked a particular piece of a process to focus. For example, she presented her impression that the students had early on identified the patient's diagnosis of sepsis. She then posed the question, "Tell me what kinds of things make you think this patient had sepsis?" She went deeper to explore the students' knowledge of sepsis. A student answered and she confirmed the answer and then performed a swoop linkage, "do all of these things…(lists the symptoms identified by the student) make you think of something you may have gone over in class in terms of sepsis?" The discussion ensued and the students gained knowledge about guidelines to assist in the decision making process with identifying sepsis.

Decision making and critical thinking were also apparent in Case 3 Educator 1's comments. She referred to debriefing and said, "you get to find out more about what they were thinking when they were actually in the middle of the simulation." She wanted to know more about how students made their decisions. She explained that she tried to "make them (students) think beyond just what they are thinking. To expand basically their critical thinking and then if they don't take one per say route in the scenario we still try to hit on that to give them a little more information even though they didn't experience that particular portion of the scenario…" Her questioning during debriefing, specifically the use of the "Why?" and What else?" reflected her attempts to uncover students' intent when certain decisions were made.

Students displayed decision making in the simulation and the debriefing allowed for time to recall specific events of the simulation that led to how they made decisions. Students' data converging on Higher Order Thinking: Critical Thinking and Decision Making include quotes from the questionnaire. Case 1 students responded with answers reflective of the decisions made at the patient's bedside. They learned about prioritizing patient care during urgent situations. One student said about debriefing, "It reinforced ABC's on all patients & how to better prioritize care, orders, etc." Another student from Case 1 pointed to things debriefing reinforced, "needing to know medications was [sic] greatly reinforced, and also how to do the drug calculations." Yet another student from Case 1 pointed to learning about prioritizing and stated, "I believed the ABC's of nursing and prioritizing was inforced [sic]. Airway is always #1." One student wrote that the debriefing "Helps you learn and think critically."

Case 3 students reflected about decision making in their questionnaire answers also. One student said the purpose of debriefing was to "explain mistakes that was [sic] made during the

process." This student's choice of the word "explain" signified listening as well as learning about the how to of decision making.

Case 4 students presented another picture of decision making. Some of their questionnaire answers reflected actual skills performed at the patient's bedside dependent on the role played in the simulation. One student stated, "The assessment needs to be done no matter the situation and it needs to be done first. Another student stated, "To focus on your patient during your assessment and not on the monitors. Also it is important to think critically so as to prioritize your care." Yet another student pointed to a lesson learned in the debriefing as, "Get all my labs before I call the M.D. If lab forgets something it's my responsibility to re-order CPR cycle r/t meds." These students had gleaned bites and pieces of information about decision making and critical thinking from the simulation and the 30-minute dialogue of the educator.

Case 2 students were the outlier in decision making and critical thinking data. During their simulations, the students made decisions on how to communicate with the patient, which is, again, skill focused. The majority of these students' comments were reflective of the type of debriefing and the structure of the debriefing, full of feedback and the significance of feedback.

Experience Counts

Experience Counts was evident from both quantitative and qualitative data convergence. After observing and watching the videotape, it was evident educators brought their experiences to debriefing. My direct interpretation was that some educators appeared more comfortable in posture, eye contact, and delivery. Frequency counts from quantifiable data supported the role of experience as well as interview comments. The more experienced educators, Case 1 and Case 4, performed debriefing alone (see Table 4-1). These educators appeared to be confident in their

abilities to facilitate and lead a group discussion and handle whatever content or questions that arose. Case 1 Educator stated, "I feel like I am much more confident in my approach (referring to debriefing) and I realize the significance of debriefing and how probably last year I probably wasn't putting as much significance, the scenarios were taking longer and trying to move through the scenarios and make the debriefing almost the same length…" She acknowledged the role of practice to becoming more confident and proficient. Through her practice of simulation and debriefing she believed her own confidence had improved, in a parallel to Jeffries and Rizzolo (2006) findings that students' self reports of self confidence improved following simulation exercises.

I asked Case 4 educator about written objectives for the debriefing and she said, "It's more in my mind. My goal is to have them written down and become more organized with my debriefing.", but she is comfortable in her role and style. She allowed for less structure and more discussion, to branch out and then return to the main stream. Case 4 educator also identified strategies she used to help draw out more timid students. She said, "I may look at them and talk about the role they had and the particular scenario and ask them how what they felt about how they did there and what they would do different." She had an overall plan. She also identified that she understood "some people say you shouldn't do teaching during debriefing," but she found it "very difficult not to take if there is a teachable moment to do that." She was comfortable that she would cover her objectives while allowing learners certain latitude to explore and contribute if desired. Her overall plan was well-thought out, and she had prepared a few slides that would not have been necessary if she had not planned to use the scenario to teach

specific content that was supplemental to the scenario (e.g., advance directives and dealing with families surrounding death and dying situations).

Lederman (1984), Pearson and Smith (1986), and Sims (2001) all pointed to the significance of the role of experience with teaching, for example, timing. Knowing when to choose an exact moment to emphasize a student's action or comment is learned through experience. A theory from nursing reflective of the value of experience is from Benner (1984) that describes the role of experience in moving one from novice to expert.

Cases 1 and 4 had several similarities; both educators had multiple years teaching experience and multiple years practice experience, and both used multiple teaching methods during debriefing, such as swoops and links. Educators in cases 1 and 4 performed linking 13 and six times, respectively. Educators in cases 2 and 3 did not use the technique of linking as often, one and two times, respectively. Although these are not two behaviors mentioned in the literature of debriefing, they were occurrences in the data sources that converged in meaningful ways to multiple areas.

Experience counts with students too. Student comments reflected how they also value the role of experience. A student said, "We practiced on a plastic dummy which just increased our chances of responding appropriately to the situation in real life." This comment reflected not only the role of experience and practice but also the role of transference of knowledge and skill from a simulated event to a real life occurrence. Students in Case 2 were asked to reflect on their first simulation experience in the beginning of the semester and compare their growth through the experiences of the semester.

Bond et al. (2004) referred to the role experience plays in the educational life of second and third year medical residents. Bond et al. discovered one year made a difference in being focused on acquiring knowledge and being able to articulate what is meant by metacognitive thinking. The second year residents were still seeking more knowledge and were unable to grasp the meaning of the exercise.

Although students in this research were not studying metacognitive strategies, they were learning at their own knowledge, skill, and attitude levels. The students of Case 2, 3, and 4 were in their third year of a four-year program. Students of Case 1 were in their second semester of a four-semester program. The students of all cases answered three questions postdebriefing (see Appendix F) that asked them to self-rate their knowledge, skills, and attitudes of the simulated patient's condition prior to simulation, after simulation, and after debriefing. All student answers were retrospective. A repeated measures ANOVA was calculated comparing the scores of students at three different times: presimulation, postsimulation, and postdebriefing. A significant effect was found: Knowledge ($F(2,44) = 20.30$, $p < .001$), Skill ($F(2,42) = 20.43$, $p < .001$), Attitude ($F(2,42) = 13.45$, $p < .001$). Follow up paired t tests with a confidence interval of 95% revealed that scores increased significantly ($p < .001$) from presimulation to postsimulation; however, the scores did not reveal a significant difference from postsimulation to postdebriefing.

Although this was a self-rate Likert-type scale, the students across cases converge on improvement from presimulation to postsimulation in all three areas of knowledge, skills, and attitudes. It is unknown why the scores did not change from simulation to debriefing. This lack of change seems to negate the hand-written comments regarding the benefits of debriefing. The problem may be in the instrument and its design. The instrument had not been pretested, it was

actually being piloted. Also, the timing of the completion of the instrument, wherein the students answered questions all at once, after the debriefing, may have dampened their ability to differentiate the experience. For them, the effect seemed to be binary: I am improved in all three areas now as compared to before today's exercise.

The statistical test of choice is dependent on level of measurement, in this instance ordinal or interval. Controversy exists of composite scale research viewed as interval measure. However, Stommel and Willis (2004) cite a trend in healthcare research, including nurse researchers, who use inferential statistical analysis on Likert-type response scales. This data was considered interval for statistical analysis.

Another area where experience counted was with students' approval of simulation as a method they will encounter frequently. Case 2 Educator 1 commented about how important it was to end debriefing on a positive note. This particular comment proved significant to experience counts. Case 2 Educator 1 said,

> Also, it is very important to us that we end with the positives, like we were talking about earlier. We want to end with a whole group look at how far I have come with a positive feeling when they leave. 'Cause we want them to leave feeling positive about simulation and not being terrified and being embarrassed and 'cause we are using simulation in every single course. We want them to go into their next course and be more comfortable so we want the debriefing with them having more self-confidence.

The data triangulated on characteristics of the educators in that they bring themselves and their experiences to the debriefing. My observations, field notes, and review of the videotapes identified the educators as nurses with specialties in medical/surgical, psychiatric, critical care,

and palliative care. Their life experiences and professional experiences were part of the

debriefings. They used techniques such as storytelling and links to relay some of their

experiences. Personal and professional characteristics linked them to their specialty of practice

(e.g. their fields of expertise, medical-surgical, psychiatric, critical care, and palliative care).

Their behaviors and communication styles were representative of their practice specialties. For

example, in critical care a nurse has little time to spend attending to anything but life and death

matters, second by second; thus, the quick firing of questions in Case 3. In a psychiatric setting

the nurse is also structured as is the critical care nurse but in a different fashion: more relaxed

presence and open to communication and feelings; thus, the therapeutic milieu of Case 2. Their

specialty and experiences are also present in their choice of simulation content. Case 4 Educator,

the palliative care nurse, helped students discover how death of a patient may be an eventual

outcome in their professional lives. The medical-surgical nurse, Educator Case 1, helped students

explore the feelings of responsibility and identify who can help in their daily work life. The

Educators' comments also reflected this observance of bringing oneself to debriefing. Case 2

Educator 1 stated, "…I really try to treat the students like I would want to be treated and model

for them the way that I would be with my patients…" Case 1 Educator answered the question,

What drives your approach to debriefing? She says,

> I want to stress to be not just task oriented but a holistic approach and
> caring and compassionate and provide that therapeutic communication
> and go beyond just nurse tasky things that a tech (technician) could do.
> And so, in my practice I was that way, strive to be that way all the time
> and I try to portray that in the simulation experience so that they focus on
> the caring approach.

Case 1 Educator had practiced and taught nursing using a holistic approach and was trying to be true to her beliefs and practices and bring this same approach to simulation and debriefing. The data support that she, indeed, had accomplished her goal.

Summary

Participants were generous in their words and actions, reflective of the vast amount of data of analysis and synthesis of chapters four and five. The data converged and seven patterns emerged: structure, communication, time, emotion, accentuate the positive, higher order thinking, and experience counts. Because of my familiarity and personal entrée, I had the opportunity to observe and document the beginning stages of the development of this educational strategy, the debriefing practice. Findings that reflect what is "really being done" will help in future research on debriefing's role in this new educational technique of simulation. The timing of this study was vital. Nursing schools across the country are buying HFS equipment without sufficient training or knowledge of how to use this teaching tool. For example, equipment is purchased and stored for several years without use (Wagner, Hallmark, Farrar, & Overstreet, 2008). No formal education practice guidelines exist to help novice or expert teachers know how best to use this technology or how best to perform a debriefing following a NCS.

The ultimate outcome of NCS or nursing education, in general, is toward providing safer, more deliberate care for patients. Through these educational efforts we may be able to help students and future nurses become more aware of their actions, and more conscious in their daily practice, particularly of patient, nurse, and environmental safety. If simulation with debriefing assists nursing students in performing a meaningful evaluation of safe patient care activities, then

nursing may be advancing a teaching methodology that other disciplines could investigate to assist their learners to become more mindful, safer, and deliberate in their actions.

CHAPTER 6

Lessons Learned

Summary of Findings

I explored and described the current practice of NCS debriefing through a qualitative perspective. I selected cases in four different geographical areas of Tennessee. These four cases contributed a vast amount of data from multiple sources: observations, videotapes, interviews, and written questionnaires. The participants, educators, students, and environments, were all part of the process studied. Seven patterns emerged from a cross case synthesis of the data. Four patterns (structure, communication, time, and emotion) are supported by literature of education, psychology, medicine, and nursing. Three new patterns (accentuate the positive, higher order thinking, and experience counts) require additional research to determine if these patterns as well as the original four patterns are consistent with a larger sample of NCS debriefings as well as other disciplines. Researchers and educators now have a foundation upon which to expand their research and practice, study theory supporting the practice, explore the purposes of specific methods, or study the outcomes of the process.

Strengths and Limitations

The strengths of this research are inherent in the design chosen to explore and describe the phenomenon. Yin (2003) described specific strategies used in case study to increase trustworthiness, rigor, and validity. These strategies include triangulation of multiple data sources, peer review, and identification of own biases. I employed all three of these strategies. To strengthen internal validity in qualitative inquiry, Merriam and Caffarella (1999) discussed the researcher's ability to "capture reality" (p. 201). In pressing for a high quality analysis of the

data, I attended to all the evidence and used strategies known in case study to strengthen validity: (a) categorical aggregation, (b) time-ordered analysis, (c) pattern matching, and (d) cross case synthesis.

The phenomenon studied lent itself to the use of direct observation. I viewed what actually occurred in real time. I also videotaped while observing so that I could continue to view the phenomenon multiple times. The videotapes served as the primary source to any conflict between data sources.

An enormous strength of this study was the participants: universities, educators, and students. All participants were outwardly willing to participate. Participants were offered multiple ways to anonymously decline participation and not one student, educator, or university declined participation. This willingness and active participation suggests positive attitudes around NCS, such as

1. Administration recognizes the importance of simulation/debriefing to student learning and desires to learn more about the current practice.

2. Educators appreciate simulation/debriefing is a new teaching tool and must embrace the technology as well as the method and learn how to use it effectively.

3. Students understand the importance of simulation/debriefing as a learning experience to assist in knowledge, skills, and attitude of patient care delivery.

An additional strength of this study was that I chose four different geographical areas within Tennessee that varied in diversity of educator demographics, especially teaching and practice specialty. Without prior knowledge of educator specialty or design of simulation, I

discovered all four cases used higher fidelity simulations and applied nursing content congruent with their own specialty of practice, a finding that indicates educators bring themselves to simulation and debriefing. Thus, experience counts in creating simulations.

Generalizability in such studies is viewed differently, that is, as naturalistic and analytic (as in Chapter 3). The sample size was small, but data rich. Yin (2003) considered multiple case study "as one considers multiple experiments" (p. 47), referring to the replication of procedures of study for each case. As in this study, I replicated my research protocol four times. I witnessed through triangulation of multiple data sources nine patterns and frequency counts of measurable pieces of data.

Direct observation and videotaping were used in data collection; therefore, participants may have acted or answered differently than they typically do. However, triangulation of multiple sources of data yielded a consistency across all cases, a doubtful occurrence in Hawthorne effect. Also, because direct observation was used in data collection, observer tendencies to be influenced by participant characteristics should be considered in data analysis. The use of a second reviewer and early identification of bias were safeguards to the halo effect as well as error of leniency and error of severity, that is, rating observed events too positively or negatively, respectively.

A limitation was discovered during data analysis. The initial intent was to focus on the educator during the debriefing. After multiple reviews of the videotapes, questions arose as to the behaviors of the students as well as their facial expressions during the debriefing. The intention was to focus the camera's lens on the educator, thereby limiting the camera's view of the student. However, I recognize debriefing is a process between the educators and students as well as

among the students themselves. Students' views of debriefing were analyzed from written questionnaire answers and field notes of direct observations. Observance for student behaviors was only from tone of voice and posture, thus limiting the amount and type of data on student responses.

Implications

This study has useful information for current practice in NCS debriefing with implications for nursing as well as other disciplines utilizing HFS in healthcare professions. The seven patterns are representative of components of debriefing that must be addressed in the practice of NCS debriefing or when designing future studies of debriefing.

This study's findings add to the literature in the field of debriefing with the identification of three new patterns found in current NCS debriefing practice. The findings also add to literature through identification of four concepts of debriefing from the literature of education, psychology, medicine, and nursing, and emergence of those concepts as patterns from the convergence of data sources. These concepts from the literature were operationalized in this study and this operationalization lends itself to more quantitative methods for larger scale research.

The findings also support analytical generalization. I began this study with an overarching theoretical guide reflective of Dewey's (1938) theory of experiential learning with a more directed focus to the reflective observation stage of Kolb's (1984) cycle of experiential learning and Schön's (1987) theory of reflective practice with emphasis of reflection on action. I end the study returning to experiential learning with the emerged patterns, Higher Order Thinking and Experience Counts.

Higher Order Thinking

The educational tenets of integration, critical thinking, and decision making were present in Higher Order Thinking. Nursing is not a knowledge only profession or a psychomotor skill profession. Nurses are at patients' bedsides and must quickly assess, analyze, and interpret data to inform their next action. Students' comments about debriefing were consistent with educator comments in that simulations challenged the students to think critically at the simulated patient's bedside and to make decisions. The debriefing process allowed for students to pull together the knowledge, skills, and attitudes of the experiential learning exercise; thus it was a meaning making experience.

Experience Counts

These educators expose the teacher as a growing life-long learner and a person who also learns through experience. The Educators of Cases 1, 2, 3, and 4 had somewhat varying attributes: age, years teaching, years using simulation and debriefing, and even educational degrees (see Table 4-1). However, one thing they all had in common: they realized they were all still learners too with not only this new technology, simulation, but also with debriefing. Whether it was at the end of the interviews or during conversation afterwards, each educator wanted me to know the answer the question, "How am I doing?" A parallel process of need for feedback, they sought what their students sought, clarification, feedback, and to know how they were doing compared with others. We are all learning. This is a new interpretation of the meaning of Dewey's (1938) experiential learning theory, that is, students and teachers having a parallel learning process.

We, as teachers, learn experientially as well. Input from a peer or expert is important for teachers and students alike as we endeavor into areas in which we are novices. I was surprised the educators perceived themselves as learners too. At the end of every educator interview, I asked the question, "Is there anything you would like to ask me?" The educators also sought clarification, wanted feedback, and desired to gauge themselves against other educators. Thus, the question from the educators is best represented with the question, "How am I doing Coach?" They wanted to know how their performance measured up to others.

An immediate implication for teachers is to videotape their own debriefing sessions. I encourage teachers to critically watch themselves to learn more about patterns and to observe for any of the seven patterns identified in this study. Thus, I encourage teachers to become more reflective of their own practice.

The nurse teachers brought themselves to the debriefing and the riches of their nursing experiences. Each of these educators created simulations from their wealth of nursing experiences. Either in the simulation or through storytelling in the debriefing, three of four educators included situations these students may never have the opportunity to encounter while working with real patients as a student. Their life and work experiences became the vicarious experiences of the students through an experiential learning exercise of simulation and debriefing. Their fields of expertise also seemed to influence their styles of communication; rapid-fire in critical care, structured in a circle for the psychiatric mental health, and a gentler, slower paced attention to emotions from the palliative care specialist.

This study has occurred at a time when policymakers are asking about simulation, its costs, and how and if fits into the clinical curriculum. The American Association of Colleges for

Nursing was one of 36 nursing organizations to express a written gratitude to the work of the

Senate Health Education, Labor and Pensions (HELP) Committee in crafting the *Affordable*

Health Choices Act of 2009. One message from this group to the HELP committee was to

include provisions for monies to schools of nursing in support of student education, including

"simulated hospital units to prepare students to provide lifesaving nursing services" (AACN,

2009). Individual state boards of nursing are now debating the recommendation and regulation of

hours associated with the use of simulation in substitute for clinical hours, (Barr, M., Associate

Executive Director, Education, Tennessee State Board of Nursing, personal communication,

October 2008). Debriefing is essential to the learning experience of simulation and the findings

from this study inform stakeholders and policymakers at several levels, including university level

(equipment purchasing, building renovation, or faculty workload assignment), state level (State

Boards of Nursing assigning clinical hours to simulation), and national levels (grant funding and

hospital accreditation standards), as to the importance of providing education and practice in

simulation and debriefing for nurse educators. Educators who had attended conferences and or

read Jeffries (2007) were able to incorporate in their simulations and debriefings more of a

meaning making experience focused on knowledge, skills, and attitudes. This may require a

change in focus; a concerted effort of monies allocated for the preparation and continued practice

of simulation and debriefing for nurse educators.

Simulation/debriefing is a reality; it is here and educators have the responsibility to learn

about it, practice it, and become proficient. Educators also have a responsibility to their students

to present simulation/debriefing in a positive manner; at least educators of this study say that this

is of the utmost importance to them. But what is being positive? The auxiliary educator in Case 3

described positive as helping students through "a state of shock." Accentuating the Positive has never appeared in the literature and research in larger studies in both nursing and medicine is called for to determine if and how this ethos is considered important or is evident in clinical simulation and debriefing and if it matters.

In the short term, accentuating the positive seems pragmatic. Case 2 Educator 1 described why it is important for their students to feel positive about simulation, "Cause we want them to leave feeling positive about simulation and not being terrified and being embarrassed 'cause we are using simulation in *every single course*." The educators at this particular university are being challenged to integrate simulation and debriefing throughout the curriculum. She has assumed the responsibility within her courses to help students to recognize the value of simulation and debriefing and to present the exercises in a positive manner.

Future Research

This study has provided a foundation to build subsequent studies. A next step could be to study a larger geographic region, possibly the Southeast region, maintaining specificity in nursing. A mixed method design investigating both quantitative and qualitative concepts of student and educator may be able to capture even more of a holistic view of debriefing, including multiple views of all participants, gleaning more behavioral cues specifically from student responses to provide a more holistic picture for review. The focus of questions both interview and questionnaire can now include content from this study's findings for testing. For example, questions more specific to the design of simulation may inform choices made by educators in debriefing. The hope is that publications and dissemination of these findings will spark dialogue on debriefing, its importance, and how it is best practiced.

Additional inquiry is required to explore how knowledge, skills, and attitudes change or remain the same prior to simulation, after simulation, and after debriefing. Attention to detail for the researcher is imperative in the design of an instrument to measure significant difference of these three entities. The findings from this study of knowledge, skills, and attitudes are all retrospective, measured at one point in time, which is a limitation. However, a post hoc analysis confirmed a significant difference was discovered from prior to simulation to after simulation in knowledge, skills, and attitudes.

Other studies of debriefing could compare NCS debriefing practice to other similar nursing teaching activities such as postclinical discussions so as to gain further insight into areas we may already excel or need enhanced instruction. Another focus area is taking the nurse education model of debriefing practice and looking for similarities and differences in hospital simulation/debriefing of practicing nurses. How are simulation and debriefing being used in the continuing education of current practitioners?

Smaller observational studies could expand on a single detail from this study. A quantitative inquiry might be to study differences in talk time or linkage methods, such as storytelling or the question-answer-question format referred to as a swoop. One may work with a researcher of communication techniques to begin study of best practices with NCS debriefing. I have particular interest in further exploration of how an educator becomes proficient in debriefing as well as studying best practices of debriefing.

Longitudinal research with debriefing is a hefty project; however, outcomes can really only be measured this way. Does use of debriefings in nursing school lead to nurses who use

reflection during every day practice? Does reflective practice lead to improved nursing practice; thus, improved patient outcomes?

                                Summary

This case study on NCS debriefing has led to the identification of three new patterns: accentuate the positive, higher order thinking, and experience counts. The findings also support the four concepts in the extant literature. These patterns were reflected among educators and students alike. As educators, we must spend countless hours updating and renewing lectures and now simulations as well as learn new technologies to support varies methods for delivering content to learners. We must learn new methods to provide students an opportunity to practice their knowledge, skills, and attitudes in an environment without harm to the patient. Debriefing provides students the opportunity to reflect on their experiential learning exercises and to hypothesize how they might perform differently next time. Debriefing also offers students a reality check, a way to see themselves through the eyes of the teacher or their peers, something the participants of this study, students and educators, valued and sought.

This study was an experiential learning exercise. I performed my own meaning making through reflective observation and reflection in and on action. I was learning and experiencing what I studied.

REFERENCES

References

AACN. (2009). Retrieved July 22, 2009, from http://www.aacn.nche.edu/ Government/pdf/
NC_AHCresponse.pdf

Argyris, C., & Schön, D. (1978). *Organizational learning: A theory of action perspective.*
Reading, MA: Addison Wesley.

Armstrong, K., O'Callahan, W., & Marmar, C. (1991). Debriefing Red Cross disaster
personnel: The multiple stressor debriefing model. *Journal of Traumatic Stress,*
4(4), 581-593.

Baldwin, K. (2007). Friday night in the pediatric emergency department: A simulated
exercise to promote clinical reasoning in the classroom. *Nurse Educator, 32*(1),
24-29.

Bloom, B., Englehart, M., Furst, E., Hill, W., & Krathwohl, D. (1956). *Taxonomy of*
educational objectives: The classification of educational goals: Handbook I.
The cognitive domain. New York: David McKay.

Bond, W., Deitrick, L., Arnold, D., Kostenbader, M., Barr, G., Kimmel, S., et al. (2004).
Using simulation to instruct emergency medicine residents in cognitive forcing
strategies. *Academic Medicine, 79*(5), 438-446.

Bradley, P. (2006). The history of simulation in medical education and possible future
directions [Electronic version]. *Medical Education 40*, 254-262.

Brink, P., & Wood, M. (1998). *Advanced design in nursing research (2nd ed.).* Thousand
Oaks, CA: Sage.

Carey, R., McKechnie, L., & McKenzie, P. (2001). Gaining access to everyday life information seeking [Electronic version]. *Library & Information Science Research, 23*(4), 319-334.

Clay, A., Que, L., Petrusa, E., Sebastian, M., & Govert, J. (2007). Debriefing in the intensive care unit: A feedback tool to facilitate bedside teaching. *Critical Care Medicine, 35*(3), 738-754.

Communication. (2009). In Merriam-Webster Online Dictionary. Retrieved July 20, 2009, from http://www.merriam-webster.com/dictionary/communication

Davila, Y. (2005). Teaching nursing students to assess and intervene for domestic violence. *International Journal of Nursing Education Scholarship, 2*(1), 1-11.

Decker, S. (2007). Integrating guided reflection into simulated learning. In P. Jefferies (Ed.), *Simulation in nursing education: From conceptualization to evaluation* (pp.73-85). New York, NY: National League for Nursing.

Denzin, N., & Lincoln, Y. (Eds.). (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Dewey, J. (1938). *Experience and education*. New York: Collier.

Dismukes, R., Gaba, D., & Howard, S. (2006). So many roads: Facilitated debriefing in healthcare. *Simulation in Healthcare, 1*(1), 23-25.

Dyregrov, A. (1989). Caring for helpers in disaster situations: Psychological debriefing. *Disaster Management, 2*, 25-30.

Dyregrov, A. (1997). The process in psychological debriefings. *Journal of Traumatic Stress, 10*(4), 589-605.

Fanning, R., & Gaba, D. (2007). The role of debriefing in simulation-based learning. *Simulation in Healthcare, 2*(2), 115-125.

Field, P., & Morse, J. (1985). *Nursing research: The application of qualitative approaches*. Rockville, MD: Aspen.

Fillion, J., Clements, P., Averill, J., & Vigil, G. (2002). Talking as a primary method of peer defusing for military personnel exposed to combat trauma. *Journal of Psychosocial Nursing and Mental Health Services, 40*(8), 40-49.

Gaba, D. (2002). Two examples of how to evaluate the impact of new approaches to teaching [Electronic version]. *Anesthesiology, 96*(1), 1-3.

Gaba, D., Howard, S., Fish, K., Smith, B., & Sowb, Y. (2001). Simulation-based training in anesthesia crisis resource management (ACRM): A decade of experience. *Simulation & Gaming, 32*(2), 175-193.

Gillham, B. (2000). *Case study research methods*. New York: Continuum.

Hamman, W., & Rutherford, W. (2005). The language of aviation simulation training: Relevance for medical education [Electronic version]. *Accreditation Council for Graduate Medical Education Bulletin,* (4), 5-7.

Henneman, E., Cunningham, H., Roche, J., & Cumin, M. (2007). Human patient simulation: Teaching students to provide safe care. *Nurse Educator, 32*(5), 212-217.

Howard, S., Gaba, D., Smith, B., Weinger, M., Herndon, C., Keshavacharya, S., et al. (2003). Simulation study of rested versus sleep-deprived anesthesiologists. *Anesthesiology, 98*(6), 1345-1355.

Hotchkiss, M., & Mendoza, S. (2001). Full-body patient simulation technology: Gaining

experience using a malignant hyperthermia model [Electronic version]. *AANA*

Journal, 69(1), 59-65.

Jeffries, P. (Ed.). (2007). *Simulation in nursing education: From conceptualization to*

evaluation. New York: National League for Nursing.

Jeffries, P., & Rizzolo, M. (2006). Designing and implementing models for the innovative

use of simulation to teach nursing care of ill adults and children: A National, multi-site,

multi-method study. National League for Nursing and Laerdal Medical.

Retrieved December 7, 2006, from http://www.nln.org/research/LaerdalReport.pdf

Johnson-Russell, J. (2007). Tips and tricks: The debriefing process. *HSPN News, 4*, 11.

Kolb, D. (1984). *Experiential learning: Experience as the source of learning and*

development. Englewood Cliffs: Prentice Hall.

Laerdal Medical Corporation Homepage. (n.d.). Retrieved August 2, 2008, from

http://www.laerdal.com/document.asp?subnodeid=13088270

Laerdal Medical Corporation Catalog. (n.d.). Retrieved August 2, 2008, from

http://www.laerdal.com/document.asp?subnodeid=31154325

Language. (2009). In Merriam-Webster Online Dictionary. Retrieved July 20, 2009, from

http://www.merriam-webster.com/dictionary/language

Lasater, K. (2007). Clinical judgment development: Using simulation to create an

assessment rubric. *Journal of Nursing Education, 46*(11), 496-503.

Lasater, K. (2007). High-fidelity simulation and the development of clinical judgment: Students' experiences [Electronic version]. *Journal of Nursing Education, 46*(6), 269-276.

Lederman, L. (1984). Debriefing: A critical reexamination of the postexperience analytic process with implications for its effective use. *Simulation & Games, 15*(4), 415-431.

Lederman, L., & Ruben, B. (1984). Systematic assessment of communication simulations and games: An applied framework. *Communication Education, 33*, 152-159.

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Listening. (2000). In Merriam-Webster Online Dictionary. Retrieved July 20, 2009, from http://www.merriam-webster.com/dictionary/listening

MacDonald, C. (2003). Evaluation of stress debriefing interventions with military populations. *Military Medicine, 168*(12), 961-968.

Madjar, I., & Walton, J. (2001). What is problematic about evidence? In J. Morse, J. Swanson, & A. Kuzel (Eds.), *The nature of qualitative evidence.* Thousand Oaks, CA: Sage.

Marshall, S. (1947). *Men against fire: The problem of battle command in future war*. New York: William Morrow.

Meadows, L., & Morse, J. (2001). Constructing evidence within the qualitative project. In J. Morse, J. Swanson, & A. Kuzel (Eds.), *The nature of qualitative evidence.* Thousand Oaks, CA: Sage.

Merriam, S. (1998). *Qualitative research and case study applications in education: Revised and expanded from case study research in education.* San Francisco: Jossey-Bass.

Merriam, S., & Caffarella, R. (1999). *Learning in adulthood: A comprehensive guide* (2nd ed.). San Francisco: Jossey-Bass.

Merriam, S., Caffarella, R., & Baumgartner, L. (2007). *Learning in adulthood: A comprehensive guide* (3rd ed.). San Francisco: Jossey-Bass.

Miles, M., & Huberman, A. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.

Mitchell, J. (1983). When disaster strikes: The critical incident stress debriefing process. *Journal of Emergency Medicine Services, 8*, 36-39.

Morse, J., Swanson, J., & Kuzel, A. (Eds.). (2001). *The nature of qualitative evidence.* Thousand Oaks, CA: Sage.

Pahlow, J., Northeast Director of Sales, Laerdal Medical Corporation, personal communication, July 29, 2008

Pearson, M., & Smith, D. (1986). Debriefing in experience-based learning. *Simulation/Games for Learning, 16*(4), 155-172.

Petranek, C. (2000). Written debriefing: The next vital step in learning with simulations. *Simulation & Gaming, 31*(1), 108-118.

Polit, D., & Beck, C. (2004). *Nursing research: Principles and methods* (7th ed.). Philadelphia: Lippincott Williams & Wilkins.

Radhakrishnan, K., Roche, J., & Cunningham, H. (2007). Measuring clinical practice parameters with human patient simulation: A pilot study [Electronic version]. *International Journal of Nursing Education Scholarship, 4(1).*

Rall, M., Manser, T., & Howard, S. (2000). Abstract No. 2: Key elements of debriefing for simulator training. *European Journal of Anaesthesiology, 17*, 516-517.

Roberts, J., While, A., & Fitzpatrick, J. (1992). Simulation: Current status in nurse education [Electronic version]. *Nurse Education Today, 12*(6): 409-15.

Rudolph, J., Simon, R., Dufresne, R., & Raemer, D. (2006). There's no such thing as "nonjudgmental" debriefing: A theory and method for debriefing with good judgment. *Simulation in Healthcare, 1*(1), 49-55.

Rudolph, J., Simon, R., Rivard, P., Dufresne, R., & Raemer, D. (2007). Debriefing with good judgment: Combining rigorous feedback with genuine inquiry. *Anesthesiology Clinics, 25*(2), 361-376.

Savoldelli, G., Naik, V., Park, J., Joo, H., Chow, R., & Hamstra, S. (2006). Value of debriefing during simulated crisis management: Oral versus video-assisted oral feedback [Electronic version]. *Anesthesiology, 105*(2), 279-285.

Scherer, Y., Bruce, S., Graves, B., & Erdley, S. (2003). Acute care nurse practitioner education: Enhancing performance through the use of clinical simulation [Electronic version]. *AACN Clinical Issues, 14*(3), 331-341.

Schön, D. (1983). *The reflective practitioner: How professionals think in action.* New York: Basic Books.

Schön, D. (1987). Educating the Reflective Practitioner. San Francisco: Jossey-Bass.

Seropian, M., Brown, K., Gavilanes, J., & Driggers, B. (2004). Simulation: Not just a manikin [Electronic version]. *Journal of Nursing Education, 43*(4), 164-169.

Seropian, M., Brown, K., Gavilanes, J., & Driggers, B. (2004). An approach to simulation program development. *Journal of Nursing Education, 43*(4), 170-174.

Simon, R., Raemer, D., & Rudolph, J. (2008). Institute for medical simulation: Comprehensive course. Unpublished manuscript, Harvard and Massachusetts Institute of Technology.

Sims, R. (2001). Debriefing experiential learning exercises in ethics education. *Teaching Business Ethics, 6*, 179-197.

Spiers, J. (2004). Tech tips: Using video management/ analysis technology in qualitative research [Electronic version]. *International Journal of Qualitative Methods, 3*(1), 1-8.

Stake, R. (2006). *Multiple case study analysis.* New York: Gilford Press.

Stommel, M. & Willis, C.E. (2004). *Clinical research: Concepts and principles for advanced practice nurses.* Philadelphia: Lippincott.

Swanson, J. (2001) Questions in use. In J. Morse, J. Swanson, & A. Kuzel (Eds.), *The nature of qualitative evidence.* Thousand Oaks, CA: Sage.

Tanner, C. (2006). Changing times, evolving issues: The faculty shortage, accelerated programs, and simulation. *Journal of Nursing Education, 45*(3), 99-100.

Timing. (2008). In Merriam-Webster Online Dictionary. Retrieved December 26, 2008, from http://www.merriam-webster.com/dictionary/timing

Wagner, L., Hallmark, B., Farrar, C., & Overstreet, M. (2008). Tennessee nursing

    partnership promotes skill-advancement in simulation technology for nurse educators

    in Tennessee. *Nursing Perspectives, 71*(3), 1, 5.

Yin, R. (2003). *Case study research: Design and methods* (3rd ed.). Thousand Oaks: Sage.

APPENDICES

APPENDIX A

Research Protocol

Master Protocol for Case Study Research Plan

Changes to this document during the data collection process are highlighted in ***bold italic*** type.

Research proposal to IRB:

- Submit IRB to College of Nursing committee for review

- Revisions/Corrections to IRB made prior to resubmitting to College of Nursing.

- Receive approval from CON IRB committee

- Submit IRB to University of Tennessee IRB Committee

- Corrections to IRB with resubmission as required

After IRB Approval is received:

- Follow up with contacts at possible sites

- Send recruitment letter to Dean or Director of potential institutions in Tennessee, using simulation technology to teach nursing students

- Follow up on recruitment letter with phone call one week after the date of mailing

- Following approval from Dean or Director to proceed, I will contact specific educators at the institutions. Ask educator about interest in study. Email informed consent to potential educator/subject. Answer any questions about the research and time frames for study.

- Obtain information about time and date of simulation and how many students will be participating as well as how many instructors.

- Use email communications with potential educator participant prior to arrival date by sending out a reminder email of date and time of simulation and that I will be videotaping.

Projected dates for observation: March, 2009

Actual dates of observation: April 2, 8, 16, and 22, 2009.

On Date of observation:

- Make copies of all papers and records and take extra batteries, cables, tapes, videotape recorder, audiotape recorder, paper and pen.

- Talk with educator alone and read consent and allow time for potential participant to read consent. Answer any questions.

- Obtain educator participants signature on consent form as informed consent.

- Remind potential participant of demographic data and interview at the end which should take approximately 30 minutes to complete and the interview will be audiotaped for the purposes of the researcher to review their responses completely.

- Talk with potential student participants as a group without educator present or administration present so as not to feel coerced by educator or administration to participate in research.

- *Added step: Asked potential student participant to write Yes or No on blank sheet of paper, fold the paper to obscure their answer and I looked at the answers to determine*

if the whole group wanted to participate. If one "No" occurred, I would not collect data. All papers had "Yes" written; therefore, I proceeded with informed consent information.

- Inform potential student participants about videotape process and that videotape only will be used for research in this study and that disposal will occur upon completion of dissertation when chair of committee approves of disposal.

- Obtain signature as verification of informed consent granted.

- Remind potential student participant at the end of the debriefing they will be asked to complete a short demographic data form as well as a short questionnaire and the entire process should take between 15 to 20 minutes to complete.

If participant does not consent:

- If participant refuses to consent the data collection for this particular day with this particular group will not occur.

- If any potential participant (educator or student) decides not to participate in the study because of videotaping or audiotaping and will participate if no taping occurs, data collection and observation will proceed without videotape or audiotape.

- If a potential participant student decides not to participate and the educator allows for reassignment of another student group, the study may proceed if all the new group of potential participants agrees.

- If potential participant does not agree to the study, does not allow for observation without videotape, and no participant substitution is allowed by the educator, the study will not proceed for this particular site on this particular date.

Observation Protocol:

- Set up videotaping and check for accuracy of equipment.

- Observe the simulation from the educator's viewpoint if invited.

- Note time from end of simulation to beginning of debriefing.

- Observe the debriefing while videotaping it.

- At the end of the debriefing, stop the videotape.

Student Post-hoc Questionnaires Protocol:

- Ask the student participants (SP) to complete the demographic and questionnaire and to return them to me prior to leaving the debriefing area.

- Inform the SP's that none of the responses will be given to the instructor or administration; no data will be traceable back to any individual.

- Reinforce the fact that I do not want them to place their names on the sheets. If names are placed on the sheets, I will remove the name before reading the responses.

- Remind the SP's that this should take approximately 15 to 20 minutes to complete.

Post-hoc Educator Participant Semi-structured Interview Protocol:

- Ask the educator participant (EP) if we can proceed with the interview in a quiet area with no interruptions or noise.

- Test the audio digital recorder for accuracy.

- Complete the semi-structured interview.

- Remind the EP the interview should take approximately 20 to 30 minutes to complete. Remind the EP any personal or institution identifiers revealed during the audiotaped interview will be removed from text and/or given alias.

- Terminate interview.

Post-hoc Educator Participant Questionnaires Protocol:

- Ask the EP to complete the demographic data record and for copies of documents used for debriefing.

- Remind the EP no data will be traceable back to any individual. Reinforce the fact that I do not want them to place their names on the sheets. If names are placed on the sheets, I will remove the name before reading the responses.

- Remind the EP's this should take approximately 15 to 20 minutes to complete.

Away From Site Protocol:

- Following the completion of the data collection for each case, I will record my field notes after I have removed myself from view of the participants.

- I will not collect any data from another case until I have completed the field notes for the previous case so as not to either confuse or forget information collected from observation.

- After the first observation, I will travel to Knoxville and meet with committee members to discuss my observations, watch the videotape separately and together for first check of interrater coding reliability.

- *Added change to meeting in person: The meeting with the Chair of the dissertation took place via telephone after data was collected from the first case. The Chair then viewed the videotape alone, as well as I reviewed the tape alone and then we had another conversation via telephone. The same procedure occurred for each subsequent case.*

- All documents and field notes will be catalogued and reviewed.

- *Added step: I decided on the use of NVivo8 to store and catalogue data.*

- This process will occur again after the second observation.

Securing of All Data Sources Protocol:

- All data sources will be kept on my person while in the process of collecting data at each collection site.

- Once data collection has been completed, transport of the data to my home locked cabinet will occur.

- Any transport of data to and from the University of Tennessee, Knoxville for review with the dissertation committee will occur on my person or over the University's secured internet email site.

- No data will be shared with participants or those who employ the participants.

- Destroy of data will occur in agreement with the University protocol. Following final completion of dissertation defense and in agreement with the dissertation chair, data will be destroyed which includes any participant identifiers. Three years following the

completion of graduation requirements, the data from video, audio, and paper will be destroyed.

Terminate with Participants:

- Send a personalized thank you note for participation in the research study to the educator participant, the group of student participants in care of the educator participant, and the Dean or Director of the school.

- *Added change in above step: Because individual student addresses or emails were not available, I sent my appreciation for student participants to the educator and asked for my appreciation to be forwarded to the students.*

Data Analysis of Individual Cases:

- Video will have been initially coded by hand. After 2$^{\text{nd}}$ viewing by researcher, bits will be reduced using either IMovie or Transana software.

- *Added change to software: I decided on use of NVivo8 software to assist with storing and cataloging the data.*

- Data from the other sources will be reduced using similar coding procedures.

- It is expected that new codes will emerge from either video or non-video sources.

- A sense of the whole should emerge for an individual site, such as the role of instructor as coach versus director and the tone as collaborative versus cooperative.

- The demographic data from each case will be triangulated, to look for relationships such as age of participants and progression in nursing school (e.g., differences 2nd and 3rd year residents in the 2004 Bond et al. study).

- Again, the dissertation committee will assist the researcher in identifying researcher bias during the analysis phase and help to identify any premature closure, adding to the credibility of the study.

Data Analysis Across Cases:

- After each case has been analyzed individually, then, and only then will cross case synthesis occur.

- The same general procedure will be followed, looking for pattern matching or dissimilarity.

- These findings will be written in a separate chapter.

- All findings will be compared to extant literature in education, nursing, or other related areas of theory or practice.

APPENDIX B

Letter of Support Example

Letterhead Seal

Date: *(insert present date here)* _____

To: University of Tennessee, Knoxville IRB Committee:

      Administration and nursing faculty proudly support Maria Overstreet and her doctoral research endeavors. Nursing faculty integrate simulation into nursing curriculum to empower nursing students in skill mastery and critical thinking as well as building self-confidence. Therefore, the Dean, Director, and nursing faculty in the school of nursing at *(insert your schools name here)* _____ support Maria Overstreet's research efforts. We are willing to allow faculty engaged in simulation debriefing to decide without coercion if they would like to participate in her research. We are also willing to allow nursing students without coercion to decide if they would like to participate in her research study.

Sincerely,

Insert your signature here _____

Insert your title and position here _____

APPENDIX C

IRB Approval Letter

February 23,2009

lRB#: 7830B

TITLE: The Practice of Nursing Clinical Simulation: Focus on Debriefing

Overstreet, Maria and Roman, Marian Nursing

Your project listed above was reviewed and has been granted IRB under Expedited review.

This approval is for a period ending one year from the date of this letter. Please make timely submission of renewal or prompt notification of project termination (see item #3 below).

Responsibilities of the investigator during the conduct of this project include the following:

1. To obtain prior approval from the Committee before instituting any changes in the project.

2. If signed consent forms are being obtained from subjects, they must be stored for at least three years following completion of the project

3. To submit a Form D to report changes in the project or to report termination at 12-month or less intervals.

The Committee wishes you every success in your research endeavor. This office will send you a renewal notice (Form R) on the anniversary of your approval date.

Sincerely,
Brenda Lawson

Compliances

APPENDIX D

INFORMED CONSENT STATEMENT
For Educator Participant

The University of Tennessee, Knoxville

Title of Study: The Practice of Nursing Clinical Simulation: Focus on Debriefing

You are being invited to participate in a research study of nursing clinical simulation debriefing. The purpose of the study is to explore and describe the current practice of debriefing.
You are being asked to participate in the study by allowing the researcher to observe and videotape one debriefing exercise, obtain any documents used for the debriefing exercise, audiotape a 20 to 30 minute interview with you, and complete a 15 to 20 minute questionnaire. The total time that you will spend by participating in this study is approximately one hour following the debriefing exercise. The researcher will not record your name or otherwise identify you in the researcher's notes.
The videotapes are being used in this research study to enhance the researcher's ability to accurately explore and describe the occurrences during a nursing clinical simulation debriefing. No one outside the research team and UT IRB will have access to the videotapes. All videotapes will be securely stored in a locked cabinet for the duration of this study. At the completion of the study, the original videotapes will be destroyed.
Selected video clips may be kept for presentation of research results. Once data are included in dissemination, the data are not confidential but techniques to protect privacy such as preventing facial recognition and removing names from video clips will be used. These video clips will remain with the researcher and password protected on a personal external hard drive indefinitely.
No references will be made in oral or written reports of the research that could link you to the study other than the knowledge of the study occurring in the state of Tennessee. There is no overt physical risk to you by participating in the study. It is possible you may initially feel uncomfortable about being observed and videotaped.
There are no specific benefits to you from participating in the study other than contributing to the science of nursing.
All of the written recorded observations and study records will be kept confidential. No one outside the research team will have access to the research records. All records will be securely stored in a locked cabinet or password protected on a personal external hard drive. No references will be made in oral or written reports of the research that could link you to the study other than the knowledge of the study occurring in the state of Tennessee.
You will not receive any compensation for participating in this research study.

_____ Participant's initials.

INFORMED CONSENT STATEMENT

For Educator Participant

The University of Tennessee does not "automatically" reimburse subjects for medical claims or other compensation. If physical injury is suffered in the course of research, or for more information, please notify the investigator in charge, Maria Overstreet 615-389-1714. If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study,) you may contact the researcher, Maria Overstreet, at 461 21st Avenue South, Nashville, TN 37240, and 615-343-4797. If you have questions about your rights as a participant, contact the Office of Research Compliance Officer at (865) 974-3466.

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed.

_____

CONSENT

I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

INFORMED CONSENT STATEMENT

For Educator Participant

_____

CONSENT

I have read the above information. I have received a copy of this form. I agree to participate in this study.
I give my explicit consent for any public use of videotapes such as use in the classroom or use in a public presentation of research results.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

APPENDIX E

INFORMED CONSENT STATEMENT
For Student Participant

The University of Tennessee, Knoxville
Title of Study: The Practice of Nursing Clinical Simulation: Focus on Debriefing
You are being invited to participate in a research study of nursing clinical simulation debriefing. The purpose of the study is to explore and describe the current practice of debriefing.
You are being asked to participate in the study by allowing the researcher to observe and videotape one debriefing exercise and complete a 15 to 20 minute questionnaire following the debriefing exercise. The researcher will not record your name or otherwise identify you in the researcher's notes.

The videotapes are being used in this research study to enhance the researcher's ability to accurately explore and describe the occurrences during a nursing clinical simulation debriefing. No one outside the research team will have access to the videotapes. All videotapes will be securely stored in a locked cabinet for the duration of this study. At the completion of the study, the original videotaping will be destroyed.
Selected video clips may be kept for presentation of research results. Once data are included in dissemination, the data are not confidential but techniques to protect privacy such as preventing facial recognition and removing names from video clips will be used. These video clips will remain with the researcher and password protected on a personal external hard drive indefinitely.
No references will be made in oral or written reports of the research that could link you to the study other than the knowledge of the study occurring in the state of Tennessee.
There is no overt physical risk to you by participating in the study. It is possible you may initially feel uncomfortable about being observed and videotaped.

There are no specific benefits to you from participating in the study other than contributing to the science of nursing.
All of the written recorded observations will be kept confidential. No one outside the research team will have access to the research records. All records will be securely stored in a locked cabinet or password protected on a personal external hard drive. No references will be made in oral or written reports of the research that could link you to the study other than the knowledge of the study occurring in the state of Tennessee.
You will not receive any compensation for participating in this research study.

_____ Participant's initials

INFORMED CONSENT STATEMENT
For Student Participant

The University of Tennessee does not "automatically" reimburse subjects for medical claims or other compensation. If physical injury is suffered in the course of research, or for more information, please notify the investigator in charge, Maria Overstreet 615-343-4797. If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study,) you may contact the researcher, Maria Overstreet, at 461 21st Avenue South, Nashville, TN 37240, and 615-343-4797. If you have questions about your rights as a participant, contact the Office of Research Compliance Officer at (865) 974-3466.

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed.

_____

CONSENT

I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

INFORMED CONSENT STATEMENT
For Student Participant

_____

CONSENT

I have read the above information. I have received a copy of this form. I agree to participate in this study.
I give my explicit consent for any public use of videotapes such as use in the classroom or use in a public presentation of research results.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

APPENDIX F

Student Questionnaire

Please share with me your true thoughts and feelings about your debriefing experience by answering the following questions to the best of your ability. To complete this questionnaire should take approximately 15-20 minutes.

The following are definitions to explain the meaning for words used in the context of your simulation and debriefing exercise:

Knowledge is having the cognitive content to safely perform care of the simulated patients.

Skill is considered having ability to perform correctly specific nursing interventions for the simulated patients.

Attitude includes your feelings, emotions, values and beliefs about the care of the simulated patients.

Scales used in this questionnaire include the following:

Knowledge, Skill, & Attitude scale: (1 = very poor; 2 = poor; 3 = average; 4 = good; 5 = very good)

Feeling scale: (-2 = very negative, -1 = negative, 0 = no change, +1 = positive, +2 = very positive)

1. **Prior** to the simulation exercise how do you rate your knowledge, skills, and attitude about this simulated patient's problem(s)?

   a. Knowledge   (1   2   3   4   5)

   b. Skills   (1   2   3   4   5)

   c. Attitude   (1   2   3   4   5)

   (1 = very poor; 2 = poor; 3 = average; 4 = good; 5 = very good)

2. **After** the simulation exercise how do you rate your knowledge, skills, and attitude about the simulated patient's problem(s)?

   a. Knowledge   (1   2   3   4   5)

   b. Skills   (1   2   3   4   5)

   c. Attitude   (1   2   3   4   5)

   (1 = very poor; 2 = poor; 3 = average; 4 = good; 5 = very good)

3. **After** the debriefing exercise how do you rate your knowledge, skills, and attitude about the simulated patient's problem(s)?

   a. Knowledge   (1   2   3   4   5)

   b. Skills   (1   2   3   4   5)

   c. Attitude   (1   2   3   4   5)

   (1 = very poor; 2 = poor; 3 = average; 4 = good; 5 = very good)

4. What did today's debriefing mean to you?

5. After the debriefing, please identify anything you believe, think, or feel that was reinforced or changed, please describe.

6. What do you think the purpose of debriefing should be?

7. What is your overall feeling about debriefing?

8. Following debriefing today, circle the number below that indicates how you now feel about your nursing practice abilities?

[**-2 = very negative,** -1 = negative, **0 = no change,** +1 = positive, **+2 = very positive**]

9. What was the lesson(s) to be learned from the simulation today?

10. What would you like to share with me about debriefing that I have not asked?

Student Demographic Data

1. What is the degree you are in the process of achieving? _____

2. What semester of this program are you enrolled? _____

3. Do you have any previous degrees? Yes _____   No _____

    a. If Yes, please specify _____

4. Do you currently have a healthcare professional license? Yes _____   No _____

    a. If Yes, please specify _____

5. What is your age? _____

APPENDIX G

Educator Semi-Structured Interview Questions

Thank you for allowing me to observe during your simulation and debriefing. I appreciate your efforts as an instructor and desire to learn about debriefing and the strategies you use in teaching. The following questions are used as a guide to my research about debriefing and the tenets each instructor uses to guide their teachings. If at any time you wish to elaborate or stop, please let me know and we will do so. This should take approximately twenty to thirty minutes.

1. What was your overall feeling at the end of the debriefing exercise?
    a. Follow up with: Did you feel more positive or negative?
2. What is your perception of the students during the debriefing exercise?
3. Do you feel the students ended the debriefing session more positive or negative?
4. Was there anything during this debriefing exercise that really stood out to you?
5. What are your underlying (assumptions, beliefs, foundations, purpose) that drive your approach to debriefing? Give list of things to choose from (+ other).
6. Previous question rephrased if needed: What factors determine your approach to debriefing? Give list of things to choose from…
7. Another rephrasing of question five: Do you have a theory, a framework, a concept, or a rule that guides how you facilitate the debriefing exercise?
8. This question will be about what I think was either the most important event during the debriefing or the method of debriefing. This sentence will be guided by my direct observations during the debriefing. For example, if the instructor uses a plus/delta format my question may flow like this: I noticed in your debriefing you brought attention to both the positive actions of the students and the things you want to help the students change. I understand the importance of positive reinforcement and telling others about their errors and I am wondering how you feel about this method of inquiry? Or, what are your thoughts on this method of inquiry?
9. Is there anything you would like to ask me? If asked if I would offer my evaluation of the debriefing or the instructor's performance, my response will reflect the nature of my research and it is not about evaluating the instructor's performance. I will follow up with asking them how they thought they did.
10. Is there anything you use during the debriefing such as written objectives or notes taken during the simulation that I may have a copy for the research study?
11. Is there anything you would like to add?

APPENDIX H

Educator Questionnaire

Please answer the following questions to the best of your ability. To complete all questions should take approximately 15-20 minutes.

1. How long have you practiced as a Registered Nurse? _____years _____month
    a. What is your nursing specialty? _____
2. How long have you:
    a.   taught nursing in the clinical setting? _____years _____months
    b. taught nursing in the classroom? _____years _____months
    c. taught nursing with simulation? _____years _____months
    d. taught nursing using debriefing techniques? _____years _____months
    e. taught at this institution? _____years _____months
3. What is the highest degree you have completed? _____
4. Have you completed any college courses in education? Yes ____   No _____
    (if Yes, please specify)_____
5. Do you have a major or a minor in education? Yes ____   No _____
    (if yes, please specify which) _____
6. Do you use a specific theory, framework, or model to influence your:
    a. Practice: Yes ____   No _____
    (if Yes, please elaborate)_____
    b. Teaching: Yes ____   No _____
    (if Yes, please elaborate)_____
    c. Debriefing: Yes ____   No _____
    (if Yes, please elaborate)_____
7. Does the simulation content or objectives guide the choice of debriefing method you choose to use? Yes ____   No _____
8. What education, formal or informal, have you had on debriefing? (conference, workshops, courses, books, articles, internet, etc…)
9. How did you learn to perform the simulation you did today? _____
10. How did you learn to perform the debriefing you did today?
11. What future educational plans do you have to learn more about simulation or debriefing?
12. Please circle below any factors which determine your approach to debriefing.
    a. Simulation content
    b. Student error in simulation
    c. Simulation objectives
    d. Debriefing objectives
    e. Student response in debriefing
    f. Student suggestions
    g. Information from seminar or workshop

h. Notes taken during simulation of student positive actions
i. Notes taken during simulation of student negative actions
j. Student response to others comments
k. Information from other faculty of student needs
l. Your feelings following the simulation
m. The number of simulations or debriefings you have performed that day
n. Your theory of education
o. Your theory of nursing
p. Your theory of debriefing

Other:

VITA

Maria Overstreet was born in Nashville, Tennessee. She graduated from Cheatham County Central High School. Maria began higher education at Middle Tennessee State University and completed her Bachelor of Science in Nursing at Austin Peay State University in 1985. She began her nursing career at Metropolitan Nashville General Hospital as a staff nurse in the surgical intensive care unit taking care of patients with various life threatening situations. Maria received her Master's of Nursing degree from The University of Tennessee, Knoxville in 1987. For the next 20 years, Maria worked at various institutions in the field of nursing, at one time owning and operating her own nursing registry. As Maria sought to explore her own happiness, she discovered a sincere and innate love for teaching. For the past 10 years Maria has been employed at Vanderbilt School of Nursing in Nashville, Tennessee. She has used simulation and debriefing as teaching tools for the past five years and has found she can incorporate various teaching methods within simulation and debriefing. Maria recently began a pilot study in conjunction with Vanderbilt's School of Nursing, School of Medicine, and University Medical Center studying multidisciplinary communication through use of simulation and debriefing. Recently, Maria created a website designed to allow all nurse educators in Tennessee access to current information of simulation and debriefing. The website is sponsored by the Tennessee Center for Nursing. Maria hopes to continue her nursing career teaching students more about deliberate practice and the use of reflective practice throughout their careers.