

## Chapter 20

# Human Patient Simulations: Evaluation of Self-Efficacy and Anxiety in Clinical Skills Performance

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### ABSTRACT

*The relationship between self-efficacy (self-confidence) and anxiety levels, and the use of Human Patient Simulations (HPS) as a teaching-learning strategy, has not been sufficiently studied in the area of clinical nursing education. The purpose of this chapter is to evaluate the self-efficacy/self-confidence and anxiety levels in clinical skills performance of undergraduate nursing students, pre-use and post-use of Human Patients Simulations (HPS), as a teaching and learning strategy in maternity nursing. The study used a quantitative, pre-experimental, one group study design with a pretest and posttest experiment in data collection. The findings concluded that HPS reduced anxiety and increased self-efficacy/self-confidence in clinical skills performance and decision-making of the participants. In addition, the study found that the participants had difficulties in tasks performance with the following action verbs associated with the cognitive domain of Bloom's taxonomy. The verbs were "identify," "apply," and "analyze."*

### INTRODUCTION TO THE PROBLEM

The relationship between self-efficacy, anxiety, and the use of Human Patient Simulations (HPS) as a teaching-learning strategy has not been sufficiently studied in the area of clinical nursing education. Despite the evidence in the literature that HPS increases self-efficacy and decreases anxiety levels in nursing clinical skills performance in the hospital setting (Cant & Cooper, 2010; Fanning & Gaba, 2007), a great number of third-year undergraduate nursing students have difficulty transitioning from the nursing learning laboratory setting to the real-life hospital setting in all nursing specialties (Kameg, Mitchell, Clochesy, Howard, & Suresky, 2009; White, 2003; White, 2011). Critics attributed the cause to a lack of self-efficacy/self-confidence, increase in anxiety level in the hospital setting post use of HPS as a teaching-learning tool, a lack of critical thinking and critical reflection in teaching and learning, in addition to teaching naively—by which the facilitators believe that the students are learning and

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## ***Human Patient Simulations***

understanding what is being taught (Brookfield, 1995; Bourbonnais & Kerr, 2007; Fanning & Gaba, 2007; Hallin & Danielson, 2009; Omansky, 2010; White, 2003; White, 2011).

In addition, the application of critical thinking in performing nursing psychomotor skills is vital in helping the students integrate nursing theory into nursing practice. Furthermore, the integration of critical thinking skills with the action verbs associated with the cognitive, affective and psychomotor domains of Bloom's taxonomy in clinical skills performance, might help in building the self-efficacy levels and in decreasing the anxiety levels of the students. The cognitive domain which focuses on knowledge is vital for competency in tasks performance (Brookfield, 1995; Gronlund & Waugh, 2009; White, 2003; White, 2011).

## **BACKGROUND**

An alarming number of undergraduate nursing students have low self-efficacy and high anxiety levels in clinical skills performance despite the use of Human Patient Simulations (HPS) as a teaching-learning strategy in the nursing learning laboratory (Kameg et al., 2009; Shepherd et al., 2007; Shepherd et al., 2010; Omansky, 2010). According to Leigh (2008), National League for Nursing 2006, 2007, Nehring, 2008), the use of simulators as a teaching tool is new to the field of nursing compared to other fields of studies such as the fields of aviation, infantry, and medicine. Although a decade has passed since the beginning of the use of HPS as a teaching tool in nursing, much is still not known about the deficiencies of HPS on undergraduate nursing students' learning (Nehring, 2008, 2010). The literature indicated that self-efficacy and anxiety are barriers to students' clinical skills performance in all areas of nursing clinical practice (White, 2003; White, 2011). Historically, a few research studies exist on the effects of HPS on self-efficacy, anxiety levels and poor clinical skills performance of the undergraduate nursing students (Laster, 2007a; National League for Nursing, 2010; Nehring & Lashley, 2004; Nehring, 2008; Waxman, 2011). This research study therefore, explored the effect of the use of HPS as a teaching strategy on the self-efficacy and anxiety levels of the third-year undergraduate nursing students enrolled in maternal and child health specialty course.

## **INTRODUCTION TO THE LITERATURE REVIEW**

The purpose of reviewing the literature for this study is to analyze, integrate, evaluate and synthesize the concepts of self-efficacy, anxiety, human patient simulations (HPS), and their effects on teaching and learning of the undergraduate nursing student's clinical skills and performance of the skills. The study used HPS as a teaching strategy to teach maternity nursing care in the learning laboratory. Evaluation of self-efficacy and anxiety levels of the students required the review of critical thinking application and the roles of the facilitators/nursing educators in incorporating critical thinking to teaching and learning with HPS. According to Gaba (2004) and Shepherd, Kelly, Skene, and White, (2007) very few studies exist on the evaluation of self-efficacy and anxiety in maternity nursing. Hence, this chapter presented the gaps and findings in the literature, the theoretical framework, and human patient simulation as a teaching-learning strategy in clinical nursing. In addition, the theoretical application of critical thinking to teaching and learning, was explored.

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