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UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science
DOCTOR OF PHILOSOPHY IN NURSING

NURSING STUDENTS' LIVED EXPERIENCES SURROUNDING
MEDICATION ADMINISTRATION

by

Sally Nan Morgan

A dissertation presented to the
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requirements for the degree
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Dissertation Committee

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Abstract

Medication errors are abounding and the complexity of medication administration creates an environment where health care providers are at risk for making errors. This environment includes nursing students learning medication administration. Coupled with a rigid, protocol-driven pedagogy, nursing students may be placed in a learning experience counterproductive to accuracy. Previous studies have focused on causes and perceptions of medication errors looking for the delineation between safe and unsafe practice. In doing so, past research may have narrowed the path of discovery needed to diminish medication errors. In addition, research regarding the lived experience of nursing students while they are learning medication administration is limited. Two designs were used for this study. First, using a critical feminist perspective, a mid-range theory of nursing lens distortion is proposed regarding the oppression caused by the socially-constructed phenomenon of perfectibility and its distorting influence on the development of a nursing lens. Subsequently, an interpretive phenomenological study was conducted to approach the reality of how nursing practice and practice wisdom is learned during medication administration. A purposive sample of 13 students attending an entry-level masters nursing program was analyzed using the interpretive phenomenological method by Benner. Paradigm cases, thematic analysis, and exemplars were identified from the narrative accounts. Four paradigm cases emerged revealing a student-clinical instructor-staff nurse triad where power relations themes either promoted or inhibited learning medication administration. Exemplars of student feelings, meaning of medication administration, and solutions for improvement further revealed the students' experiences. A portion of the thematic analysis examined a student medication

error revealing a destructive learning aftermath. Themes describing the sociopolitical context, including the rights of medication administration, are also examined. Discussion using the mid-range theory of nursing lens distortion and the Perfectibility Model further illustrated the experiences. Exploring such experiences offered insight into educational pedagogies that inhibited and promoted accuracy. The phenomenon of medication errors was exposed in a contemporary context revealing a complexity that requires more than a list of rights, or ineffective preparatory actions when learning medication administration. Opportunities for academia and practice are further explored.

Dedication

This dissertation is dedicated to my husband Byron who supported me, listened to my stories, and shared the joys, tears, and sacrifices of this wonderful journey. Also, my children, Lana and Zac, gave me encouragement to continue and my grandson, Morgan, kept my heart filled with joy.

Preface

I wish to acknowledge the profound impact Dr. Jane M. Georges has had on my growth as a Registered Nurse and a teacher. I will always remember that power relations matter and every civil voice has a place at the table. As I watched and learned from a master teacher, my assumptions were challenged and my thinking was transformed. In addition, I want to thank Dr. Ann M. Mayo who made her passion for research contagious as she shared her craft. Much appreciation is given to Dr. Maryanne Garon who gave me her time and expertise to improve my dissertation. I also wish to acknowledge my friend, classmate, and confidant, Liz Ciaccio. Her support, humor, and ride sharing to and from San Diego were a special part of my experience and I will miss those times with her.

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Introduction

Martin Heidegger, the founder of interpretive phenomenology, proposed that human beings are dynamic participants in their world rather than objective spectators and care is the essential human approach to existence. Therefore this study was conducted because I care about (a) patients and their need to receive the correct medications, (b) the nurses who diligently work at being accurate and those that accept the reasons why they do not need to be so careful during medication administration, and (c) the nursing students who try to give the right medications, amidst rigorous learning rituals carried out in life or death situations. Due to my experience as a nursing student, a practicing nurse, and a nursing faculty, it was decided useful to engage that experience in the discourse with the data. Therefore the interpretive phenomenological methodology was chosen to reveal what is salient in the time honored tradition of learning medication administration in nursing.

How nursing students learn medication administration is a process shrouded in rituals played out in the academic and practice settings. Emerging from the study and examination of this phenomenon, content for three distinct articles came forward. The first explores the process of learning nursing illustrated through a concept analysis of the term nursing lens. This is followed by the proposal of a mid-range theory of the distortion of that lens through the expectation to be perfect, exemplified through the Perfectibility Model. The second and third articles arose from the interpretive phenomenological study examining the ritual of learning medication administration by nursing students and the errors inherent in that process. The lived experiences, captured in narratives, from entry level nursing students revealed a perspective offering insight

into educational practices that promote and inhibit learning and those that are supportive and counterproductive to medication safety.

A Theory of Nursing Lens Distortion:
Perfectibility as Oppression

Sally Nan Morgan

Jane M. Georges

Abstract

Using a critical feminist perspective, a mid-range theory is proposed regarding the oppression caused by the socially-constructed phenomenon of perfectibility and its distorting influence on the development of a nursing lens. The commonly used term nursing lens is analyzed from a historical perspective and differentiated from a nursing gaze. The position of perfectibility in the industry of healthcare and nursing is explored with the Perfectibility Model as an exemplar. Implications for further examination of perfectibility's effect on nursing lens development during education and practice are presented as a response to the need for radical transformation in nursing.

Keywords: critical, feminist, perfectibility model, nursing lens, nursing gaze

A Theory of Nursing Lens Distortion: Perfectibility as Oppression

The term “nursing lens” remains a frequently used but somewhat ambiguous concept in nursing literature. In its most general sense, the term is used to capture how nurses currently and historically view their patients, themselves, their practice, and their environment.¹⁻⁴ This article explores the concept of nursing lens as a basis for developing a mid-range theory about the potential oppressive consequences of the distortion of the nursing lens. The purposes of this article are to: 1) provide a historical background for the concept of a nursing lens; 2) differentiate between a nursing lens and a nursing gaze; 3) propose a mid-range theory regarding the potential distortion of the nursing lens by the socially-constructed phenomenon of “perfectibility” using a critical feminist perspective; and 4) explore implications for nursing resulting from such distortive practices.

Nursing Lens Concept: Historical Background

For the purposes of this article, “nursing lens” is understood as not only how nurses view themselves and their practice, but also what influences the development of this lens in their lived experience as nurses. The nursing lens is by its nature contextual, arising out of the sociopolitical context in which it develops. It can be shaped in ways both subtle and overtly violent, reflecting the power relations inherent in a given context. It can become clear and useful, or distorted depending on the experiences.

A “lens” in its most basic meaning is an optical structure that transmits and refracts light. We tend to think most readily of either the lenses worn as corrective devices or the ellipsoid anatomical structures contained in our eyes. Given the hegemony of empirical “knowing” in the Western tradition, it is not surprising that the use of the

concept of “lens” as a metaphor is pervasive in epistemological literature. As postmodern thought began to influence the discourses surrounding practice-based disciplines during the late 20th century, the concept of lens became a central trope in describing counter-hegemonic social practices, such as critical/feminist pedagogy. However, alternative uses of lens as a metaphor in analyzing social processes pre-dates this postmodern application and continue to be used in nursing science.⁵⁻⁹

The Lens Model

The Lens Model developed by Brunswik¹⁰ has been widely used in the social sciences. Succinctly, this model purports that cognition is determined by a lens that focuses on environmental uncertainty. This lens uses multiple informational cues to develop the person’s perception. This perception can vary between persons and moves beyond what the cues are by themselves. Hammond and co-workers¹¹ applied the Brunswik Lens Model to judgment analysis for clinical decision making in such diverse fields as medicine and psychology, and Kelly and Hammond² in nursing.

A sample application of the Brunswik Lens Model in the investigation of nursing judgment is described here as a basis for demonstrating its limitations for a praxis-based discipline. Thompson and co-workers⁴, conducted a quantitative research project to evaluate nurses’ assessments of critical event risk. Using written simulated scenarios, nurse participants were asked to rate patient risk level and evaluate if further intervention was needed. The results included a wide variation in nurses’ risk assessments and decisions to intervene. From these findings, the authors concluded that “non-linear thinking and intuitive reasoning” must have influenced the results, in the sense of having “contaminated” their nursing lens. Additionally, these authors asserted that that the

“public’s social trust in nursing may not be justified”. This application of a mechanistic, rational-technical worldview reflected in Brunswik’s model demonstrates its insufficient ability to capture the complexity and richness of nursing’s ways of knowing or the dynamic nature of a praxis-based discipline. If nursing is both an art and a science (which we assert it is,) then the utilization of an acontextual model in the analysis of nursing judgment is as inappropriate as evaluating visual artwork by simply analyzing artists’ written descriptions of color, subject, medium, and brushstroke technique. We do not reject the idea of empirical research being used to assess nurses’ judgments- we suggest that investigations of nursing judgment must capture the comprehensive nursing cues commensurate with the complexity of the nursing lens. As a corollary, the development of theories about “nursing lens” must be sufficiently robust to include the context in which nursing occurs, including the power relations that shape it. We therefore seek to develop a theory based upon a concept of nursing lens that reflects a postmodernist/feminist perspective and rejects the acontextual formulation used by previous workers in this field.

Differentiating Nursing Lens from Nursing Gaze

The related term “nursing gaze” is often used interchangeably with “nursing lens,” but we feel it is important to differentiate the two terms for the sake of conceptual clarity. An application of the distinction between gaze and lens is well stated in the title of a paper by Bucknall “A gaze through the lens of decision theory toward knowledge translation science”¹²(pp 60). At its most basic level, gazing is what nurses *do*. The lens is *what we look through*, and it is comprised of both content and such

attributes as zoom and focus. It is both *how* nurses view themselves and their practice and also *what influences* how they see.

The differentiation between lens and gaze becomes salient when considering such related concepts as Foucault's¹³ "medical gaze" as a hegemonizing device. To Foucault, the body is the ultimate site of control in Western culture, and the "objective" gaze that the medical professional uses is an important element in the armamentarium of control. Certainly, nurses can (and do) use gaze as an instrument of control when they participate in hegemonizing social processes. We assert that it is essential for nurses to engage in a "gaze" that is emancipatory, rather than oppressive. Georges and Benedict define nursing gaze as "nurses gazing with, rather than merely at, patients in a reflective fashion in the context of connection, caring, and empowerment"¹⁴(pp 141). But this definition begs the question, how does one "learn" to gaze in a reflective fashion? How can we teach our students and our colleagues to adopt such a gaze and how can we develop related theories that can guide our pedagogy and practice? We believe that it is in the nursing *lens*- the content and influences shaping it- that a much-needed focus for theory development resides. Thus, we present a theory of nursing lens distortion as a starting place- for a transformation of nursing education, practice, and research.

A Mid-Range Theory of Nursing Lens Distortion

Every professional nurse shares the foundational experience of having been through some type of formal educational process to become a nurse. From a postmodernist stance, our professional socialization as nurses constitutes the "ur-text" and foundational narrative for all of us- it is where our nursing lens was first formed. A vast literature exists regarding the strengths- and weaknesses- of contemporary nursing

education. Recently, Benner and co-workers¹⁵ have provided a stunning critique of contemporary nursing educational practices in Educating Nurses: A Call for Radical Transformation. These authors have documented and articulated what many of us in nursing education have long thought- that a radical transformation is desperately needed in the most basic premises of nursing education. No longer can a disconnected, behaviorally-driven model of “observable skills” form the basis for nursing education. Nurse educators must “teach for moral imagination,” and enable their learners to “form effective relationships and act with compassion”¹⁵(pp 165).

We support the position of Benner and co-workers and wish to build upon what we view as a turning point in the very understanding of what nursing education can- and should be. Benner’s vision is no less than the transformation of the way in which we promote the development of the nursing lens in our students. It is the nursing lens that is at the heart of this call for radical transformation. Congruent with the Benner and co-workers¹⁵ vision, how can we assist our students in “growing” a nursing lens that leads to a gaze that is connected and empowering? Obviously, a full treatment of such lens development is beyond the scope of this article. We choose as a starting place the proposal of a mid-range theory regarding the nursing lens and a key factor in its distortion: the socially-constructed phenomenon of “perfectibility.”

Perfectibility

While we give lip service in our rational-technical Western culture to the idea that “nobody is perfect,” even a cursory examination of our social processes shows a very different ethos. The importance of “perfection” in industrial culture, with a “zero tolerance” for any variations is a central theme of discourse surrounding health care.

Health care has been largely framed in contemporary culture as an industry with “consumers” purchasing a “product,” rather than human beings engaging in healing relationships with other humans.¹⁶ Congruent with the adoption of this corporatized discourse, such sub-discourses as “continuous quality improvement”¹⁷(pp 103) have become a central focus in health care, in which the reduction of “variances” is the ultimate- and obtainable- goal. Perfectibility is not only possible; it is also the ultimate indicator of a “quality” product. If such an ethos is useful in guiding factory production, this line of thinking proposes, it must be equally applicable to health care settings.

The Perfectibility Model developed by Leape¹⁸ is an exemplar of the application of industrial-based thought to professional practice. Succinctly, the Perfectibility Model proposes a simple causal relationship. If a professional is sufficiently trained and is properly motivated, s/he will not make a mistake- ever. Although empirical data strongly support that mistakes are *inevitable* in complex human activities, this model proposes that education and motivation can somehow reduce errors to an absolute zero level. The corresponding assumptions of the Perfectibility Model are that errors are based on individual, and not systemic, failures. It becomes the individual’s duty to seek adequate training and maintain appropriate motivation. If an error occurs, then it becomes the individual’s fault, and peers and supervisors actively seek an individual to blame. The combination of the perception of failure and the reaction to blame give rise to secrecy, limited disclosure, discounting, and feelings of anger, fear, and sadness by the one who is deemed responsible for the error.¹⁸⁻²⁰

The uncritical acceptance of the myth of perfectibility now dominates much of nursing practice and consequently, education. In a highly litigious culture, it follows axiomatically that perfection is not just desirable, it is essential for the financial survival of corporate entities. However, the application of “perfectibility” as a teleological focus in nursing has enormous consequences for nursing education and the development of the nursing lens that have, thus far, remained unexplored. What happens when a nursing student is presented with “perfectibility” as the ultimate good? We assert that perfectibility is unattainable in the complex context of health care in which human beings make mistakes. We also assert that emphasis on perfectibility in nursing education does violence to our students, freezing them in fear of mistakes that they will undoubtedly make. The perfectibility trap is the unspoken weapon poised above every nurse’s head, placed there by well-meaning nurse educators. It lives on in the lateral violence nurses enact on each other for making even a minor mistake, particularly mistakes made by novice nurses. We thus propose a mid-range theory to guide future nursing education and practice: that the nursing lens can be significantly distorted by perfectibility, and that alternative ways of shaping the nursing lens will result in improved outcomes for patients.

We are not suggesting that nurses no longer need to check that the correct medication is being given or that the correct leg is being amputated- far from it. If nurses are to have the “moral imagination” that Benner and co-workers¹⁵ propose, they certainly must act as moral agents who engage in reflective practice at an extremely high level. But the context in which they engage in such praxis cannot be based on a culture of fear of personal humiliation. Such a climate of violence distorts the nursing lens, as it promotes a

context in which nurses are pitted against nurses in a never-ending search for a victim to blame. Making perfectibility the basis of our education and practice can only contribute to a warped nursing lens. A lens that is cloudy, cracked, or distorted by the need to hide errors may promote poor clinical judgment and risk placing patients in harm's way. It will result in what Chinn and Kramer term "patterns gone wild"²¹(pp 13) in nurses' ways of knowing- a failure to integrate nursing knowledge, resulting in potential violence to our patients and ourselves. In so doing, it may amplify patients' *and* nurses' suffering to an unbearable level. Our patients- and our colleagues- deserve better. From a critical/feminist perspective, the marginalization and oppression that flow from the use of the perfectibility myth are unacceptable. If we are truly to achieve nursing lenses and subsequent gazes that are informed by a moral imagination, we must begin by attending to the conditions that produce such patterns of oppression.

Implications

We propose the mid-range theory of distortion of the nursing lens by perfectibility as a starting point for future scholarship. We suggest that the further examination of nursing lens distortion by perfectibility take into account the current dominance of post-Enlightenment thought throughout nursing science. An examination of the ways in which many nursing curricula uncritically incorporate these philosophical assumptions of perfectibility as a "natural" result of controlling for sources of variance would yield some interesting findings. For example, nursing education and practice have continued to insert additional "rights" (i.e., right patient, medication, dose, time and route) to medication administration in hopes of perfecting the medication administration process.²²⁻²⁶

According to Elliott and Liu²⁷, currently *nine* rights are being suggested. Meanwhile,

rates of medication errors and underreporting continue to rise.²⁸⁻³⁴ As long as nursing education and practice continue to blame individuals' failures- rather than social processes that promote oppression- as the principal sources of errors, the overt and covert power relationships inherent in the Perfectibility Model will continue to fuel the nursing lens distortion. Giving voice to nurses' and nursing students' lived experiences and the errors inherent in being human may provide the insight needed to illuminate a high level of accuracy, instead of perfection.

Ellefsen and co-workers state, "We know about activities, but we do not know what goes on in the nurse's head, what nurses think about the patients and their problems, and how they end up doing what they do for patients"³⁵(pp 98). Without an analysis of the development and context of a nursing lens as well as research methodologies that compliment the dynamic nature of the nursing lens, current research approaches will continue to pound nursing's square peg into an existing round hole appropriate only to other professions.^{1,4}

The exploration of the mid-range theory regarding the distortion of the nursing lens by perfectibility would benefit by including a fresh, novice nursing perspective. A qualitative study of nursing students just prior to graduation would be useful in capturing that perspective. An exploration of students' current nursing lens- how they view themselves, their patients, and their practice- would yield some rich insights into the embryonic nursing lens that is currently unexplored. Similar research could be conducted with nurses along a continuum of experience and diverse settings. The subsequent identification of factors contributing or enhancing the distortion of nursing lens could form the basis for the design of educational programs and interventions congruent with

the Benner and co-workers¹⁵ vision of a “connected” nursing practice. Future investigation of the promotion of a “connected” nursing practice could draw from the already deep well of nursing scholarship into creative leadership for building community, particularly the work of Chinn.³⁶ Such lines of research could ultimately result in the development of educational and systemic processes that replace the myth of perfectibility- and its accompanying oppressive distortion of nursing lens- with an authentic, empowered true nursing praxis.

Conclusion

By providing a historical background for the concepts of nursing lens and nursing gaze, we have proposed a mid-range theory regarding the potential distortion of the nursing lens by the socially-constructed phenomenon of “perfectibility” using a critical feminist perspective. Drawing upon the recent work of Benner and co-workers,¹⁵ we have proposed strategies for reducing distortive, oppressive processes related to perfectibility. We believe that the theory of nursing lens distortion has the potential to guide future scholars in developing innovative ways of transforming nursing education and practice.

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Power Relations:

The Effect on Students' Learning Medication Administration

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Abstract

Nursing education is at a crossroads. It has been called to change the content and method of educating nurses for current and future practice. Shrouded in memorization and content overload is the method medication administration is learned in pre-licensure education. Research regarding the lived experience of nursing students learning medication administration is limited. Using an interpretive phenomenological approach, the reality of how nursing practice and practice wisdom is learned during medication administration was examined. A purposive sample of 13 students attending an entry-level masters nursing program was analyzed using the interpretive phenomenological method by Benner. Four paradigm cases emerged revealing a student-clinical instructor-staff nurse triad where power relations themes either promoted or inhibited learning medication administration. Exemplars of student feelings, meaning of medication administration, and solutions for improvement further revealed the students' experiences. Discussion using the concept of nursing lens development from the mid-range theory of nursing lens distortion illustrated the findings. Relationships regarding the student, clinical instructor, and staff nurse were crucial in the development of medication administration practice. Exploring such experiences offered insight into educational pedagogies that inhibited and promoted accuracy.

Keywords: nursing education, nursing students, medication administration, interpretive phenomenology, clinical setting, power relations, nursing lens

Power Relations: The Effect on Students' Learning Medication Administration

It was always hard to get the meds, and the patient, and the instructor all together. The instructor had to be there when you gave the meds. So, I had the meds all together in the little cup...and my instructor told me to put it in my pocket. But the nurse at the hospital said, "No, no, you can't do that"...so I had it in the little cup. And then, I'm walking around waiting for the instructor to get back up there. And somehow, one of them must have fallen out...but it was packaged. OK, so we're in the room, with the machine, we get to the last one and there's no med there! You know, and she's lookin at me like, "Ah, I can't believe you screwed up like this". You know, this is the one, the scary teacher...so I said, I know I had it...so I walked out and I found it on the ground outside the nurses' station. But it's all packaged up...so I brought it back in and she looked at me like "I can't believe you're gonna be a nurse" ...and I thought, I should not be a nurse...

Nursing education is at a crossroads. It has been called to change the content and method of educating nurses for current and future practice. No longer is it acceptable for faculty to teach nursing students as they were taught. A recent Institute of Medicine (IOM) report, *The Future of Nursing: Leading Change, Advancing Health*, called for new strategies for learning fundamental concepts and charged nursing education to cease reliance on student memorization and content burdened curricula (IOM, 2011). However, research to influence alternative evidence-based education pedagogy is limited. In addition, it is rare to find nursing faculty incorporate research regarding teaching and learning strategies. Yet faculty are called upon to graduate nurses that have a reflective nature to their practice and a learning experience that is steeped in engaged learning (Benner, Sutphen, Leonard & Day, 2010).

Background and Significance

Shrouded in memorization and content overload is the method by which medication administration is learned in pre-licensure nursing education and subsequently

performed in practice. The method used for medication administration was first documented by Catholic clergy in 1841 (Wall, 2006). Stemming from that tradition, nursing education and practice has become accustomed to the five rights of medication administration. They include the right patient, medication, dosage, route, and time (Eisenhauer, Hurley & Dolan, 2007). Recently, a variety of nine and ten rights was proposed to ensure safe medication administration. The nine rights include the original five plus the right documentation, action, form, and response (Elliott & Liu, 2010). The ten rights method include the original five plus the right client education, documentation, client right to refuse, assessment, and evaluation of the client after the medication is administered (Berman, Snyder, Kozier, Erb & Pearson, 2008).

Medication administration has been described as a therapeutic nursing ritual characterized by many procedures, customs, and routines to avoid errors (Wolf, 1988). In spite of the commitment to teaching and adhering to a rigid administration tradition, nursing students and practicing nurses continue to commit medication errors that include but are not limited to the five to ten rights method (Agyemang, R.E. & While, 2010; Berman, et al., 2008; Harding & Petrick, 2008; Wolf, Hicks, Altmiller & Bicknell, 2009; Wolf, Hicks & Serembus, 2006). Therefore, the purpose of this study was to uncover and describe the lived experiences of learning medication administration from the authentic voice of entry-level masters nursing students.

Associated Assumptions

Two assumptions are presented regarding how nursing students learn. First, experiential learning is a recommended method for learning nursing and especially suited for medication administration. It forms in an environment where student reflection and

discourse as well as valuable feedback on student performance are intentionally designed (Benner, et al., 2010). However, the current method of learning medication administration from an experiential learning perspective has serious challenges. Students, while learning medication administration, are required to obey strict adherence to protocols, or not be successful (Craven & Hirnle, 2009). Yet this pedagogy and environment has remained comparatively unchanged for 50 years with relatively no studies to gage its effectiveness (Craven & Hirnle, 2009; Kron, 1962).

The second assumption addresses the internal process of how learning medication administration influences “nursing lens” development. The term “nursing lens” remains a frequently used but somewhat ambiguous concept in nursing literature. In its most general sense, the term nursing lens is used to capture how nurses currently and historically view their patients, themselves, their practice, and their environment. For the purposes of this research, “nursing lens” is understood as not only how nursing students develop a view of themselves and their emerging practice, but also what influences the development of this lens from their lived experience as nursing students learning medication administration. In addition it is assumed that the nursing lens is by its nature contextual, arising out of the sociopolitical context in which it develops. It can be shaped in ways both subtle and overtly supportive or violent, reflecting the power relations inherent in the context of learning medication administration and the threat of making medication errors. It can become clear and useful, or distorted depending on the learning experiences (Morgan & Georges, 2011).

Review of the Literature

Three recent reports underscore the need to investigate how nursing students learn medication administration. First, the Quality and Safety Education for Nurses (QSEN) initiative, proposed the knowledge, skills, and attitude (KSA) necessary to meet quality and safety competencies for pre-licensure nursing education. One of the five pre-licensure competencies, entitled safety, impacts the current method of medication administration taught to nursing students. The QSEN competency called for less dependence on memory strategies therefore bringing into question the three checks and five to ten rights traditions used in medication administration. In addition, the safety competency addressed attitude development regarding the physical and cognitive limits of being human (Cronenwett et al., 2007).

The second report appealed for a “radical transformation” in nursing education (Benner et al., 2010). One significant finding revealed nursing faculty teaching in the separate physical locations of the classroom, the skills lab, and the clinical setting in a non-integrated approach. Therefore, the student was left with the arduous task of taking in enormous amounts of information, applying it in a less than realistic lab environment, and then applying it again in the fast paced clinical setting where there is little margin for error. The result being a gap between the expectations of practicing nurses and the education nursing students are experiencing.

Lastly, another call for major changes in education strategies emerged from a recent Institute of Medicine report regarding the future of nursing. They denounced the education strategy of memorization in light of the futility of knowing vast amounts of information regarding the current health care environment. In addition, the report called

for foundational nursing concepts to be experienced and applied in a variety of contexts as opposed to memorizing facts and lists for each circumstance. To accomplish this they asked for nursing to not only rethinking curricula, but focus on faculty being better prepared academicians to influence improved teaching and learning strategies (IOM, 2011).

Medication Administration

Nurses play a key role in medication administration although other health care professionals share the responsibility of medication administration and the errors that occur. Interventions to correct nursing medication errors have focused on the procedures, environment, and equipment in the practice setting as well as error reporting and discipline measures (Elliot & Liu, 2010; Potylycki, et al., 2006; Wolf, 2007). Yet the administration method and the pedagogy used to teach that method is steeped in tradition instead of research.

David Kolb, an education theorist, embraced an experiential learning perspective that purports learning will take root, when one takes hold of an experience, and transforms it through various learning experiences. Once the taking hold and transforming occur, the learning can be applied to a new situation (Kolb, 1984). Adding reflection to a cyclic experience of repeated taking hold and transforming provides adjustments to a learner's mind-set and perceptions (Beard & Wilson, 2006). According to Benner, et al. (2010), experiential learning for nursing students forms in an environment where reflection and discourse as well as valuable feedback on student performance are intentionally designed. However, for nursing, the current pedagogy of

learning medication administration from an experiential learning perspective has two serious challenges.

First, nursing students occupy a powerless position in the clinical setting where they are learning medication administration on actual patients. They exist in an environment with the dichotomous expectation of carrying out the actions of a nurse in real time, according to the culture of the clinical setting, as well as meeting the student role expectations. The qualitative study by Reid-Searl, Moxham & Happell (2010) exemplifies this dilemma. They found that in spite of the Queensland law requiring supervision of student medication administration, frequently students would need to take the responsibility of requesting the staff nurse to supervise the medication administration process. Students reported this action was to not only meet the needs of their patients, but to meet their learning needs. Their requests were frequently met with disdain and a range of no supervision to oppressive supervision by staff nurses. These experiences exemplify Andersson's, (1995) claim that existing between the roles of a student and a member of the nursing staff, create a socio-political space where nursing students can be classified as a marginalized group.

Second, the pedagogy is dictated by a demand for firm obedience to protocols. Protocols such as requiring three checks for each medication poured; as well specific sequences of activities to be memorized and followed in a lock step fashion permeate the activity of learning medication administration (Craven & Hirnle, 2009; Leape, 1994). Finally, the pedagogy used to teach medication administration, including the five to ten rights, has remained relatively unchanged for 50 years with relatively no studies to gauge its effectiveness (Berman, et al., 2008; Craven & Hirnle, 2009; Eisenhauer, et al., 2007;

Elliott & Liu, 2010; Kron, 1962; Lilley & Guanci, 1994; Wilson & DeVito-Thomas, 2004).

Method

The interpretive phenomenological methodology was chosen to reveal what is salient to nursing students during their experiences of learning medication administration. This taken for granted situation is particularly suited for interpretive phenomenology because insights are often revealed through the deconstruction of the familiar (Leonard, 1994). Actual circumstances described in a narrative fashion bring us closer to the reality of nursing practice and practical wisdom than specific questions about theory, perceptions, ideology, or comprehensive reports of a typical experience (Benner, 1994). Therefore this methodology was chosen to not only hear the nursing students' authentic voices, but to position the researcher to interact with the data as it emerges with engaged reasoning.

The data was drawn from the student narratives and was especially meaningful as it described a tacit, but common event, with origins in traditions, specific language, and organized practices within a social context (Benner, 1994). In doing so authentic data describing the phenomenon of learning medication administration was gathered from the participants and examined using the interpretive phenomenological methodology.

Interpretive or Heideggerian phenomenology methodology separates itself from other accounts of current qualitative inquiry by focusing on not only the description of the lived experience, but the understanding or meaning it holds for the participant and the researcher. Martin Heidegger introduced the concept of "Dasein", or being-in-the-world where you cannot separate human beings from their world, as well as the temporality of

being is the unity of the past, present and future (Heidegger, 1962). Therefore the interpretive phenomenological methodology was chosen to reveal what is salient in the time honored tradition of learning medication administration in nursing.

The nursing student perspective was unique both in the roles the students occupy and in the environments used for learning. Students simultaneously occupy the roles of student learners attempting to meet the academic expectations coupled with the demand for the accuracy of a practicing nurse. In addition they are learning medication administration in the traditional classroom and skills lab student environments as well as the real life space of patient care. Therefore, the descriptions and meanings they hold regarding learning medication administration has voice using an interpretive phenomenological method.

Participants and Setting

The participants were students accepted into the entry level masters nursing program at a public university in Southern California, who had recently taken the National Council Licensing Examination for Registered Nursing (NCLEX-RN). These students were chosen for four reasons. First, they have proven academic success by having a baccalaureate degree in another subject. Second, they bring a unique perspective to the learning milieu with knowledge and work experience outside of nursing. Third, limited research was found employing this student population. Last, they have had the maximum exposure to student medication administration learning experiences yet have limited or no experience as a novice RN due to their recent licensure and nursing student status.

Fourteen participants were recruited through purposive sampling and saturation of the data was achieved with the thirteen who participated. The participants ranged in age from 23 to 55. Ten were female and three were male. All were licensed Registered Nurses (RNs), with 11 having passed the NCLEX 1 to 5 months before the interview and two within the last 24 months. Most had not worked as an RN, and those that did had five or less month's experience. In a wide variety of subjects other than nursing, eight held baccalaureate degrees, three held both a baccalaureate and a master's degree, and two held two baccalaureate degrees. All had a few months to 20 years experience working in positions outside of health care. Twelve of the thirteen had four months to thirteen years experience working in healthcare aside from nursing. Prior to beginning data collection, IRB approval was obtained from both the participants' and the researcher's universities.

Data Collection Procedures

Participants were interviewed individually using a voice recorder visible to them, as well as the researcher taking hand written notes or jottings. Interviews make available the opportunity to study participant's understanding of their lived world and give meaning to that experience (Kvale & Brinkmann, 2009). To increase authenticity, member checking was employed. Follow-up interviews were conducted by phone and email to obtain data regarding issues raised in subsequent participant interviews as well as member checking of the data analysis.

A semi-structured interview provided an indirect discourse to reveal the following. In what ways do students construct descriptions of their medication administration experiences? What meanings do students give to their medication

administration learning experiences? How do the classroom, skills lab, and patient care environments influence student medication administration experiences? How does the context of current medication administration nursing practice, influence the student learning experiences?

Data Management and Analysis

The individual recordings were transcribed by the researcher and the transcriptions were reviewed in synchrony with the voice recordings, while field notes were developed from the interview jottings. From those activities, analytical, methodological, and personal memos were developed to begin tracking reflexivity and engaged reasoning as it transformed. According to Benner (1994), the reflexivity is valuable in presenting a more authentic voice of the participants, if the researcher's engaged reasoning is captured in writing and available for analysis.

Analysis of data was done using the interpretive phenomenological method by Benner (1994). It contained a coding process followed by three narrative analysis strategies. Both initial coding and values coding were used to not only identify distinct parts of the data for examination but to reveal the nursing students' values, attitudes and beliefs (Saldana, 2009). The narrative analysis strategies included selecting paradigm cases, thematic analysis, and exemplar identification (see Appendix A for a Mock Schematic of the Data Analysis).

The first list of codes was completed by hand as data was gathered and following completion of data collection. The codes and transcripts were entered into the qualitative software management tool QDA Miner where they were again, reviewed, revised, and added to as needed. Using an indirect dialog with the data, interviews and

accompanying researcher memos were reviewed as a whole for the overall understanding of each nursing student's story. Paradigm cases were chosen by the researcher because they stood out during analysis as being well understood, or perplexing (Benner, 1994).

Thematic analysis, the second strategy, entailed cross-case comparisons to search for commonalities and differences. According to Benner & Wrubel (1989), there are five sources of commonality in phenomenology. They include (a) the functioning level of the situation and how the participant is posited, (b) the embodiment, or bodily responses that are usually taken-for-granted, (c) temporality, or how one perceives time in the lived experience, (d) the concerns, or what is salient to the participant, and (e) the common meanings, or understandings that usually go unnoticed, yet provide a source for harmony and discord among people in the phenomenon. Previously described values coding was especially helpful in achieving the purpose of thematic analysis because values coding considers the meaning behind the phrases rather than the words themselves (Saldana, 2009). According to Benner (1994), the process of thematic analysis does not sanitize the lived experiences into a common ideal, rather it reveals distinctions and similarities and the meanings behind them.

The final narrative strategy used to analyze this study was exemplar identification. Exemplars are portions of a paradigm case or thematic analysis that are taken from the text to define a similarity or contrast. They demonstrate intents and concerns that could be recognizable in another situation. Benner (1994) compares them to quantitative operational definitions. Exemplars were extracted from the paradigm cases and thematic analysis according to the similarities and contrasts identified during the paradigm case

and thematic analysis processes. Data management and analysis were reviewed by the Chair and revisions were made accordingly.

Results

A significant portion of the lived experiences of nursing students surrounding medication administration was found in the clinical setting, therefore, the classroom and skills lab influences will not be presented in this paper. The context was characterized by student participation in a Triad relationship including the clinical instructor and the staff nurse they were assigned to or were accompanied by when administering medications in the clinical setting. The power relations emerged as themes. They included the clinical instructor-student, staff nurse-student, and clinical-staff nurse relationships. These influences, intrinsic in the Triad, profoundly shaped the personal meaning and perception of accomplishment regarding medication administration for the student. Although all students reported both negative and positive experiences with clinical instructors and staff nurses, the degree and frequency affected the perception of their own medication administration practice. Another theme applicable to the Triad emerged as students described a gap between academic learning and practice by staff nurses regarding medication administration.

Students described themselves as being prepared with a willingness to learn. “I feel like I'm always willing to learn...I think that's helped a lot...I am willing to hear the constructive criticism and learn from it, and change, you know, whatever needs to be changed.”

Each student fell into one of four categories. One student from each category was chosen because they more clearly represented the category or paradigm case. As a result,

four paradigm cases emerged based on different experiences within the Triad. The paradigm cases were titled Grounded, Academic Partiality, Practice Partiality, and Non-traditional Learner (see Appendix B, C, D and E for the Grounded, Academic Partiality, Practice Partiality, and Non-traditional Learner Paradigm Cases).

Paradigm Cases and Thematic Analysis

The Grounded paradigm case arose from experiences where both the clinical instructor and the staff nurse were a positive influence on the student.

I remember my professor, the first time I gave meds. [professor said] “You've done this in class a million times, like, it's OK, it's OK, you'll be fine”...So you kinda need a little pep talk before you go in there.” “...I just feel like it was a comfortable relationship that, I felt, like I could ask questions and I wouldn't be talked down to...

In addition, the clinical instructor-staff nurse relationship was described as supportive and collaborative. According to Anthony and Yastik (2011), student treatment by staff nurses was contingent on the level of respect given to the clinical instructor.

I feel like if anyone person in the situation isn't comfortable then it's not a learning environment...I could be completely willing to do something, my teacher could be completely willing to do something, but it's still that nurse's patient. And if she doesn't want us doing it, then we wouldn't be able to. So it's definitely, you have to build a rapport, um, amongst all three people.

A gap between practice and academia was acknowledged by the Grounded case, however they did not see the gap as a choice of one over the other since they valued both the clinical instructor and staff nurse contributions.

I feel like they give you, a little, towards the end, they see your progression and they give you more freedom...cause I think, a lot of the nurses and instructors that I've been with were very good about saying like “I'm not always gonna be here, it's important for you guys not to rely on us”... of course we always had to clear everything through them, but they wanted to make sure that we were progressing.

The Academic Partiality paradigm case involved an unbalanced influence where more staff nurse experiences were negative influences as opposed to more positive experiences with the clinical instructors.

I walked away goin this is the woman [staff nurse] who just criticized me and people from my program and she's doing this [unsafe medication administration]. So I'm thinking, I'm sorry, I would rather walk away with less technical skills but more critical thinking any day of the week.

Hanson and Stenvig (2008) found in their grounded theory study that the student's perception of feedback is influenced by how it is presented by the faculty.

I love my teacher, the one that I'm talking about, the drill sergeant. Actually, I love all my teachers...they're all special, you know, special nurses...and they all have their different personalities. They bring their personalities to their work and to their teaching...and it's very evident.

Unsafe staff nurse practice engulfed the Academic Partiality case in a compromising situation where they perceived knowing better, but felt powerless to advocate for the patient.

I felt like I walked away...I felt heavy because I knew that [leaving the medication at the bedside] was wrong. I knew that was wrong what she was doing. I wasn't doing it so I knew I wasn't wrong in that sense. But I knew it was wrong because I was associated with that event. So I felt heavy...hearted about the association and that I didn't feel comfortable enough to stand up and tell her, You know what...that's really opening up a can of worms. You know...anyone can walk in and just inadvertently play around, or take that, or, we-we just don't know.

In addition the student would avoid experiencing the RN role in the clinical setting.

And my attitude is always, "what can I do for you". You know if I would see my nurse running haggard because she's got millions of things to do...I would forgo the opportunity to do certain skills and I would say, why don't you go do that, and let me do this little-what I call little thing, which is the care, the CNA care thing that she's running around trying to do but the other nursing things too. And I would say "Why don't you go

give your meds, let me go ahead and get her out of bed and ah, take her to the bathroom. Ok, cause you can't do both and I'll do this.

The Academic Partiality case was searching for a practice setting likened to the academic setting.

I'm excited about the opportunity to practice under my own license, but I'm also anxious and hesitant because...because it's on my license and I want someone to preceptor me. And in precepting me, I want a nurse who does everything by the...I don't mean everything by the book as literally. But, I mean, someone who is diligent.

The gap between academia and practice was seen as a choice and the Academic Partiality case chose what academia taught as authentic practice. "I just shuck it [practice not like academia] off as that's their practice, that's not how I want to practice. And for when, you know, I actually practice, I want to practice the way that my teachers have taught me."

The Practice Partiality paradigm case was the reverse of the Academic Partiality as a result of the imbalance created by the experiences with clinical instructors having more negative influences verses the experiences with staff nurses having more positive influences. Disharmony in the clinical instructor-staff nurse relationship was also described.

I think the first one [injection] I gave, my clinical instructor wasn't there. Um, I probably wasn't supposed to be doing it. I think it was at a time when we were only supposed to be doing oral medications. But, the nurse with me gave me the opportunity...I wasn't going to say no (laugh)...I think that it was more, I always seem to in general have better relationships with the nurses than some of the clinical instructors. So, I felt that they were there more and, kind of, a bigger part of the process.

The gap between academia and practice was seen as a choice and the Practice Partiality case chose the staff nurse medication administration as authentic practice. This

is illustrated in response to a question asking a description of the practice of medication administration by staff nurses:

“... definitely not the kind of by the book medication administration that we learn in school as an ideal. But, I think that on a good unit, it's also, it's safe. It might not be a 100% by... the book where ... you're identifying the patient with two identifiers for every medication you give, throughout the day...and I think that probably, almost nowhere are any floors being done 100% like that...I think that on a responsible floor, with responsible nurses...it's still being practiced in...a safe way... I don't imagine how to explain it, but there's...certain medications that are high risk, or certain lines that people don't cross beyond the kinda, five, you know, five rights thing like that. That you know there's a difference, a qualitative difference between good medication administration and lazy medication administration that maybe isn't exactly the one that books would describe.

According to Clark, Olender, Cardoni, and Kenski (2011), nurse executives perceive nursing educators as not keeping current regarding practice regulations, standards, and changes as well as being slow to incorporate changes in the curriculum.

The Non-traditional Learner paradigm case was the opposite of the Grounded case in that both the clinical instructor and the staff nurse experiences had more negative influences. “my teacher just like took it from me and just did it. And I was kinda like, OK, I didn't warrant-I remember walking out of there, like, I have no idea what you just did, or anything like that.” Faculty identified intimidating and bullying students and using inept teaching skills as two of the major uncivil faculty behaviors (Clark, 2008c). Marchiondo, Marchiondo, and Lasiter (2010) went on to describe places common to faculty incivility include areas where there is frequent interaction that involves feedback.

The Non-traditional Learner case described the effect of the negative staff nurse influence as the following.

“I would say a lot of the staff nurses were not willing to teach or, you know, anything...which is sad because we're the profession too now and if

you don't teach us to be good nurses you're just bringing down the entire profession.”

The gap between academia and staff nurse practice caused further confusion for the Non-traditional Learner case and the learning experiences from both relationships were seen as irrelevant albeit finding some value in negative experiences.

“Cause if you kinda make...a little mistake, like, oh I didn't ... scan the armband. You know, you're gonna remember next time. And they never really, you never got to make a small mistake. So it was just like “You want me to step back and you can do this?”

Disharmony between the clinical instructor and the staff nurse was also expressed.

...she [staff nurse] had them [medications] identified, but, she was giving them all at once, you know. She wasn't going back and pulling everyone's meds one at a time, which is what we were taught to do. And I just remember my instructor being like, “Don't do what she's doing”.

The Non-traditional learner frequently described themselves as needing time to process what they were learning and found that was not received well during medication administration.

“I think she could've stepped back a little bit. And...obviously if I'm gonna make a mistake step in, but if it's just something small like I'm forgetting, you know, scan-like I'm gonna figure it out on my own. But...I feel like she never really gave me a chance.”

Exemplars

Student feelings, the meaning of administering medications, and solutions for improvement emerged as exemplars from the paradigm cases and thematic analysis. A variety of feelings associated with medication administration were expressed by the students. The following exemplify their voiced feelings of being fearful, humiliated, intimidated, terrified, and trusted.

Fear was the dominate feeling expressed and students described coming to the medication administration experience with the fear of making a mistake, hurting a patient, or failing the program.

I think that if you're filled with fear because of something you experienced in nursing school, the nursing school's not doing their job...and I think that ultimately when you find those supportive teachers and you surround yourself with some pretty good boundaries and are able to set a boundary and say no I'm not willing to be abused, you are a more competent nurse because you know your boundaries and that is gonna lead to a more accurate administration of medication, every time. Simply because your attention is 100% on that task. It's like texting and driving... Your attention is not on driving, you're putting others in danger.

Unrealistic expectations of clinical instructors, such as wearing non-sterile gloves to prepare oral medications, and verbal condemnation put some students in frustrating situations that were humiliating and would override the learning experience According to Clark (2008a), the act of faculty stating condescending remarks or put-downs to students was the most frequent uncivil behavior identified by both faculty and students. One student depicted anxiety lingering nearly two months following a humiliating experience in front of a patient

“[what the clinical instructor said was] Not really bad, but just like, “I can't believe you did this! Didn't you know he had a G-tube?” Like, ah, yeah, I cared with him earlier with the nurse. Yeah, I should have made that connection, I messed up. It [not crushing the PO meds for a G-tube] made me feel like I'm not really capable of doing this. It made me really question myself.

Another student described having the initial impression that expressing needs and concerns was appropriate, however feelings of powerless and intimidation ensued. In a phenomenological study by Clark (2008b) a significant theme voiced by nursing students was feeling helpless and powerless in response to faculty incivility.

“There's a lack of male representation and um, the expectations of us students, sometimes are really high and sometimes they're expressed in a way, like...if you don't do it this way, you know, you're gonna be a terrible nurse. And sometimes the feeling that you get...they um, just make you feel a little inferior. And you know, not everybody, not all of the teachers, but there are a large majority of them that do and unfortunately...I'm in a position that's very powerless in this role. So I don't have a choice. And I finally learned to swallow that.

One student expressed a continual feeling of being terrified that was temporarily subdued by the thrill of initially giving medications. However, once the elation dissipated, they would avoid giving medications for the fear of being dismissed from the program.

“I think just that feeling like you're absolutely terrified!...throughout the everything of even ... like the first couple of times of doing it and ... you got the thrill out of...I did this, I did that...later on...if it was just basic meds and stuff you would just like “Oh, you know, just tell the nurse to do it”, and you will say “oh, I'll go do this while you give em the meds”. Cause it's like...actually after you open the pills and actually hand them the cup, and you're like, OK...this is kinda lame...the thrill's gone...and then when you kinda think of like the potential ta make a mistake, or do anything, like I'm “Oh, I'll let them do it”. Um...and like especially towards (laugh) really the last couple of days in clinical. Where it's like I don't want to do anything...we're so close to being done, I'm terrified of making a mistake and failing. Um...I mean-it's just how-it's like if you make a mistake, your kicked out of the program.

The Grounded paradigm case described the feeling of being trusted. This occurred following a positive staff nurse influence.

I guess it [not having to be perfect] made me feel like I was more trusted? So it gave me a better respect for the nurse that I was working with. Cause I knew that they trusted me, and they knew that I ... had the best intentions. So, if a mistake was made, they knew it wasn't because I was trying to defile someone...

Meaning of Administering Medications

Meanings frequently attributed to successful medication administration were empowerment, accomplishment, confidence, responsibility, feeling good, and the ability to change a patient's condition. However, the meaning most frequently described was a rite of passage to being a nurse.

That was one step closer to becoming a real nurse! I just feel like that's one of... the qualities of nursing. Like that's just what people really see a nurse as you know like that's one of the things they do, they administer drugs. So being able to do that kinda gives you a sense that your attaining some of the attributes of a nurse

Conversely, the meaning of medication administration for some practicing nurses was perceived by the students as a routine task gladly delegated to the students. This diminished meaning is illustrated by the current notion to reduce interruptions and distractions to improve the efficacy and accuracy of medication administration (Keohane, et al, 2008). However, the ethnographic study reported by Jennings, Sandelowski and Mark (2011) found it pointless to make a distinction between nurse's work and interruptions of their work because both are interwoven into the powerful influence medication administration has on the temporal structure of a nurse's day. A student's voice captured this more complex perspective of the meaning of medication administration.

Medication administration's a little bit hard because it's such a specific, it's so specific to nursing, as far as being a nursing task that isn't really reproduced that often in other, you know, work places. Um, I think it is the prioritization aspect of being able to prioritize and kind of discern, like, as you go through the process of administering medication.

Accompanying student perceptions of negative or ineffective experiences were solutions for improvement in the clinical instructor-student and staff nurse-student

relationships. Suggestions pertaining to the clinical instructor centered on the student having the space and freedom to learn as well as consistency regarding expectations among clinical instructors.

I think if they were to all meet together, all have...a set...these are the steps we are gonna teach them, this is how they're gonna be critiqued, this is how they're gonna be evaluated. We're gonna hold true to this in clinical, you know, that would really, reassure us and let us know that, you know, these are the steps you need to take and they don't differ, and maybe through clinical experience we'll learn that there are variations, from our nurses. But, I think you have to start off with a solid foundation, where you feel secure, and you're not insecure of should I do this? This instructor told me to do this. Like leave an alcohol wipe on the spot you're gonna inject or (laugh) take off. Just like little things like that, that people really focus on...

Requests for the staff nurse focused on the desire to work with a student.

I wish that the nurses on the floors, that they could somehow find out who wants to take a student before hand, you know. And pair up people that wanna take a student, than, it seems like they're always pairing up people that don't want students.

Discussion: Application of the Nursing Lens Concept

The nursing lens concept previously mentioned illustrates the findings for discussion. (Morgan & Georges, 2011). In the context of this study, the wide-angle capabilities represent the academic influence and the narrow-angle capabilities represent the practice influence. The wide-angle view allows the student, in the clinical setting to include the foundational medication administration learning influenced by the academic clinical instructor. If allowed to develop in a positive learning environment, with realistic expectations, the student can clearly focus when zooming-out to include the academic influence during medication administration. The narrow-angle view represents the real time experiences with the staff nurses. Competent, safe practice attributes coupled with a

positive learning environment allows the narrow-angle capabilities to develop, results in the student bringing into focus medication administration to patients within the time frame and context of the nurse's work day.

The Grounded paradigm case possessed a clear view of medication administration because both the wide-angle and narrow-angle capabilities of the nursing lens are established. The student was able to zoom-in and zoom -out with a clear perspective of medication administration influenced by positive power relationships within and among the clinical instructors and staff nurses. However, the Academic Partiality case only saw the academic influence clearly, and the student was left searching for a practice setting that mirrors, sometimes, unrealistic academic expectations (see Appendix F for the Grounded Lens and Appendix G for the Academic Partiality Lens).

The Practice Partiality paradigm case was the reverse of the Academic Partiality case by only clearly seeing the practice influence. As a result, the academic learning was set aside as not being authentic practice. The Non-traditional Learner paradigm case has a blurred image of both the academic and practice influences leaving their medication administration acumen to be informed by their independent learning (see Appendix H for the Practice Partiality Lens and Appendix I for the Non-traditional Learner Lens).

The relational themes within the Triad point to the existence of a positively constructed learning environment, with power relations from academia and practice that develop a clear and effective nursing lens for a graduate to be confident in their ability to safely, yet cautiously, administer medications. The Grounded triad offers a simplistic model to pattern a supportive sociopolitical context for emerging nursing lens development for nursing students.

The triad also describes negatively constructed learning environments from unbalanced power relationships arising from both academia and practice, resembling incivility. Faculty and staff nurses knowingly partake in incivility amongst each other, in addition to, identifying a significant gap between the expectations and praxis of academia and practice (Clark et al., 2011). However the marginalized student trying to learn safe medication administration amid these negative influences, experiences a stunted development of their nursing lens, affecting how they view safe medication administration and in turn administer medications.

Limitations

Three notable limitations should be addressed. First, the overall limitation was the question of generalizability to those outside of the study. However, according to Creswell (2009), there is a growing interest in generalizing the particularity of qualitative research. Second, interviews from these nursing students are also at a disadvantage due to the inequality of student articulation and insightfulness. Third, the interviews were conducted in a location outside of the influence of the natural settings where learning medication administration takes place. Other limitations included the lack of triangulation, and limited time in the field.

Conclusion and Recommendations

This study gave voice to the entry-level masters nursing students revealing power relations inherent in their medication administration learning experience. The roles of and relationships between the student, clinical instructor, and staff nurse were crucial in the student development of medication administration practice. Both academia and practice would benefit from including the student perspective when building a positive

learning environment. In doing so, minor alterations in approach during clinical can have drastically different outcomes. This article began with a student doubting their ability to become a nurse after an experience surrounding dropping a medication on the floor. In a positive learning environment, a similar situation described a positive teachable moment.

I remember one time (laugh)...everything was smooth sailing...and, what did I do? Oh, I opened the pill package. And, of course, it got stuck, so when I peeled it back, the med fell on the floor...you know, that happens to anyone, but, of course at the time, I was like, this would only happen to me, right now, when I have my professor here, and I have the patient, and I look like a fumbling student...so, that was a learning experience because I had already gone through the meds with the patient and opened some of them. And I was putting them into a little cup. And I spilled, the cup was fine, but I spilled one of them. And I kinda looked at my professor like..oh crap, what do I do now? Instead of answering for me, she just kinda looked at me and I appreciated that she gave me a look that was like "OK, now what are you gonna do?" And she didn't tell me what to do. So I had to kind of think it through...well, I'm gonna get another medication for you [the patient], um, I'll be right back. And as I was about to leave, my professor touched my arm and pointed to the pills and I was like..Oh, yeah, I can't leave them there; I gotta take them with me! And we had to go into the Pixus and explain that it had to be wasted... and then brought it back. So it was an accident but it was a learning experience...and I appreciate, looking back, that she let me kinda think it through...instead of just saying "OK, this is what you are gonna do".

Further research to triangulate the clinical instructor and the staff nurse perspectives would provide a thick description of the phenomenon of learning medication administration, perhaps revealing strategic areas to move the Academic and Practice Partiality, and the Non-traditional Learner Triads to a stable Grounded Triad learning environment. Further conceptualization and investigation of the Triad representing learning medication administration in the clinical setting is warranted to enhance the quality of student learning. Replicating the study using pre-licensure nursing students in Associate Degree and Baccalaureate Degree programs is also recommended.

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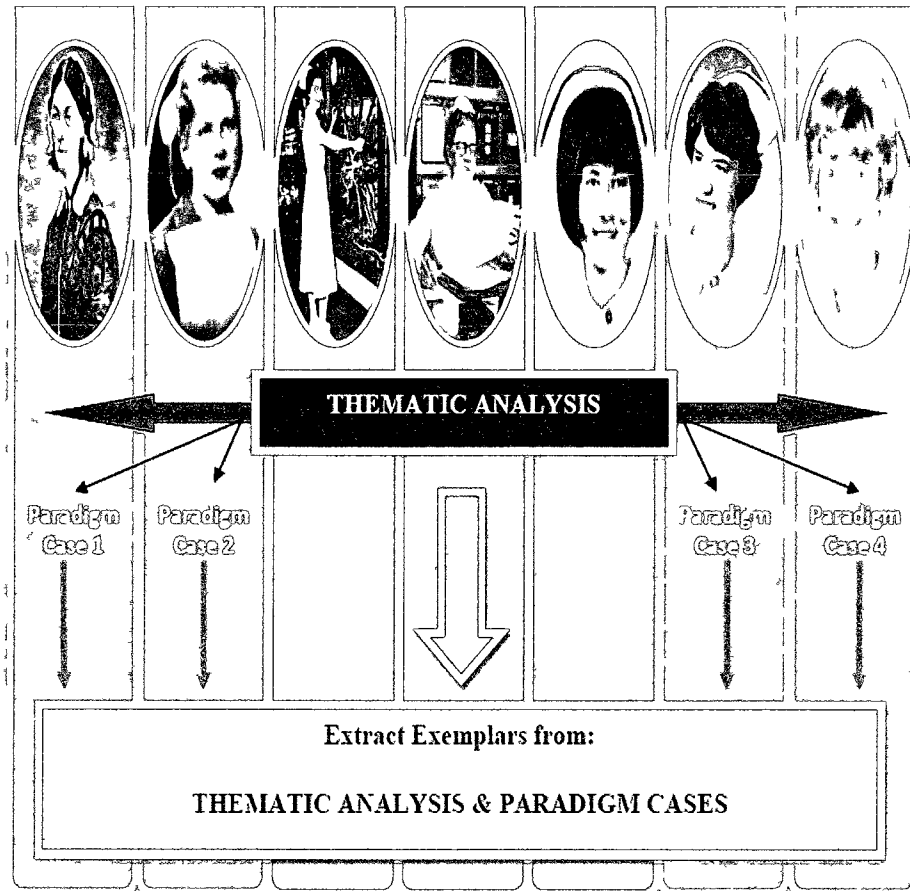
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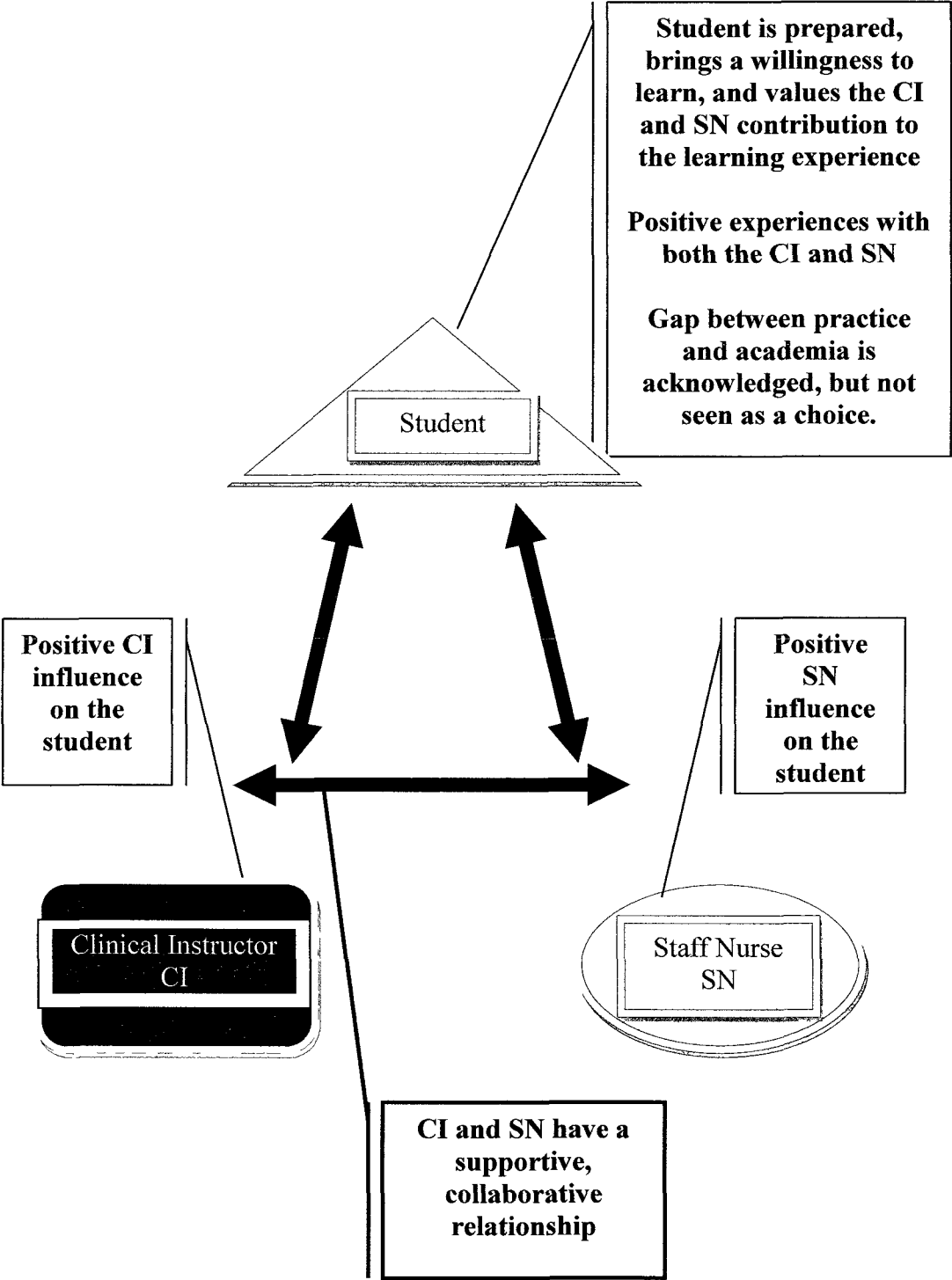
Appendix A

Mock Schematic of the Data Analysis



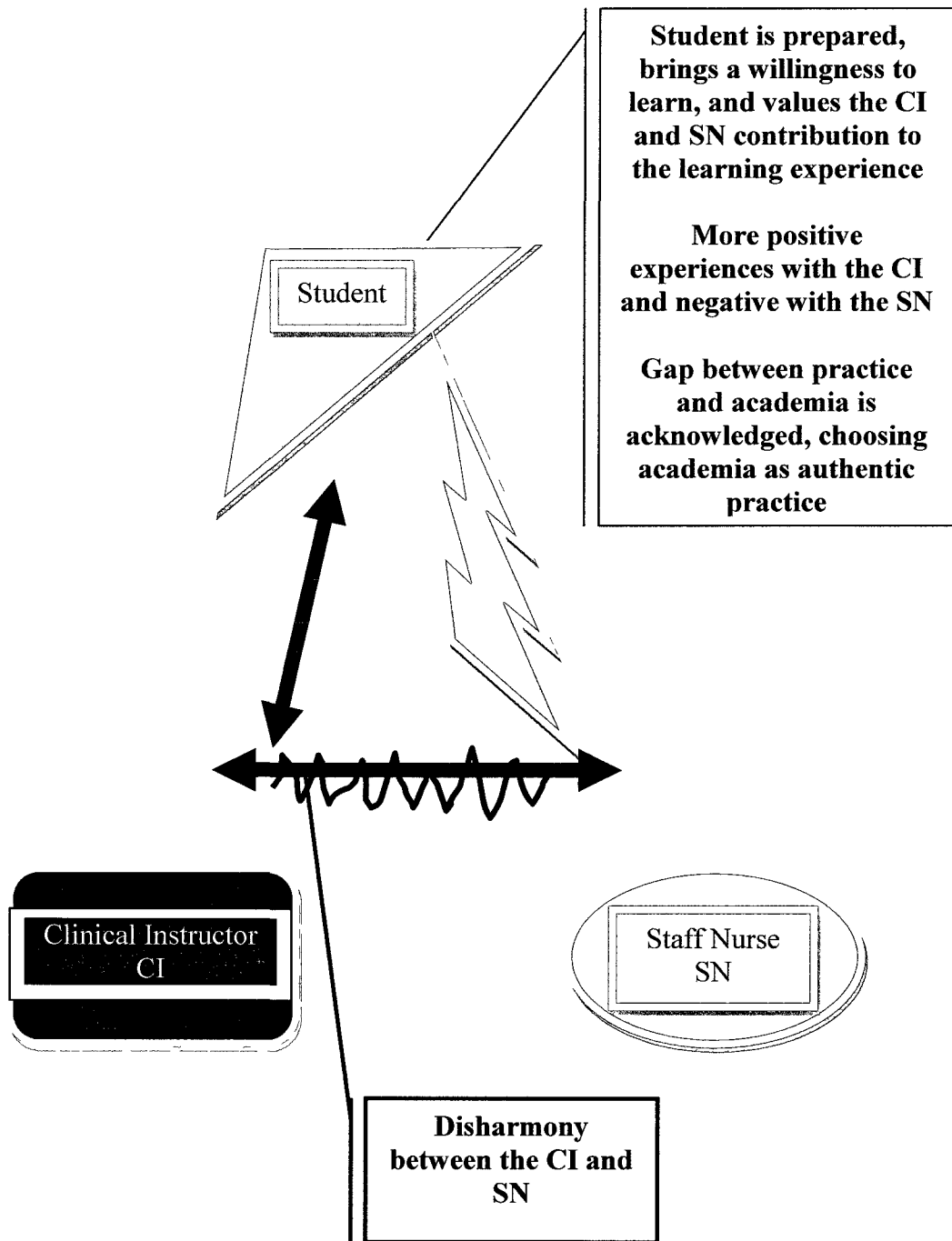
Appendix B

Grounded Paradigm Case



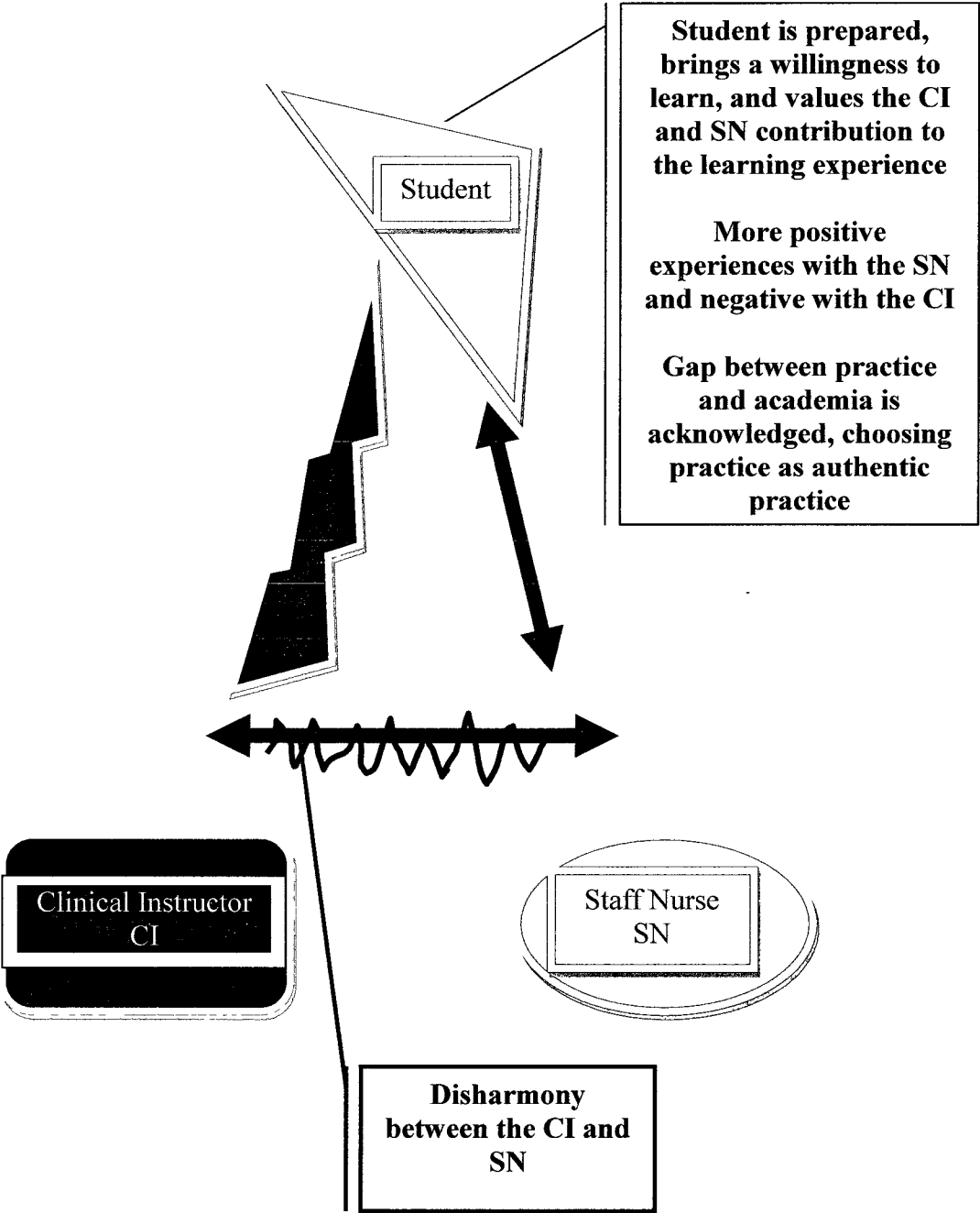
Appendix C

Academic Partiality Paradigm Case



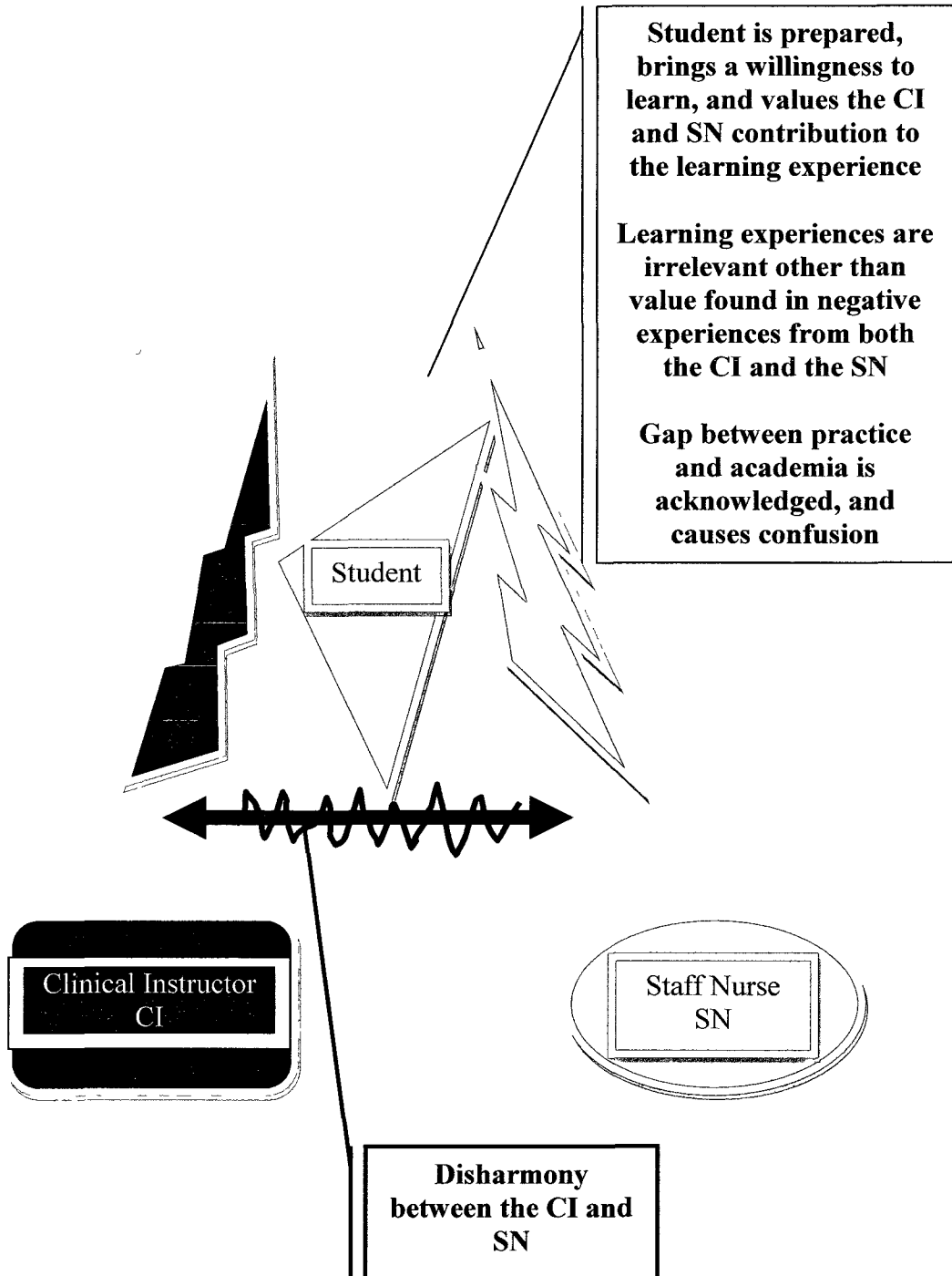
Appendix D

Practice Partiality Paradigm Case

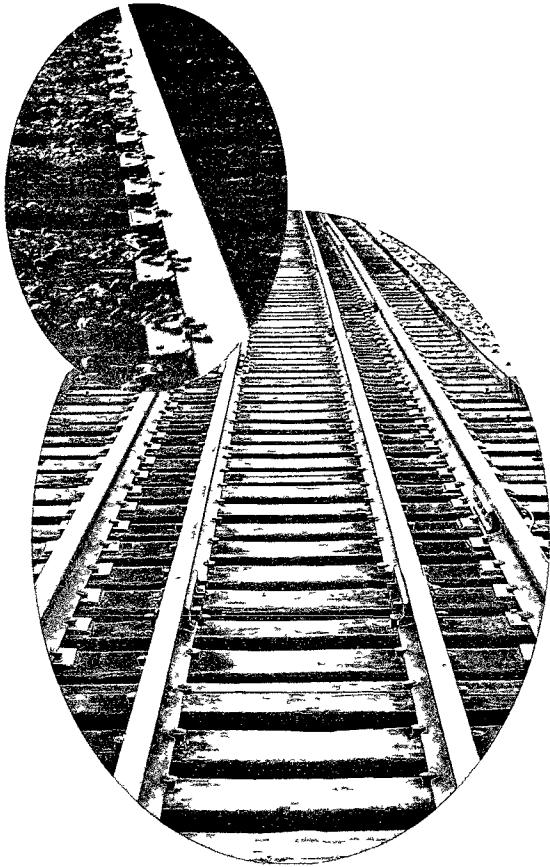


Appendix E

Non-traditional Learner Paradigm Case



Appendix F
Grounded Lens

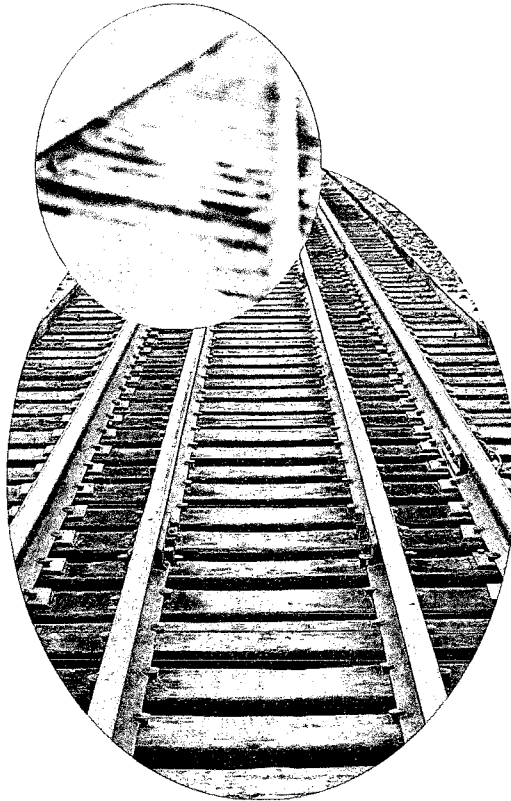


Grounded

Both the wide-angle and narrow-angle capabilities of the nursing lens are established. The student is able to zoom-in and zoom-out with a clear perspective of medication administration due to positive experiences (power relations) with both the Clinical Instructors and the Staff Nurses

Appendix G

Academic Partiality Lens

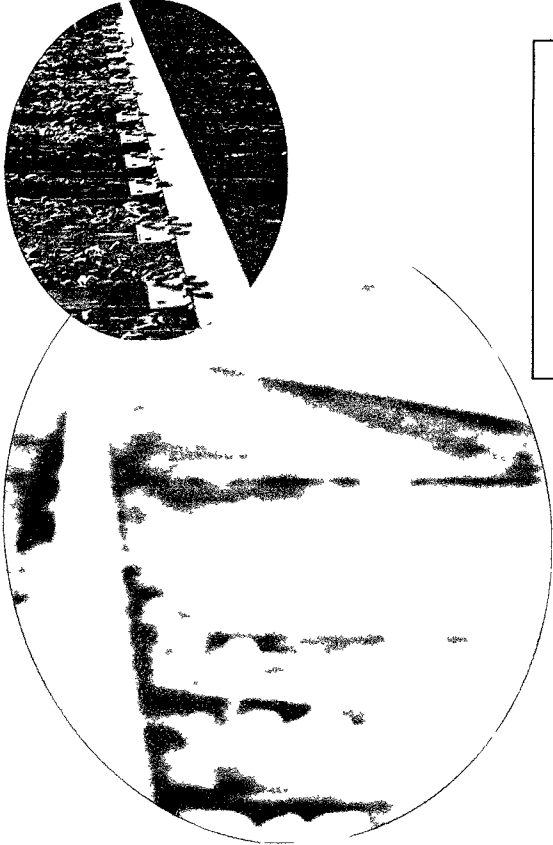


Academic Partiality

The Wide-angle capability of the nursing lens is established, but the student is unable to zoom-in to the narrow-angle practice setting influence due to negative experiences (power relations) with staff nurses affecting the ability to produce a clear narrow-angle perspective of medication administration.

Appendix H

Practice Partiality Lens

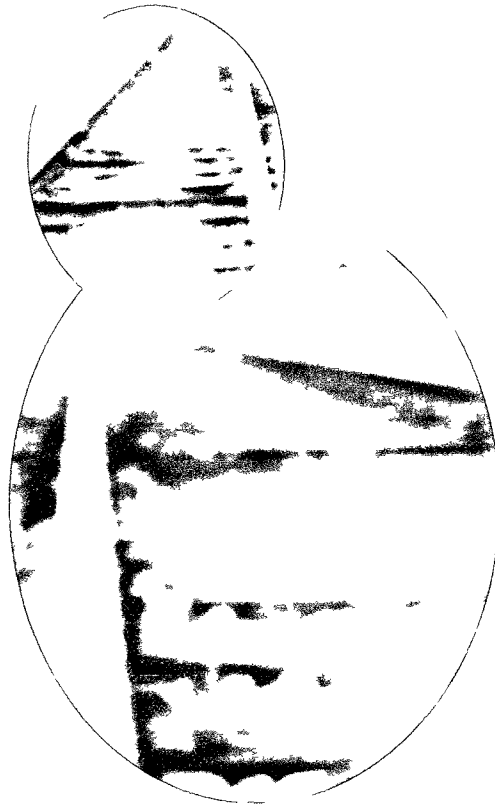


Practice Partiality

The narrow-angle capability of the nursing lens is established, but the student is unable to zoom-out to the wide-angle academic influence due to negative experiences (power-relations) with clinical instructors affecting the ability to produce a clear, wide-angle perspective of medication administration.

Appendix I

Non-traditional Learner Lens

**Non-traditional Learner**

Both the wide-angle and the narrow-angle capabilities of the nursing lens are not established due to negative experiences (power-relations) with both the clinical instructors and the staff nurses. The student is unable to zoom-in and zoom-out producing a blurred perspective of medication administration.

Anatomy of a Student Medication Error:

What's Wrong with the Rights of Medication Administration?

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Abstract

The complexity of medication administration creates an environment where nursing students are at risk for making errors. Coupled with a rigid, protocol-driven pedagogy students are placed in a learning experience counterproductive to accuracy. Previous studies focusing on causes and perceptions of medication errors may have narrowed the path of discovery needed to diminish medication errors. Using an interpretive phenomenological approach, the reality of how nursing practice is learned during medication administration was examined. A purposive sample of 13 entry-level masters nursing students was analyzed using the interpretive phenomenological method by Benner. A portion of the thematic analysis examined a student medication error and the phenomena surrounding that shared experience. A destructive learning aftermath resulted from one student-made error. Participant relationships with the student making the error, the nursing staff, and the clinical instructor were negatively affected. Themes describing the sociopolitical context, including the rights of medication administration, are also examined. The Perfectibility Model further illustrated the experiences. The phenomenon of medication errors was exposed in a contemporary context revealing a complexity that requires more than a list of rights, or ineffective preparatory actions when learning medication administration. Opportunities for academia and practice are further explored.

Keywords: nursing education, nursing students, medication administration, medication errors, interpretive phenomenology, perfectibility model

Anatomy of a Student Medication Error:

What's Wrong with the Rights of Medication Administration?

The complexity of medication administration creates an environment where many health care providers are at risk for making errors (McIntyre & Courey, 2007). This environment includes nursing students learning medication administration. Those experiences along with a rigid, protocol-driven pedagogy may place the already marginalized nursing student in a learning experience vortex that is counterproductive to accuracy. Previous studies, primarily with practicing nurses, have focused on causes and perceptions of medication errors looking for a delineation of what is safe and what is unsafe. In doing so the past research may have narrowed the path of discovery needed to tackle this horrific problem. In addition, these studies have not addressed the lived experiences of nursing students while they are learning medication administration. Exploring such experiences offer insight into educational pedagogies that inhibit or promote accuracy as well as unknown sources influencing medication errors.

Background and Significance

The importance of this hallmark of nursing practice is compounded by the profound risk to patient safety associated with medication errors. In June 2006, the IOM released a report revealing an estimated 1.5 million preventable adverse drug events occur each year in the United States as well as hospitalized patients experiencing more than one medication error per day (Aspden, Wolcott, Bootman & Cronenwett, 2007). Although other health care professionals share the responsibility of medication errors, nurses play a key role in medication administration. In the hospital setting, nurses are the last safety gate prior to the patient receiving the medication. Interventions to correct

nursing medication errors have focused on the procedures, environment, and equipment in the practice setting as well as error reporting and discipline measures (Elliot & Liu, 2010; Potylycki, Kimmel, Ritter, Capuano, Gross, Riegel-Gross, Panik, 2006; Wolf, 2007).

Statement of Purpose

The purpose of this study was to uncover and describe the lived experience of learning medication administration from the authentic voice of entry-level masters nursing students. In doing so, this study (a) revealed the personal experiences associated with student medication administration learning activities, (b) captured the meanings students give to their medication administration learning experiences, (c) uncovered the influence from the classroom, skills lab, and patient care learning environments on student learning experiences, and (d) disclosed the influence of current medication administration nursing practice on student learning experiences.

Questions posed to guide the aims listed above are as follows. In what ways do students construct descriptions of their medication administration experiences? What meanings do students give to their medication administration learning experiences? How do the classroom, skills lab, and patient care environments influence student medication administration experiences? How does the context of current medication administration nursing practice, influence the student learning experiences?

Philosophical Basis

Interpretive or Heideggerian phenomenology methodology was chosen for this study because it separates itself from other accounts of current qualitative inquiry by focusing on not only the description of the lived experience, but the understanding or

meaning it holds for the participant and the researcher. Martin Heidegger introduced the concept of “Dasein”, or being-in-the-world where you cannot separate human beings from their world, as well as the temporality of being is the unity of the past, present and future (Heidegger, 1962). Actual circumstances described in a narrative fashion bring us closer to the reality of nursing practice and practical wisdom than specific questions about theory, perceptions, ideology, or comprehensive reports of a typical experience (Benner, 1994). Therefore the interpretive phenomenological methodology was chosen to reveal what is salient in the time honored tradition of learning medication administration in nursing.

Review of the Literature

The following review of the literature explores and critiques current and seminal evidence related to medication errors and medication administration. Both the practicing nurse and nursing student experiences, perspectives, and practice are subject to this review.

Medication Errors

In June 2006, the IOM released a report revealing an estimated 1.5 million preventable adverse drug events occur each year in the United States as well as hospitalized patients experiencing more than one medication error per day (Aspden, et al., 2007). Individual accountability was increased when the Appellate Court of Illinois ruled a nurse is responsible for preventing administration of a contraindicated medication even when it is ordered by a physician (“Medication Ordered”, 2007).

Eisenhauer, Hurley and Dolan, (2007) found practicing nurses, although well intended, circumvent established procedure for a faster method of getting the medication

to the patient or time efficacy for the nurse. Westbrook, Woods, Rob, Dunsmuir & Day (2010) discovered the more interruptions nurses experience, the greater the medication errors. Maricle, Whitehead & Rhodes (2007) observed nurses administering 1514 doses of medication with 74 errors committed. Of note in their findings, only 14 of the observed errors were reported using the hospital quality improvement mechanism and 3 of the 30 nurses observed were responsible for 79.2% of the errors observed. Other reports found nursing responsible for 26 to 38 percent of medication errors (Bates, 2007; Leape, Epstein & Hamel, 2002) and similar to the Maricle, et al. (2007) study, only 29 to 46 percent of medication errors committed by nurses were perceived to be reported to a nurse manager by means of an incident report (Mayo & Duncan, 2004; Ulanimo, O-Leary-Kelley & Connolly, 2007).

Three survey studies examined the perceptions of nurses as to what constitutes a medication error, how often errors are reported and why, and the perceived causes. Eighty-four to ninety-three percent perceived knowing what constituted a medication error, but the majority believed under reporting of medication errors occur due to fear of reprisal from supervisors and co-workers as well as deeming the error not serious enough to report (Osborne, Blais & Hayes, 1999; Mayo & Duncan, 2004; Ulanimo, et al, 2007). The main cause of errors reported by Osborne, et al. (1999) and Ulanimo, et al. (2007) was the failure of nurses to checking the name band with the Medicine Administration Record (MAR). However, Mayo and Duncan (2004) found illegible physician writing on the doctor's order form as the primary cause. A limitation to the Osborne, et al. (1999) and Ulanimo, et al. (2007) studies is the small convenience samples from a given nursing unit. However Mayo and Duncan (2004) selected a random sample of 5000 nurses from

a target population of 9000. The target population included nurses from a variety of settings including 16 acute care hospitals. Thus more applicability is possible from the Mayo and Duncan results. However, the Mayo and Duncan (2004) and the Ulanimo, et al. (2007) studies did not establish validity or reliability beyond what was reported in the Osborne, et al. (1999) study.

A comprehensive literature review using several major databases and reviews called for more research into medication calculation errors. Results revealed only 33 of 784 articles regarding medication errors were research studies where nursing medication errors occurred. Of these, only five documented medication calculation as a cause (Wright, 2010).

A qualitative study by Manias, Aitken, and Dunning (2004), found recent graduates of nursing experienced or heard of other graduates making medication errors that reflected one of the nine or ten rights. Graduates reported the errors as learning experiences, but expressed concern regarding the handling of their debriefing of the incident by supervisors. Manias, et al. (2004) found minimal studies regarding graduate nurses' perceptions of medication administration activities and called for more research for that nurse population.

A retrospective review by Harding & Petrick (2008) studied three years of incident reports documenting causes for medication errors committed by nursing students. They concluded that although most of the errors were attributed to a failure to read or comprehend the medication label as well as inexperience with interpreting the MAR correctly, the influence of the greater system and its problems indicated a multi-causal issue for the reported errors.

In a grounded theory research study of senior baccalaureate nursing students in Australia, Reid-Searl, Moxham, and Happell (2010) noted that student medication errors not only occur but were accompanied by a lack of nursing supervision during administration. The students described the nurses' supervisory participation as ranging from being with, being over, being near, and being absent. Why these four positions were taken by the nurse supervising the student is of interest, in light of the Queensland legislation stipulation that no undergraduate nursing student is to administer medications without direct supervision by an RN or other authorized person.

Characteristics of student-made medication errors were analyzed in a descriptive study of the medication administrative phase by Wolf, Hicks, and Serembus (2006). A convenience, sample size of 1,305 student-made errors, over a five year period, was analyzed using the pick fields inherent in a data base of self-selected reports entered by institutions reporting medication errors. When compared to all errors reported to the data base, omission and improper dose quantity causes were the number one and two types of errors for both students and the entire data set. However, wrong time, wrong patient, and wrong route were higher in student medication administrations. Inexperience and distraction were the major reported contributing factors for the errors and a conclusion was drawn that this combination is a result of student inexperience with safe medication administration amid the numerous distractions of the clinical setting.

A descriptive study by Wolf, Hicks, Altmiller, and Bicknell (2009) used the same data base as the previous study. They reported a unique type of medication error committed by nursing students involving tubing and catheters. The majority of errors were due to misconnections and the authors called for more simulated experiences with

tubings for students as well as direct supervision while administering medications to actual patients. Though detailed and accurate data analysis was provided for each of the previous two studies, limitations stem from convenience samples of self-selected reports entered into a data base from institutions reporting medication errors.

Medication Administration

Nurses play a key role in medication administration although other health care professionals share the responsibility of medication administration and the errors that occur. Interventions to correct nursing medication errors have focused on the procedures, environment, and equipment in the practice setting as well as error reporting and discipline measures (Elliot & Liu, 2010; Potylycki, et al., 2006; Wolf, 2007). Yet the administration method and the pedagogy used to teach that method is steeped in tradition instead of research.

In spite of the commitment to teach and adhere to a rigid medication administration tradition, practicing nurses and nursing students continue to commit medication errors that include but are not limited to the five to ten rights method (Agyemang & While, 2010; Berman, Snyder, Kozier & Erb, 2008; Harding & Petrick, 2008). The method of medication administration has been documented in two of the earliest nursing texts from 1841 and 1849 written by Catholic clergy (Wall, 2006). Nursing education and practice has become accustomed to the five rights of medication administration, namely, the right patient, medication, dosage, route, and time (Eisenhauer, et al., 2007). The five rights first appeared in nursing literature nearly 50 years ago. Although the right patient response was not included in the original five, the

author addressed the notion as part of the newly introduced concept of patient-centered care (Kron, 1962).

Lilley and Guanci (1994) added a sixth right, documentation, to the five rights. In addition, they recommend checking a medication three times prior to administration and giving only self poured medications. Wilson & DiVito-Thomas (2004) proposed Kron's (1962) concept of the right response of the patient as a different sixth right. Recently, a variety of nine and ten rights were proposed to ensure safe medication administration. The nine rights include the original five plus the right documentation, action, form, and response (Elliott & Liu, 2010). The ten rights method includes the original five plus the right client education, documentation, client right to refuse, assessment, and evaluation of the client after the medication is administered (Berman, et al., 2008). The various rights documentation is based primarily on a perceived need rather than research. According to Wolf (1988), medication administration is a therapeutic nursing ritual shrouded in many procedures, customs, and routines to avoid errors.

Two observational studies on time and motion during medication administration revealed unanticipated distractions and interruptions. The studies called for an elimination of the distractions and interruptions to facilitate a practical and efficient process (Elganzouri, Standish & Androwich, 2009; Keohane, et al., 2008). However, Jennings, Sandelowski, and Mark's (2011) ethnographic study of medication administration suggest distinguishing between nurses' work and interruptions of work was a futile endeavor.

Method

The interpretive phenomenological methodology was chosen to reveal what is salient to nursing students during their experiences of learning medication administration. There is a paucity of literature regarding the student perspective yet the practice of medication administration and the pedagogy has remained relatively unchanged for over half a century (Craven & Hirnle, 2009 & Kron 1962). This taken for granted situation is particularly suited for interpretive phenomenology because insights are often revealed through the deconstruction of the familiar (Leonard, 1994).

The nursing student perspective is unique both in the roles the students occupy and in the environments used for learning. Students simultaneously occupy the roles of student learners attempting to meet the academic expectations coupled with the demand for the accuracy of a practicing nurse. In addition they are learning medication administration in the traditional classroom and skills lab student environments as well as the real life space of patient care. Therefore, the descriptions and meanings they hold regarding learning medication administration have voice using an interpretive phenomenological method.

Analysis of data was completed using the interpretive phenomenological method by Benner (1994). This method required a vigilant reflexivity from the researcher, throughout data collection and analysis. In addition, the analysis was conducted initially with a coding process followed by three narrative analysis strategies. They included selecting paradigm cases, thematic analysis, and exemplar identification.

Participants and Setting

The participants were students accepted into the entry level masters nursing program at a public university in Southern California, who had recently taken the National Council Licensing Examination for Registered Nursing (NCLEX-RN). These students were chosen for four reasons. First, they have proven academic success by having a baccalaureate degree in another subject. Second, they bring a unique perspective to the learning milieu with knowledge and work experience outside of nursing. Third, limited research was found employing this student population. Last, they have had the maximum exposure to student medication administration learning experiences yet have limited or no experience as a novice RN due to their recent licensure and nursing student status.

Fourteen participants were recruited through purposive sampling and saturation of the data was achieved with the thirteen who participated. According to Holloway and Wheeler (2002), the number in qualitative studies usually ranges between 4 and 40 and is also influenced by time, availability, and resources. To show gratitude and respect for the participants, the researcher provided a \$10.00 gift card at each interview session.

The participants ranged in age from 23 to 55. Ten were female and three were male. All were licensed Registered Nurses (RNs), with 11 having passed the NCLEX 1 to 5 months before the interview and two within the last 24 months. Most had not worked as an RN, and those that did had five or less month's experience. Eight held baccalaureate degrees, three held both a baccalaureate and masters degree, and two held two baccalaureate degrees in a wide variety of subjects other than nursing. All had a few months to 20 years experience working in positions outside of health care. Twelve of the

thirteen had four months to thirteen years experience working in healthcare aside from nursing.

Nursing students have been classified as a marginalized group due to being positioned between the roles of students in academia as well as being newcomers to the sociopolitical majority of practicing nurses (Andersson, 1995). Also, the power relations emerging from the faculty as the evaluators of the student's success provide a potential for further marginalization and an abuse with grading. Therefore anonymity and confidentiality were secured for the participant to speak freely without concern that their recordings would identify them or their participation would influence their grade. Each participant was given the choice of an on-campus or off-campus location for the interview. All chose the option to conduct the interview on-campus in a private office. Prior to beginning data collection, IRB approval was obtained from both the participants' and the researcher's universities.

Data Collection Procedures

Participants were interviewed individually using a voice recorder visible to them, as well as the researcher taking hand written notes or jottings. Interviews make available the opportunity to study participant's understanding of their lived world and give meaning to that experience (Kvale & Brinkmann, 2009). To increase authenticity, member checking was employed. Follow-up interviews were conducted by phone and email to obtain data regarding issues raised in subsequent participant interviews as well as member checking of the data analysis.

A semi-structured interview provided an indirect discourse to reveal the following. In what ways do students construct descriptions of their medication

administration experiences? What meanings do students give to their medication administration learning experiences? How do the classroom, skills lab, and patient care environments influence student medication administration experiences? How does the context of current medication administration nursing practice, influence the student learning experiences?

Data Management and Analysis

The individual recordings were transcribed by the researcher and the transcriptions were reviewed in synchrony with the voice recordings, while field notes were developed from the interview jottings. From those activities, analytical, methodological, and personal memos were developed to begin tracking reflexivity and engaged reasoning as it transformed. According to Benner (1994), the reflexivity is valuable in presenting a more authentic voice of the participants, if the researcher's engaged reasoning is captured in writing and available for analysis.

Analysis of data was done using the interpretive phenomenological method by Benner (1994). It contained a coding process followed by three narrative analysis strategies. Both initial coding and values coding were used to not only identify distinct parts of the data for examination but to reveal the nursing students' values, attitudes and beliefs (Saldana, 2009). The narrative analysis strategies included selecting paradigm cases, thematic analysis, and exemplar identification

For this article, a portion of the thematic analysis was used to examine a single student medication error and the phenomena surrounding that shared experience. Thematic analysis entailed cross-case comparisons to search for commonalities and differences. According to Benner & Wrubel (1989), there are five sources of

commonality in phenomenology. They include (a) the functioning level of the situation and how the participant is posited, (b) the embodiment, or bodily responses that are usually taken-for-granted, (c) temporality, or how one perceives time in the lived experience, (d) the concerns, or what is salient to the participant, and (e) the common meanings, or understandings that usually go unnoticed, yet provide a source for harmony and discord among people in the phenomenon. Values coding was especially helpful in achieving the purpose of thematic analysis because values coding considers the meaning behind the phrases rather than the words themselves (Saldana, 2009). According to Benner (1994), the process of thematic analysis does not sanitize the lived experiences into a common ideal, rather it reveals distinctions and similarities and the meanings behind them.

Results

Two student clinical groups at separate hospital settings were assessed by their clinical instructor and given approval to administer medications under staff nurse supervision. Later in the semester, the clinical instructor announced they would no longer administer medications unless directly supervised by the clinical instructor. The students were shocked and dismayed as they learned their medication administration privileges were drastically altered because another student made a medication error under the supervision of a staff nurse. To complicate the scenario, the medication error, the identity of the student, and how the error was handled was not discussed with the students receiving the consequences. By word of mouth the student was identified along with speculation regarding how the error occurred and what discipline ensued for the student

committing the error. The student also refrained from discussing the medication error and how it was handled.

Reaction to a Student Error

Seven of the thirteen participants reported experiencing the repercussions of this single medication error without actually experiencing the error itself. According to Clark (2008), punishing the entire class for one student's behavior constitutes an uncivil act. The perceptions and meaning of this experience created a cascade of unpleasant consequences. They are grouped into the following categories; a) the student making the error, b) the nursing staff reaction, c) the participants' reaction, and d) the stifled learning trajectory. (See Appendix A for Anatomy of a Student Medication Error).

Student making the error.

From the participants' perspective, the student making the error was not reprimanded or held to remediation beyond the two clinical groups' discipline. Some expressed sympathy and concern for the student, however most felt resentment and persisted in ostracizing the student.

[he/she] wasn't supposed to be [identified] but of course it came out. And I think a lot of us were disappointed in [him/her] for not, you know, stepping up and taking responsibility for [the] error. And you know like, saying like, "I should be held to these standards" and instead [he/she] just hid behind the fact that [he/she] didn't have to get in trouble, so [he/she] never really said anything. And you know...I think we all just expected [him/her] to stand up for the rest of the class and be like you know, this isn't their fault. I'll take the blame, this was my, but [he/she] never really...

Interviewer: and that probably caused some kind of reaction?

Oh yeah! I think [he/she] still feels it sometimes...

Nursing staff reaction.

The nursing staff in the clinical settings displayed pity and anger over the participants missed learning opportunities. This may have been aggravated by a general perception that students are not sufficiently prepared for the clinical practice (Clark, Olender, Cardoni, and Kenski, 2011). In addition anger was expressed because the participants could no longer assist them with medication administration. Staff openly ridiculed the clinical instructor's decision and the instructor individually.

I think on most people's perspective, even, um, the facility; a lot of the nurses made comment like (deep breath) "Here comes your instructor!" Like, they were annoyed with her and they felt bad for us once they understood what was going on. Like the first day we walked in and said we can't pass meds. They were just looking at us like why not? And then you explain it to them so they understand why and then they're just annoyed with the instructor and just frustrated when she would come around.

Participants' reaction.

Feelings of anger, frustration, and humiliation remained in the participants' accounts of the medication error. They felt an injustice had been done to them by being disciplined for something they did not do. "I wish something would have been done, but it wasn't. Um, I feel that, going back, I would have done more to fight for our rights as a student". Also they described taking a step backwards, not feeling like a "real" nursing student, and frustrated over "now what do we do all day".

It was upsetting and it was embarrassing with the nurses at the facility, because you were trying to put in a good foot, like, good impression at all the facilities, so that hopefully somebody will hire you when you are done. And also keep the school in good standing. And so it was upsetting that we were now restricted, we were put back in 1st semester again, not passing meds. And so, we're like, ok now it's a year into it and we're still beginners...

Stifled learning trajectory.

Beyond the immediate dilemma, participants reported being ill-prepared to administer medications in subsequent semesters. Resentment was expressed regarding a stifled learning trajectory that required time taken from the specialty areas to remediate medication skills. “We had to catch up in [specialty area]...when we were supposed to be learning more advanced intravenous medications and things like that, we had to go back and still be practicing learning how to give oral meds...it was frustrating”.

Sociopolitical Context Themes

To further examine this event, the sociopolitical context within which it occurred was enlightened by four additional analytical themes. They include; a) other medication error experiences, b) the rights of medication administration, c) the influence of time, d) classroom, skills lab, and clinical learning deficits, and e) the absence of how to handle a medication error.

Other medication error experiences.

The participants’ described identifying near miss errors and experiencing actual medication errors committed by staff nurses. However, the solution for the errors differed from the student error scenario. To remedy these errors, staff nurses would report the error to the attending physician requesting they write an order to cover the mistake. In a mixed methods study by Covell and Richie (2009) nurses would informally report errors to physicians to receive consultation regarding whether it was serious enough to formally report an error.

I believe the medication was written for twice a day...as a PRN...and [the patient] had gotten it from the night shift, way early that morning. And we'd given [a dose] around noon, and then [the patient] asked for it again.

And so the nurse administered it right before change of shift. So then she realized that it was given 3 times when the order was only for up to 2 times in that 24 hours...so then the nurse ended up telling the next shift nurse coming on what had happened and the nurse just asked "Oh can you call the doctor and get the order changed to, you know". So I think that's how they handle it. If there's a med error that's not, you know, oh it's the wrong medication, or it's been a certain amount of time, or, OK, this morphine wouldn't have hurt them. But it wasn't, you know, they just try to get it changed to cover themselves.

Rights of medication administration.

The term "the five rights" was used in a context beyond the right patient, medication, dosage, route and time. Some participants reported learning five rights and others six. In spite of learning six rights those participants referred to safe administration practice as "the five rights". In addition, the students used the term "the five rights" more as a symbol to describe being careful, and doing medication administration safely. Safe administration did not mean using the rights verbatim.

And almost in a sense...I think we do the five rights in our heads so fast that we don't articulate them the way we did when we were students thinking through the five of them. But we still kinda go over them almost sub-you know, in the back of our consciousness with the medication. You know if I'm taking out a pill to give I might not think, oh, this is a PO medication, that's one of the fi-right routes. But, I'm...still thinking through in that thought process. So it's not articulated as...obviously but it's still there."

Great confidence was expressed by the students who used the rights of medication administration however, the meaning of using the rights meant "I know I've done all that I can" as oppose to fear and anxiety when the student skipped the process and relied on the staff nurse knowing the medication was safe.

Cause when we were first learning how to calculate, that was scary. And making sure the right dose, you're like wait...how do you do mcgs. to mls? It was just your second guessing whether you were putting the decimal point in the right direction. And so feeling that rush of it, then

you're really hoping that nurse is watching over you and making sure that you're doing it correctly. And that they can verify, but then, you're not there, I mean if they're rushing you through it. But then you may not completely understand it even later. Like well, how much did we give em, and the rate of the machine? And so it's like the pressure of getting it done in time and then just, like, the insecurity of making a mistake or that you're really learning it the way that you need to and having the confidence that you need to to do good job, I don't know...

Even though using the rights of medication administration held a unified meaning for safely preparing medications, the right time, superseded the other rights in importance. According to an ethnographic study by Jennings et al., (2011), nurses used time management as the prevailing tactic for the demands related to medication administration, desiring as many administrations as possible to be on time.

There was always the stress to just get it done on time, no matter what. Like, whether you're checking for accuracy or not, like just get it done on time. So I felt like that pressure was what made medication, like, more difficult in the future, because it wasn't about being thorough, it was about being fast.

Influence of time.

Participants described learning experiences in the clinical setting where an opposing dichotomy existed between their academic requirements and the demands of the real time clinical setting. Speed was valued in the clinical setting and the staff nurse imparted pressure on the participant to administer medications on time. Time motion studies identified 25% of a nurse's time is spent on medication administration (Koehane, et al., 2008) and up to 1.5 hours is spent on one medication pass for 4 to 6 patients (Elganzouri, et al., 2009).

She just said "Come on, let's go! You're taking too long...my meds are suppose to be done by this time". So I was feeling a little incompetent, so I was trying to prove to her that I was not incompetent, that I am capable of this. But, um, I wasn't.

Yet a significant amount of time is spent on an unrealistic medication administration method in the clinical setting.

It was a very long process. Um...probab...more so because [of] the instructor. So, um in the med room, she went in there with me, we pulled out all the medications, I had to explain every medication. And um, the reason for it, and the pathophysiology of it, so it took a very long time. And then um, went into the patient's room, had to checks all of the five rights with the medications again. And had to go through each of the medications with the patient and explain to them the reason their taking it, and what the medication...the purpose is and make sure the patient understood it. And gave those to the patient. And so it was probably an hour long process...very long, um ...and did not make my precepting nurse very (laugh) happy but, but it was a memorable experience, I guess.

Classroom, skills lab, and clinical setting learning deficits.

Missing from their verbal accounts were meaningful classroom learning opportunities to discuss the context outside of pharmacology, the incidence of medication errors, calculating medications, and the rights of medication administration.

We learned it different in each class that we took. Um, so over summer before we started our program we did a med math class. But it wasn't that great...and then in the first class we did a little of med math testing and then hadda take a test before we could actually give meds at the hospital. And then went over the five rights, what to do for everything...how to get them out, how to give them to everyone...and so like you kinda knew the basic steps and then really just learned by trial by error.

Participants had access to a sophisticated high fidelity simulation skills lab and some participants described detailed case studies that were meaningful and applicable to their learning especially when the instructor in charge of the skills lab was present. In an experimental study by Sears, Goldsworthy and Goodman (2010), significantly fewer student-made medication errors occurred in the group receiving exposure to a simulated experience prior to attending clinical.

However, most found the skills lab learning as “hard to get into”, because other instructors were not supportive or familiar with the lab capabilities or they received conflicting information from the various instructors during the skills lab day when medication administration was being “checked off”.

You kinda just had to trust what they were telling you...and I think there was variations amongst the instructors, because they all had their own techniques or methods. So I think that was kind of hard to take in too because there wasn't a complete consensus of “This is how we're gonna teach them to do this” and “this is what we're gonna hold true this whole semester”. It was kind of like “Well this is what I do” and so that was a little overwhelming to take in everybody's personal medication administration techniques instead of just learning steps one through five...and then you would go to the next station and that might not be there.

Students also described intense time and practice regarding oral and intramuscular medications, and little academic learning regarding intravenous medications. Students believed there was a greater demand for intravenous medications in the clinical setting and “learning it at the bedside” was not sufficient.

In the clinical setting, unrealistic expectations such as wearing non-sterile gloves to open unit dose oral medication packs or long explanations for every medication to each patient only aggravated the time constraint, causing humiliation and unrealistic experiences administering medications to actual patients. “Yeah, we'd put gloves on...students would, nurses there never put gloves on, but we were taught to, so I would put gloves on...and empty into their cup without touching it and give it to the patient. “

The patient was ninety years old, and she had difficulty swallowing and so we had to put each pill on apple sauce and it was just taking a long time and she was on a lot of meds. This instructor had a time frame that she wanted to keep with giving meds with students. I knew I was getting behind... the patient was oriented but we kinda had to keep re-educating her on what we were giving her and she didn't want to take it. So we're

like, is she really refusing, or does she really know? So we tried to explain to her what this medication was for and how it was helping her condition. But it was taking a while and I could tell my instructor was the type that would stand right on behind you and would kind of...I don't know, felt like every move was being watched. And I was shaky cause I could tell that she was getting upset at the situation...and the computer codes weren't working ... and my instructor's comment to me after all this was "we're gonna discuss this later and you're gonna fix this computer and all I can tell you is that you need to improve!"

Absence of how to handle a medication error.

Participants described keen awareness of the prevalence of medication errors and expressed significant fear that they might commit one. They described education tactics used to scare them into safety may not be necessary for medication error awareness.

It was really kind of weird that you're just instilling fear for, not like, we get it's serious. You know, I think maybe that was the point...what you[r] doing's serious. But it's no like, so here's how you make sure it doesn't happen to you... you know.

Only one participant described steps they would take if a medication error occurred.

Um, immediately we were to report it to our professor and the nurse. And then, we had to check the patient obviously, make sure the patient's doing well. You have to chart it...I think...yeah, luckily I never experienced it. But I know you have to notify someone immediately. Check the patient, make sure the patient is OK and then I know it goes into a whole paperwork thing as well.

Others described hoping, praying, and having the luck that it would not happen to them. These responses may be influenced by the intense rituals placed on preventing medication errors with the checks, rights, and protocols. The topic was avoided rather than described. "I...no...I just try not to make one" and "just to let our instructors know, um, I don't remember ever learning about the process".

Discussion: Being Perfect Instead of Excellent

The term "perfect" was used frequently to describe expectations by the clinical instructors and the students themselves. "Some nursing instructors that I have experience

with... they expect you to be perfect. And especially in the time when learning to give medication, and you have a patient... [and] making-creating anxiety in front of the patient is not good”.

A theoretical construct used to explain the risky and dangerous behavior surrounding medication errors is demonstrated in the Perfectibility Model (Leape, 1994). Essentially the Perfectibility Model is a simple causal relationship identifying the results of professionals being taught and expected to be perfect. The Model proposes that if a professional is sufficiently trained and is properly motivated, they will not make a mistake. Therefore, when a mistake, such as a medication error occurs, the one who is responsible for the error has failed at their duty and is at fault. Also supervisors and peers react by holding the person culpable. The combination of the perception of failure and the reaction to blame give rise to secrecy, limited disclosure, discounting, and feelings of anger, fear, and sadness by the one who is deemed responsible for the error (Crigger, 2005, Leape, 1994, & Wolfe, 2007). (see Appendix B Perfectibility Model). A mixed methods study by Covell and Richie (2009) reported nurses feeling anxious, depressed, inadequate, apprehensive, and shameful after committing a medication error.

Though not identified as such, the student error scenario parallels the Perfectibility Model. In this case, the student and the clinical instructor may have perceived they had failed at their duty and were at fault. To correct this failure attempts were made to make the event secret with only limited disclosure. The student kept silent, or was asked to keep silent. The clinical instructor acted by taking sole responsibility for all medication administration being given by all students she supervised thus forbidding students from the privilege of administering medications with staff nurses. Culpability

and blame were directed toward the student making the error and the clinical instructor. The student participants not directly involved in the medication error experienced the wrath of the blame by proxy in the hospital setting. The participants reported feelings that corresponded to the anger, fear, and sadness described in the Perfectibility Model.

An alternative could have been to discuss the error from a problem based learning (PBL) approach thus making it transparent and a learning experience. Clark (2009) suggests PBL as a strategy to promote collaborative engagement between students and faculty. Of importance is to also consider possible supporting influences that allowed this scenario to unfold.

Nursing programs tend to place the least experienced and academically prepared instructors in the clinical setting without on-sight support from fellow faculty or administration. Unless included in the faculty group with preceptors and preparatory meetings, some clinical instructors teach in isolation using teaching strategies from their past experiences.

Both the academic and clinical environments held assumptions and perspectives regarding medication errors. The error in question occurred under a staff nurse's supervision yet the clinical instructor reacted harshly taking sole responsibility for future student medication administrations. In 'just culture' environments errors are reported and examined in a transparent fashion without fear of blame or reprisal (Lazarus 2011). Since this error was not intentional, it could have been acted upon as a systems improvement opportunity for both environments. Instead of a result of improvement and excellence, the consequence was punishment.

Implications for education and practice

Absent from most participant narratives was knowledge regarding handling a medication error once it occurred. Using the classroom and skills lab environment to discuss and experience medication errors as well as how to respond when medication errors occur may give the context for the student to approach the medication administration process less fearfully and with a better understanding of safety.

The gap between the unrealistic ritual of being “checked off” to give medications with a staff nurse and the fast paced context nursing students are placed once that occurs, needs to be bridged. Time intensive scenarios would be better placed in skills lab environments including familiarity with the medications. In addition, students could be given a list of the top 20 medications used on a given unit and allowed time to prepare prior to the clinical experience. Once in the clinical setting, a more realistic pace and critical reasoning modeled by the clinical instructor may provide a safer perspective for student medication administration.

The list of 5 to 10 rights may well have outlived its purpose and medication administration needs reframing from a critical reasoning perspective. Medication administration is a complex, dynamic, nursing phenomenon couched in a temporal context yet inseparable from other nurse work. The sheer volume of medication administration has been seriously underestimated and nurses need to recognize that safe medication administration cannot meet the numerous institutional and regulatory demands in the current time frame restrictions (Jennings et al., 2011). The participants in this study described a rushed environment that took risks to be on time. Using current

evidence, nursing has the opportunity to change unrealistic expectations and improve medication administration safety.

Limitations

Three notable limitations should be addressed. First, the overall limitation was the question of generalizability to those outside of the study. However, according to Creswell (2009), there is a growing interest in generalizing the particularity of qualitative research. Second, interviews from these nursing students are also at a disadvantage due to the inequality of student articulation and insightfulness. Third, the interviews were conducted in a location outside of the influence of the natural settings where learning medication administration takes place. Other limitations included the lack of triangulation, and limited time in the field.

Conclusion and Recommendations

The phenomenon of medication errors has been exposed in a 21st century context by this study revealing a complexity that cannot be corrected by a list of rights, or ineffective preparatory actions. Long, unrealistic rituals expecting perfection for oral and intramuscular medication administration limits applicability to the fast paced practice setting. In doing so, the student is left at risk to integrate the pace and intravenous applications amid necessary distractions and interruptions of nurses' work.

Further phenomenological research including the perspectives of the clinical instructors and the staff nurses could triangulate the data and provide a thick description of the phenomenon of medication errors in the learning environment. Replicating the study using pre-licensure nursing students in Associate Degree and Baccalaureate Degree programs is also recommended.

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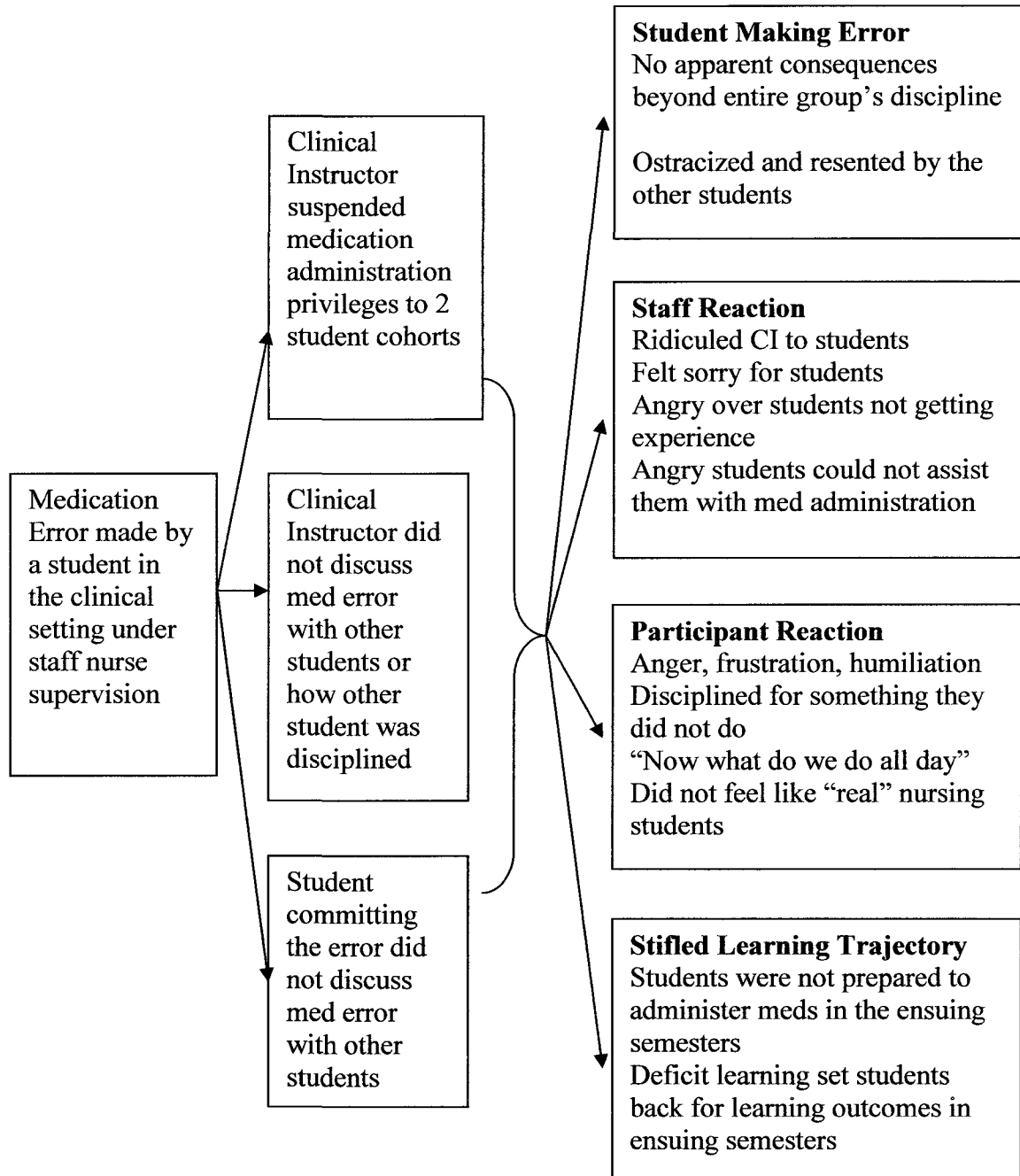
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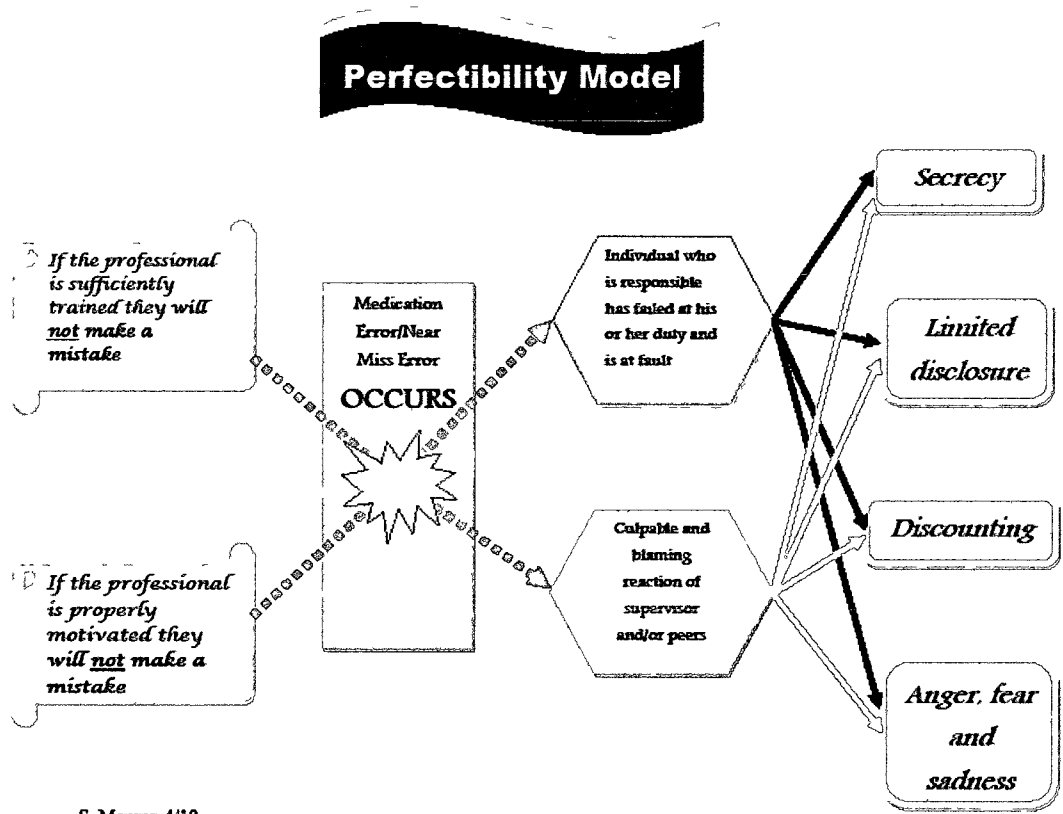
Appendix A

Anatomy of a Student Medication Error



Appendix B

Perfectibility Model



S. Morgan 4/10

Closing: Proposed Program of Research

Following the publication of these articles, a plan is in place to participate in a grant proposal aimed at developing a curriculum for nursing educators to be better informed regarding teaching medication administration to pre-licensure nursing students. Part of that grant proposal will include an interpretive phenomenological study of the experiences of staff nurses and clinical instructors while students are learning medication administration. Triangulation of the phenomenon will deconstruct the familiar and hopefully provide variables that could be tested using quantitative or mixed methods. Future research regarding learning experiences surrounding other common contexts of nursing practice such as assessment of patients and pain management will also be considered.



Appendix A

Office of Grants & Contracts California State University Fullerton
Institutional Review Board IRB Approval
(657) 278-2106/ Fax (657) 278-3000

March 17, 2011

VIA EMAIL

Smorgan-12@san Diego.edu

Sally N. Morgan

Re: Nursing Students' Lived Experiences Surrounding Medication Administration

Dear Ms. Morgan:

Thank you for your recent submission to the CSUF IRB. We appreciate your forwarding this protocol to us for review, and have copied our faculty member, Dr. Rebecca Otten on this correspondence as well.

We recognize that researchers not affiliated with CSUF may wish to engage students, faculty or staff of the University in protocols that may or may not have received IRB approval. Accordingly, we acknowledge receipt of your IRB application. Because you are a student of University of San Diego you should seek their IRB approval before collecting data.

Please forward to us, and Dr. Otten as well, a copy of your IRB approval from University of San Diego when you have received it.

Renewal of this protocol should continue through the University of San Diego's IRB board and the guidelines they have set forth. Any arrangements you have made for use of our facilities within which to conduct your study are independent of this IRB's review and you should seek departmental approval accordingly. You are also reminded to adhere closely to the guidelines for human participant use as you have described in your research proposal and to notify us if there are any adverse events that result from your study.

The CSUF IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required.

Thank you again for forwarding this protocol for our review.

This institution has an Assurance on file with the Office for Human Research Protections. The Assurance Number is FWA00000135.

Sincerely,

Ron Oliver, Chair
Institutional Review Board
Cc: Rebecca Otten (CSUF Faculty via email)