The Perception of Registered Nurses at a Regional Health Facility Regarding the Use of Simulation to Develop Their Leadership Skills

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ABSTRACT: A nurse’s ability to inspire others to higher levels of performance is related to his or her leadership abilities in the healthcare setting. Hence it is imperative that the registered nurse is equipped with the skills needed to effectively manage the unit. The aim of this study is to determine the extent to which simulation training plays a role in the development of leadership skills of junior registered nurses in the health care setting. A survey was administered to 30 registered nurses from a hospital in the North East Regional Health Authority (NERHA) in Jamaica to access their perception of the use of simulation to develop their leadership skills. This research used a mixed method approach to gather qualitative and quantitative data concurrently for the purpose of increasing the breadth and depth of understanding. The findings from the study revealed that simulation has a positive association with improve nursing practice and enhanced leadership skills. Participants indicated that simulation would enhance critical thinking, allow them to gain more experience, increase knowledge and improve their ability to manage the unit effectively. The study further revealed that simulation is a method that can be employed to increase leadership skills, teach techniques and practices in nursing, and improve critical thinking and decision-making skills.

KEYWORDS: simulation, leadership, leadership skills

I. INTRODUCTION

Effective leadership in nursing is an essential factor for achieving optimal patient care, a successful patient outcome and a productive healthcare facility. The development of nurse leaders is integral to the advancement of the practice of nursing and improvement in nursing care however nurses are not always able to demonstrate the practical skills needed to coordinate ward activities and handle challenging situations relating to the management of a unit and other staff (Mettes, 2015). According to Flesner, Scott-Cawiezell and Rantz (2005), registered nurses need to be adequately prepared with the leadership skills for successful implementation of complex initiatives and innovative approaches to facilitate the healthcare of today’s world (as cited in Mette, 2015). They contend that healthcare organizations must create the educational model of management development that are necessary to create the effectiveness of hospital systems (Flesner, Scott-Cawiezell&Rantz, 2005, as cited in Mette, 2015).

Leadership in nursing is important because it ensures the effective and efficient running of the organization. In the Institute of Medicine (IOM) report (1999) To Err is Human: Building a Safer Health Care System, simulation training is recommended as one intervention that can be used to prevent errors in the clinical setting. It was also recommended that changes occur at the institutional level to remove or minimize the possibility of individual errors, and improved communication at bedside which will improve the overall teamwork because team members will be properly informed of the client progress. The report declared that health care organizations and teaching institutions should participate in the development and use of simulation for training novice practitioners. This is necessary because the use of simulation training will assist in the development of problem-solving skills, and improve crisis management especially when new and potentially hazardous procedures and equipment are introduced (pp. 2-3).
Therefore, to ensure nursing standards are maintained the American Association of Colleges of Nursing (2015) recommended using simulation to enhance advanced practice registered nurse (APRN) clinical education and to replace more traditional clinical experience for APRN’s with use of simulation (p.1). Researchers have identified that many institutions do not invest resources in the development of nurse leaders (Sherman Bishop, Egenberger & Karden, 2007). As a result, the healthcare facilities are faced with the challenge of inadequate numbers of nurse leaders to see to the daily running of the different unit/wards in the institution. It is imperative that registered nurses not only have knowledge of the physical state of the patient but also understand and appreciate the importance of leadership in nursing. Sherman and Pross (2010) identified that nursing leadership’s greatest challenge is effectively guiding staff to manage resources and personnel in an effort to improve performance and patient outcome. Therefore, the research problem that will be addressed is, “what is the perception of registered nurses regarding the use of simulation to develop their leadership skills”?

At every level of nursing, nurses are trained on the job to carry out nursing procedures and maintain nursing standards. The training should include the teaching of leadership skills to nurses at all levels, which will equip them with the requisite tools to become competent leaders. This is important because leadership does not rest only on senior administrative nurses but on all registered nurses, and this can be developed on the job through simulation., the purposes of the study, therefore, are to (1) evaluate the extent to which simulation training plays a role in developing leadership skills among junior registered nurses in selected healthcare facility in Jamaica, and (2) assist policy makers in understanding the value of simulation training as an approach to developing leadership skills among registered nurses in particular healthcare facilities in Jamaica. For this study, the following research questions were examined (1) What are the perceptions of registered nurses on using simulation to develop in them required leadership skills for the job? And (2) is simulation-training an effective approach in developing leadership skills among junior registered nurses in Jamaica?

II. LITERATURE REVIEW

Leadership: The issues of leaders and leadership have existed since the beginning of mankind. The evolution of leadership studies began in the 1900s where the great man theory and traits theories were the basis for most leadership research until the late 1940s (Bass, 2008, p.48). The great man theory from Aristotelian philosophy asserts that some people are born to lead whereas others are born to be led. It was believed that royalty, battlefield heroes and other wealthy and successful individuals possessed inherent talents and abilities that set them apart from the population at large and which enabled them to achieve great success; for example, Moses, Thomas Jefferson and Martin Luther King Jr. (Bass,2008, p. 48). However, in the 1970s several alternative theoretical frameworks for the study of leadership were advanced, resulting in a number of new leadership studies such as transformational leadership and transactional leadership under the theme contemporary leadership theories (Barnett, 2017). These theories focused on attempting to explain how leaders can accomplish extraordinary things against the odds.

Nurse leaders are essential to the profession for maintenance of adaptability and to remain competitive in today’s dynamic environment considering the various economic, technological and academic challenges facing nurses (Mannix et al., 2013 as cited in Scully, 2015, p. 440). Until late 1990s, most nurse leadership research focused on the development of nursing practice; subsequently scholarly focus viewed nursing leadership as a vehicle through which both health policy and nursing practice can be influenced, with the aim of improving patient outcomes. (Antrobus & Kitson, 1999; Callaghan, 2007 as cited in Scully, 2015, p. 441). Antrobus and Kitson (1999) posit that nurse leaders possess knowledge of broader contemporary issues in nursing and an understanding of factors which promote or inhibit the future of nursing as a whole. They further indicated that nurse leaders play a key role in facilitating and enabling the development of nursing knowledge (cited in Scully, 2015). As such nurse leadership is vital because it provides opportunity for nurse leadersto guide and motivates junior nurses to achieve a high level of nursing care.

Leadership defined: There are contending definitions of leadership in the literature. For example, whereas DuBrin (2013) defined leadership “… as the ability to inspire confidence and support among the people who are needed to achieve organization goals”, indicating that leadership is qualitative, (Leadership defined by Bass (2008) is an interaction between two or more members of a group that often involves a structuring or restructuring of the situation and the perceptions and expectations of members…… Leadership occurs when one group member modifies the motivation or competencies of others in the group. Any member of the group can exhibit some amount of leadership…… (pp.19-20). For Stogdill (1974), “leadership is the initiation and maintenance of structure in expectation and interaction (cited in Bass, 2008, p.6). Leadership is a relationship between those who aspire to lead and those who choose to follow (Kouzes & Posner, 2002).
Yukl (2006) defined leadership as “the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives” (p.8). In defining leadership, Northouse (2007) stated that “leadership is a process whereby individual influences a group of individuals to achieve a common goal” (p. 3). Gardener (1990) defined leadership as the “process of persuasion and example by which an individual (or leadership team) induces a group to pursue objectives held by the leader or shared by the leader and his or her followers” (Gardener, 1990, cited in Marquis & Huston, 2006, p. 48). Tourangeau (2003) used a broader definition stating that “leaders are those who challenge the process, inspire a shared vision, enable others to act, model the way and encourage the heart” (Tourangeau, 2003, cited in Marquis & Huston, 2006, p. 48). In examining the definitions of leadership, it showed several components central to leadership that a registered nurse must acquire in order to provide direction and inspire others to meet the organization goals.

Spear (2010) developed ten characteristics of effective, and caring leaders after review of the traits of servant leadership put forward by Robert Greenleaf. These are (1) listening, (2) empathy, (3) healing, (4) awareness, (5) persuasion, (6) conceptualization, (7) foresight, (8) stewardship, (9) commitment, and (10) building community (pp. 27-29). These characteristics help leaders to identify ways to solve problems and promote development of self and others. Leadership skills are essential for effective management of an organization, and communication plays a crucial role in gaining support from other staff members. Kouzes and Posner (2012) identify five exemplary models of effective leadership; (1) model the way, (2) inspire a shared vision, (3) challenge the process, (4) enable others to act and (5) encourage the heart. They believe that for the leader to be able to help the community, individuals and organizations achieve extraordinary things (pp. 14-25). Kouzes and Posner contend that, “For people to listen the leader must be honest, forward-looking, competent and inspiring” (p. 35). They further stated that in order to demonstrate competence, the leader must share what he/she knows and encourage others to share the same (p. 226). An examination of leadership history, definitions and leadership characteristics will allow for the establishment of a relationship between the uses of simulation to develop leadership skills.

**Use of simulation to developing leadership skills**: Simulation according to Durham and Alden (2008) is the use of computerized human models that replicate physiologic responses and disease states, live actors who role play during medical scenarios, and real health care providers who model positive and negative professional behaviour in simulated learning environments (p. 1). Day and Antonakis (2012) looked at the nature or essence of leadership. They contend that to fully understand and appreciate the nature of leadership, it is essential that leaders have some background knowledge of the history of leadership research, the various theoretical streams that evolved over the years and the emerging issues that are pushing the boundaries of leadership (p. 3). The following are examples of simulation exercises which were undertaken to provide leadership experience to the participants. These exercises proved successful in the transformation of registered nurses from being just caregivers to leaders by enhancing their managerial and critical thinking skills which are requisite tools for positive performance outcomes at this level. These simulation exercises can be adapted to meet the needs of particular hospitals which engage in leadership training for their nurses. In looking at leadership, Ahazor (2012) described the structure of Leadership for Change (LFC) and illustrates how it helps nurses to emerge as effective leaders. The author purports that nurses need a good understanding of the context and purpose of health reforms, the ability to plan strategically and manage change, and for the strength and confidence to be fully involved in challenging and often stressful change environment (p. 27). The leadership for change programme is believed to have prepared nurses for management and leadership roles during health sector changes and enhanced their contribution to service department. Results of the programme initiative showed that leaders who participated in the programme were more willing than others to be controversial, more intuitive about what will work and more aware of the risks involved in decision making (Ahazor, 2012, p. 28).

Schwarzkopt, Sherman, and Kiger (2012) outlined a front-line leadership development initiative developed by Tenet Healthcare Corporation. The authors believe that the rapid changes in today’s healthcare environment and the movement of reimbursement to pay for performance model are indicators that are often nurse sensitive. Therefore, the charge nurse’s role in Tenet’s hospitals has been expanded and more expectations are being placed on front-line nurse leaders because they play a pivotal role in coaching and mentoring of staff. Schwarzkopt, Sherman, and Kiger (year) believe that front-line nurse leaders play a key role in promoting better patient outcomes and achieving performance measures that will ultimately affect the financial status of their organization. A study on evaluation of simulation for team training by Ballangrund, Hall-Lord, Hedlein and Persenius (2013) was conducted on 63 intensive care nurses from four hospitals and nurses in a postgraduate education programme.
Participants evaluated two scenarios related to emergency situations in the intensive care unit with regards to: (1) outcome of satisfaction and self confidence in learning, (b) implementation of educational practice and, (c) simulation design/development (Ballangrund, Hall-Lord, Hedlein, & Persenius, 2013). Ballangrund et al., (2013) found that nurses were highly satisfied with the simulation-based learning. They concluded that simulation-based programmes are useful for team training and can provide educators with support to develop and improve simulation-based programmes (Ballangrund et al., 2013). Weber, Ward, and Walsh (2015) contend that transforming the existing nurse leadership model to align with strategic priorities, will support the changing healthcare landscape and position the organization to produce high-quality outcomes (p.47). For the authors, the most significant investment an organization can make in the delivery of quality patient care is the development of current and future nurse leaders. To increase leaders ‘competency, a comprehensive training programme was developed. This focused on areas such as tools, financial/ business acumen, patient-and family-centred care, healthcare reform, leading change, collaboration, shared leadership, coaching/mentoring and innovation (Weber, Ward, & Walsh, 2015). The results showed that in order to successfully transform the way the leadership team influence quality outcome at the bedside, the leader needs to align the leadership competencies used to select, develop, and promote talents in line with the organization strategic priorities (Weber, Ward, & Walsh, 2015, p.50).

Clark and Yoder-Wise (2015) added simulation to an established orientation program. They examined enhancing trifocal (patients, patients’ parents, and other staff member) leadership practices using simulation in a paediatric charge nurse orientation program. According to Clark and Yoder-Wise (2015) the role of charge nurse is to make certain that a team on a given shift accomplishes its work and that issues related to workflow and competence are addressed in a timely manner (p.311). However, preparing charge nurse to assume this entry level nursing management role has often been neglected (Patrician et al., 2012 cited in Clark and Yoder-Wise, 2015, p.311). Waxman and Delucas (2014) indicated that “simulating situations in a realistic-looking environment can be effective in building leadership skills” (p.312). Clark and Yoder-Wise (2015) found that providing a simulation where charge nurses’ experience the trifocal of serving in charge nurse role in the paediatric setting, allowed the charge nurse to gain insight into the complexity of the role. Charge nurses who were involved in the trifocal simulation believed that incorporating ongoing simulation would benefit their ability to work through emergency situations, and would help them to cope more effectively with stressful situations with parents, children and team members (Clark and Yoder-Wise, 2015, p. 316).

Human patient simulation experiences may provide opportunities for students to progress into vital role of professional nurse leaders (Brown, 2018). In looking at leadership development Brown (2018) evaluates students’ satisfaction with human patient simulation as a strategy to develop leadership skills in a peer-facilitated environment. For the study, four small-groups human patient simulation scenarios were developed and integrated into four existing junior-level nursing courses: obstetrics, gerontology, paediatrics, and mental health nursing. Students were required to achieve objectives such as planning patient care, prioritizing nursing interventions, demonstrating appropriate delegation, demonstrating effective communication, evaluating patient outcomes and revising care as appropriate (Brown, 2018, pp-55-56). The researcher showed that overall, students’ experienced high level of satisfaction with human patient simulation, were more relaxed with their peer facilitator versus faculty member, were able to demonstrate mastery of the material, delegate appropriately, develop leadership skills and empower others (Brown, 2018). Thus, it can be seen from the research that human patient simulation experiences may provide opportunity for registered nurses to progress into the vital role of professional leader. In order to understand the use of simulation in leadership, educators, leaders and nurses must see its purpose and how introducing simulation may form an effective teaching tool. Therefore, looking at the use of simulation as training mechanism can give us insight into how it can help to develop nurses’ leadership skills.

**Simulation as training mechanism:** Simulation is used in many disciplines to enable students to develop skills and experience that will enhance their practice. Lewis and Belmonte-Mann (2002) posit that simulation allows students to practice skills in a low-risk environment by facilitating the interaction they would have with live patients. They contend that simulation allows students to develop competency in areas that may not be available consistently during professional practice experiences. According to Pearson and Mc Cafferty (2011), the use of patient simulation in nursing education is a new instrumental methodology. They noted that the rationale for using such intervention as an educational strategy include the absence of risk to alive patient, the ability to provide standardization of cases, the promotion of critical-thinking, clinical-decision making and psychomotor skills. Through patient simulation scenarios, essential elements of patient safety can be emphasized, such as prevention of medication errors, the promotion of effective communication, and the importance of teamwork.
Learners can be exposed to critical care scenarios and have the opportunity to respond without fear of harming a live patient. Marken, Zimmerman, Kennedy, Schremme, and Smith (2010) posit that simulation allows students to become more comfortable during difficult situations such as dealing with angry patients, giving bad health news to patients or asking patients personal questions. Simulation has been incorporated in professional practice laboratories and pharmacotherapy classes, and has been used to develop communication skills, physical assessment skills, and primary care skills (p. 122). Alfes (2011) declared that by providing students with exposure to a variety of clinical situations through clinical practicum experiences and patient simulations, they can be better equipped to provide safe, effective care and work as contributing members of the health care team (p. 6). Alfes (2011) examined the effectiveness of using simulation versus traditional learning methods to promote self-confidence and satisfaction with learning effective comfort care among beginning nursing students (p. 89). The result showed that students who were exposed to simulation demonstrated greater signs of self-confidence when compared with students taught with traditional method. Results from the study further indicated that simulated experiences with beginning students as well as the need to provide a multitude of interactive learning methods that challenge students at their current competency level have been effective in teaching leadership skills (Alfes, 2011, p. 92). Nurse educators are frequently faced with the problem of how to provide clinical learning experience that will promote effective and efficient clinical judgments to help increase leadership skills among nurses. The use of simulation in nursing education has its advantages and disadvantages. Li (2014) outlined several advantages and disadvantages educators and students might experience with the use of simulation. With regard to the advantages, simulation

1. Reduces training variability and increases standardization.
2. Guarantees experience for every student
3. Can be customized for individualized learning
4. Is student centered learning
5. Allows independent critical thinking and decision-making and delegation.
6. Allows immediate feedback
7. Offers opportunities to make and learn from mistakes
8. Uses the concept of experiential learning
9. Offers the opportunity to practice rare and critical events (pp. 20-21)

The disadvantages of simulation are as follows:

1. Limited realistic human interaction
2. Students may not take it seriously
3. No/incomplete physiological symptoms
4. It requires the supervision by training personnel which are generally not available.
5. Incorporating time slot for simulation can be difficult (Li, 2014, p. 23).

In spite of the disadvantages, simulation -based education can provide safe and effective learning environments for students. Simulation allows the learner to have scripted, repetitive practice of skills and clinical decision-making, followed by guided reflection and analysis (Sabus & Macauley, 2016, p.5). Sabus and Macauley (2016) explored the use of simulation in physical therapy education and practice by offering strategies, tools and scripts that physical therapy educators can apply to their own simulations, leading to positive learning outcomes and replacing traditional instructional methods. In the study the researchers created an orientation lab where student were given scripts and briefed on strategies such as mannequins’ capabilities for hands on. Students were expected to perform skills and knowledge introduced outside the simulation lab. Debriefing was used to help educators ascertain if students gathered new information after being exposed to simulation scenarios (Sabus & Macauley, 2016). The findings revealed that simulation and debriefing within physiotherapy education offers opportunities for high impact professional development (Sabus & Macauley, 2016).

In a study by Tofil, Benner, Worthington, Zinkan, and White (2010), the impact of adding a paediatric human patient simulator to pharmacy course on learning was examined. Forty-two (42) pharmacy students enrolled in a paediatric elective participated in one inpatient and one outpatient scenario using a paediatric patient simulator over two years. Immediately following each case, participants were reflectively debriefed. Ninety-five percent (95%) (40/42) of students' scores improved and they verbalized that the learning experiences were positive and realistic. Tofil et al., (2010) found that the knowledge and application skills of pharmacy students improved upon completion of the simulation exercises. According to Keys and Wolfe (1990), team simulation can provide nurses with the best training and most constructive learning experience as it provides an optical environment for active and critical learning (as cited in Shapira-Lishchinsky, 2014, p. 62). Authentic leadership in nursing according to Avolio et al. (2004) is “the root component of effective leadership required, to build an ethical and healthier work environment in order to promote excellence in care” (p. 62).
However, Gardner et al. (2005) identified four components of authentic leadership: (1) balanced processing, (2) internalized moral perspective, (3) relational transparency, and (4) self-awareness (cited in Shapira-Lishchinsky, 2014, p.62), which they believe are useful in the development of authentic leaders. Shapira-Lishchinsky (2014) further examined “Simulation in nursing practice: toward authentic leadership” and explored nurses ethical decision making in team simulation in order to identify the benefit of simulation for authentic leadership (p. 60). She outlined how team-based simulation can help overcome the barriers of ethical dilemmas that arise between nurse and physicians. The results showed that team-based simulation (TBS) prepared nurses to deal with ethical dilemmas because it provides a safe and forgiving learning environment. The forgiving environment of TBS explains the discrepancy found between ethical decision-making processes at TBS versus actual decisions made in practice (Shapira-Lishchinsky, 2014, p. 67). The findings also indicated that in order to develop authentic leaders in nursing it may be beneficial to emphasize the four components of authentic leadership in TBS, to create a sense of empowerment and improve decision making outcomes (Shapira-Lishchinsky, 2014, pp. 67-68).

These studies have highlighted the use of simulation and how effective it use as been in various settings. It is important to examine the perception of students regarding the use of simulation.

Perception of simulation: The practice of nursing is dynamic and the challenge has been to develop the critical thinking skills of nurses to prepare them to provide safe and effective patient care. Kaddoura (2010) explored the perceptions of new graduate nurses on how clinical simulation developed their critical thinking skills, learning and confidence throughout their hospital clinical training (p.507). Ten new baccalaureate nursing graduates from the Intensive Care Unit of one of the largest Hospital in United States participated in the study. The new graduates were taught using clinical simulation for 8 hours, one day every 3 weeks, with a total of 8 days of simulation throughout their training. Clinical simulation was used for critical experiences, including practice on simulated patients and evaluation, and procedures such as cardioversion, defibrillation, basic life support and advanced life support (Kaddoura, 2010, pp. 508-510).

Kaddoura (2010) found that simulation was beneficial for the development of critical thinking skills in the specialized critical care unit. All participants reported that their simulation experiences were very positive; it gave them a deeper understanding of the critical care nursing concepts and provided valuable interactive learning experiences that helped to develop their critical thinking skills (p. 511). Joseph, et al., (2015) conducted a study aimed at exploring the perception of medical students towards simulation-based learning (SBL). In the study, a total of 247 participants from the fourth, sixth, eighth semester and internship were sampled. Attitudinal data on their perception towards SBL showed that most participants (72.5%) had favourable perceptions of simulation-based learning with 90.7% in agreement that; simulation supports the overall development of clinical skills (Joseph et al, p. 248). Most of the medical students felt that SBL would solve the problem of limited availability of patients, would provide a varied learning experience by representing a wide variety of patient problem, and would provide an opportunity to learn rare clinical cases (Joseph et al, 2015, p. 250). The research also suggested that, most participants believed that SBL was good at providing opportunity for deliberate practice without putting patients at risk, can create a highly realistic, and reproducible learning environment.

Marken, Zimmerman, Kennedy, Schremme, and Smith (2010) asserted that simulation is an effective technique that can teach inter-professional teams how to engage in difficult conversations with patients and help them to gain confidence. In the study, a demonstration project was designed, and members of inter-professional teams were taught how to better engage in difficult patient conversations regarding intimate partner violence and suicide. Participants were then allowed to rate themselves. At the end of the programme at least half of the students improved their rating by 1 level on every question, 75% were able to state three (3) accurate comments about difficult conversations, and the majority felt the programme objectives were met. The students also verbalized that they liked the teaching methods and learned new skills that they could not have achieved from lectures alone. The goal of the sessions was to provide an educational experience over and above what students received in their regular educational programmes and that was achieved. Simulation education utilized in health education is aimed at developing health workers professional competence, personal behaviour, interpersonal interaction, and quick decision-making and problem-solving, and increase their performance of giving response (Reylan, Mete, Sayiner, & Celik, 2018, p. 239). Reylan et al., (2018) conducted a cross-sectional descriptive research to determine the views of midwifery students about simulation. 179 midwifery students participated in the study. When their knowledge of simulation was examined 51% had general knowledge about simulation, while 81% described the teaching method employed in their classes were “traditional teaching methods” and others pointed out that laboratory conditions in their school were inadequate for education (p. 241).
The researchers found that 95.4% of the participants were willing to take simulation education and stated that simulation education would improve their critical thinking and reduce anxiety during clinical practices (Reylan et al., 2018). This showed the importance of simulation in the learning process and how it can help students integrate knowledge and skills with active learning opportunities. Likewise, Baillie and Curzio (2009) examined students’ and facilitators’ perceptions of simulation in practice learning. For the study, one set of nursing students was placed in eight subgroups and experienced simulation programme during their placement hours, while another set was placed in four comparative subgroups and undertake their clinical placement without incorporating simulation (Baillie and Curzio, 2009, p. 299). Most students in the simulated environment expressed satisfaction with the simulation learning environment, resources, relevance of the programme and levels of supervision. The facilitators agreed that simulation enabled students to meet their learning outcomes and that the programmes were evidenced based. However, for the students in the clinical placement without simulation, they expressed that their learning was effective but felt that with simulation it would have been more enriching (Baillie and Curzio, 2009, pp. 301-303).

In addition, Presnilla-Espada (2014) conducted an exploratory study on simulated teaching as experienced by education students which was anchored on the model-centered instruction, transfer of learning and embodied cognition theories. In applying this principle, simulated teaching activates students’ learning processes while teaching the class. It included a problem component which acts as stimulus designed for learners to focus attention on specific information about the model teacher. The students’ available skills determine how they solve problem, process information, construct mental models and develop heuristic skills (Presnilla-Espada, 2014). The results showed that majority of the students strongly believe they should be exposed to teaching prior to practicum. They showed a highly positive attitude towards simulated teaching as an effective way to acquire and apply both content and skills in teaching and learning (Presnilla-Espada, 2014, pp. 54-56). Presnilla-Espada (2014) concluded that when simulated teaching functions are properly executed, students are able to unlock and develop their potential to face the issues in their practicum stage (p.60). Woda, Gruenke, Alt-Gehman and Hansen (2016) explored the nursing students’ perception of their clinical decision making (CDM) related to the block sequencing of different patient care experiences, simulated learning experiences (SLEs) versus hospital-based learning experiences (HLEs)(p. 528). 117 junior level third year nursing students who participated were randomly assigned to the SLEs group for 7 weeks followed by HLEs for 7 weeks, where they completed 4 hours high-fidelity SLEs and one mid-fidelity online simulation. Three themes were used to focus the overall practicum experience: (1) pre-experience anxiety, (2) real-time decision making, and (3) increased patient care experiences (Woda et al., 2016). The researchers found that incorporation of SLEs can decrease anxiety associated with caring for patients in hospital setting, improve nursing care and develop clinical decision-making skills of nursing students (Woda et al., 2016). Consequently, the introduction of simulation in clinical practicum has shown favourable response hence could be considered for schools of nursing in curriculum development.

**Theoretical Framework:** This study will be guided by Lave and Wenger’s situated theory of learning and Kolb’s experiential learning theory. The situated theory of learning developed by Lave and Wenger (1991) reasoned that learning is a matter of creating meaning from real activities of daily living. This theory is an expansion on the work of Dewey, Gibson, Vygotsky and Schoenfeld (year) in which they postulated that students are more inclined to learn by actively participating in the learning experience. The situated learning theory (SLT) was further developed by Brown, Collins and Duguid (year) in which they emphasize the idea of cognitive apprenticeship. This “cognitive apprenticeship” supports learning in a domain by enabling students to acquire, develop and use cognitive tools in authentic domain activity (OTEC, 2007). Situated learning theory (SLT) suggests that learning takes place through relationship between people and connecting prior knowledge with authentic, informal and often unintended contextual learning. This indicated that learning is more effective when a student is actively engaged in activities rather than attempting to receive knowledge passively. The theory of situated learning involves students in cooperative activities where they are challenged to use their critical thinking and kinesthetic abilities (OTEC, 2007). This construct represent how the student role change from being a beginner to an expert as they become more active and immersed in the social community where learning takes place. To test the theory of situated learning Laves conducted an experiment to look at the performance on arithmetical task which were measured during everyday shopping in the supermarket compare to an arithmetical test that question the same skills. The results on the test were worse than the arithmetical task performed in the supermarket. Hence she contended that when students acquire learning out of context skills, they generally were unable to apply them in real life situations for which they were predicted (OTEC, 2007). For this study, leadership will be taught by use of simulation where the staff nurse will have actual cases and issues to address while using model patients and staff.
This method of teaching incorporates behaviour of the staff nurse, and the content of the material, which set the ideal framework for the teaching of leadership instead of the traditional teaching model. The use of simulation in teaching will bring the learner and teacher into a wider context than merely providing the material for instruction.

Figure 1:

Clearly (Figure 1) situated learning involves actively participating in the learning-process by way of real daily activities (Stein, 1998; Pappas, 2015). The Situated Learning Model creates a replica of the real situation in the teaching environment. Stein (1998) went further and recommended the guidelines of classroom activities in the Situated Learning Model: 1) Knowledge is acquired situational and transfers only to similar situations; 2) “Learning is the result of a social process encompassing ways of thinking, perceiving, problem solving, and interacting in addition to declarative and procedural knowledge, and 3) learning is not separated from the world of action but exists in robust, complex, social environments made up of actors, actions, and situations” (para.3). Kolb (2007), in his theory of experimental learning, described the process of experimental learning that explained how an individual learns and applies knowledge learned from an experimental learning experience. He described the learning process in a four-stage cycle that involved four adaptive learning modes: concrete experience, reflective observation, abstract conceptualization and active experimentation. He noted that, in order to learn, individuals must have a concrete experience, reflect on the observation and abstractly conceptualize the experience, to actively experiment in order to verify that the abstract conceptualization is accurate. This theory highlighted how simulation can be effective in teaching staff nurses’ leadership skills as the learner go through the four stages in the learning modes namely: concrete experience, reflective observation, abstract conceptualization and active experimentation.

III. METHODOLOGY

This research used quantitative and qualitative approaches to gather the data concurrently for the purpose of increasing the breadth and depth of understanding (Creswell, 2009). Mixed method research was established around the year 2000 and it’s use has increased over the years because it presents a more enhanced insight into the research problem and questions than using one method independently (Creswell 2012; Frel & Onwuegbuzie, 2013, as cited in Caruth, 2013).

Research Design: A concurrent triangulation mixed method design was used to carry out this study. In this design both qualitative (thematic descriptions) and quantitative (survey) data are collected concurrently in one phase then the data is analyzed, compared and or combined (Greene, Caracell & Graham, 1989; Morgan, 1989; Steckler et. al, 1992 as cited in Creswell, 2009, p. 211). According to Creswell (2009) this model generally uses separate quantitative and qualitative methods as a means to offset the weaknesses inherent within one method with the strengths of the other. The weight in a mixed method design is equal between the two methods (p. 211). For this study quantitative data from survey was merged with qualitative data that was collected simultaneously at the sites.

Justification for Mixed Method Research: This design was selected because it can add insight and understanding into the phenomena that was studied, that might be missed when only one designed is employed. The concurrent triangulation mixed method design is advantageous because it can result in well-validated and substantiated findings. Also, the concurrent data collection results in a shorter data collection time because both qualitative and quantitative data are gathered at one time at the research site (Creswell, 2009). The mixed
method design allows for the presentation of a more robust conclusion and increases the capability for
generalization (Cronholm, &Hjalmarsson, 2011, as cited in Caruth, 2013).

**Population and Sample:** The population for this study was registered nursing who worked at one hospital from
the North East Regional Health Authority (NERHA) in Jamaica. The site was selected because the majority of the
nursing population is not trained in management. The sample population was 30 registered general nurses
from a hospital in the NERHA.

**Sampling procedure:** In order to eliminate bias, for the quantitative data collection the simple random
sampling technique was used to select thirty (30) registered general nurses that will be included in the study.
This method of sampling as asserted by Gerrish and Lacey (2006) prevents researcher bias as the sample is
selected randomly. Polit and Beck (2010), also believe that simple random sampling is the most basic
probability sampling design which allows random selection which guarantees that differences between the
sample and the population are purely a function of chances. However, to select participants for the qualitative
data collection, purposeful sampling method was used to identify fourteen (14) nurses from the thirty (30)
nurses who have experienced the phenomena that was explored. This sampling method was used to select the
interviewees because all participants that meet some criterion are useful for quality assurance (Creswell, 2012).

**Data collection:** The research used a survey and interviews tools. A standardized instrument was the tool used
to collect the data from all the participants. The quantitative data was conducted by direct handing out of survey
protocol and participants were asked to complete all items while the researcher waits for the tool. Qualitative
instrument was done by an interview protocol that was administered to fourteen (14) of the thirty (30) registered
nurses. Qualitative data was conducted using one-on-one interview and the recording procedure was included
the use of a lapel mike recorder plus pen and paper to capture all the information. Ten students from the
Northern Caribbean University were used to collect the data after one-week training in the data collection
procedure.

**Strategies for validating findings:** To achieve validity of the interview protocol and questionnaire a pre-test of
the instrument was performed using five (5) registered nurses at the National Chest Hospital to determine
ambiguity of questions, completeness of response, and the time required to complete the two tools. Validity
was solicited from participants to compare the researchers’ descriptive results with their lived experiences. Validity
was also obtained after gaining approval of interview and questionnaire protocols from my research supervisor
or a Director of Nursing Services with expert knowledge of the problem being researched. To determine the
validity of findings this was obtained from the literature.

**IV. DATA ANALYSIS**

Qualitative data was analyzed using the MAXQDA tool. This is a computer software program that helps to
systematically evaluate and interpret qualitative text. The program has four central elements: the data, the code
or category system, the text being analyzed and the results of basic and complex searches. In MAXQDA,
analysis and evaluation is done by sorting materials into groups, using a hierarchical coding system, defining
variables, and assigning colors and weight to text segment (Creswell, 2013). In this method all written
transcripts were read several times and significant phrases and sentences that pertain to the lived experience of
the nurses was grouped into themes.

For the qualitative data Stevick- Colaizzi-Keen data analysis approach, as outlined by Moustakas (1994) was
used to analyze the data (Creswell, 2013).

- The researcher describes personal experiences with the problem being studied. The researcher gives a full
description of his/her own experience of the phenomena.
- A list of significant statements are developed, the researcher finds statements in the interview about how the
individual is experiencing the phenomena and list these significant statements
- The significant statements are grouped into themes.
- A description of what the participants experienced with the phenomena is recorded (textural description).
- A description of how the experience happened is written (structural description).
- Write a composite description of the phenomenon incorporating both the textual and structural description
(Creswell, 2013).

In this method all written transcript were read several times and significant phrases or sentences that pertains to
the nurses’ perception of the use of simulation to develop their leadership skills were recorded. Base on the
responses from the one and one interview meanings were formulated from the significant phrases and sentences.
The formulated meanings were clustered into themes allowing for the emergence of themes common to all participants transcripts. Validation of the data collected was obtained through literature searches and through bracketing which is a process of setting aside one’s beliefs, feelings and perceptions to be more open to the experience thus adhering to phenomenological method/ phenomena (Creswell, 2012). The data were collected from fourteen (14) participants and transcribed into fourteen separate documents. Open coding was also done inductively and several themes were generated which was subsequently placed into sub-categories. The document was uploaded to the QDA miner software for coding. Several codes were generated after carefully reading the document. The words, phrases and passages that were relevant to the research were highlighted and colour coded and seven main categories were created. The coded texts were then assigned to a sub-category that fits each of the seven categories. Quantitative data was analyzed using the Statistical Package for Social Science Software (SPSS) latest version. Tables were used to graphically display findings of this study. Bivariate relationships were tested by way of Independent sample t-test, and Analysis of Variance. The level of significance was 5% for two-tailed test.

**Ethical considerations:** Approval to conduct this research was sought from the North East Regional Health Authority (NERHA) ethics committee and the Northern Caribbean University/ DGEL. Permission was also sought from the Chief Executive Officer (CEO) of the institution in which the research will be conducted. The purpose of the research was outlined to the Regional ethics committee and the CEO of the hospital in NERHA. They were advised that confidentiality of the questionnaires and interview sessions will be maintained, an informed consent was obtained from participants and anonymity was maintained. Participations in this study were advised in writing of the voluntary nature of their participation. Participants were informed of their right to refuse to participate or to withdraw from the study at any time after agreeing to participate without fear or threat to their employment status. The participants were informed of all data collection methods and activities. Special attention was geared towards ensuring that participants were well informed about the research and the steps that would be taken to gather data. They were guaranteed the right to the research findings. The confidentiality and anonymity of the participants was maintained as they will be given code names (Polit & Beck, 2010).

**Definition of terms:** The following terms will be defined.

**Simulation:** “A teaching technique to replace or amplify real experiences with guided experiences, that evoke or replicate substantial aspects of the real world in a fully interactive manner” (Gaba, 2004)

**Perception:** Awareness, feelings, attitudes, and understanding of things (Collins English Dictionary).

**Leadership skills:** (1) The essential and innate skills required to be a leader or to lead a team of people (Harmonious, 2015). (2) Leadership skills are the strengths and abilities individuals demonstrate that help them oversee processes, guide initiatives and steer their employees towards the achievement of goals (Rouse, 2014).

**Registered Nurse:** Is an individual who has graduated from an approved school of nursing and is qualified to practice and bear the title “Registered General Nurse” (Nurses and Midwives Act, 1964)

**Limitations:** In conducting this study, the researcher encountered the following limitations:

- No studies were done in Jamaica to support the problem been researched.
- The participants are all registered nurse.
- The study may not be generalizable to all registered nurses in Jamaica.
- There was no male in the sample size, which revealed female dominance.
- Quantitative data was collected from only 15 participants due to time constraints.

**Findings:** For the quantitative collected data, the findings revealed that most of the sampled respondents were females (100%, n=15), 25 to 44 years old (93.4%, n=14), hold a first degree (80%, n=12), and on average served for 5 years in nursing care (Table 1).
Table 1

<table>
<thead>
<tr>
<th>Details</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Female</td>
<td>15 (100.0)</td>
</tr>
<tr>
<td><strong>Age cohort</strong></td>
<td></td>
</tr>
<tr>
<td>24 years old</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>25-34 years old</td>
<td>7 (46.7)</td>
</tr>
<tr>
<td>35-44 years old</td>
<td>7 (46.7)</td>
</tr>
<tr>
<td>45-54 years old</td>
<td>1 (6.6)</td>
</tr>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>14 (93.3)</td>
</tr>
<tr>
<td>Part time</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td><strong>Educational attainment</strong></td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td>Diploma</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td>BSc</td>
<td>12 (80.0)</td>
</tr>
<tr>
<td>MSc</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td><strong>Duration of service</strong></td>
<td></td>
</tr>
<tr>
<td>Median=5 years; range =28 years</td>
<td></td>
</tr>
</tbody>
</table>

From fourteen (14) verbatim transcripts, significant statements obtained from each participant during the interview were extracted. The formulated meanings were originally clustered into 15 themes which were subsequently revised, resulting in 7 themes.

**Theme 1: Enhanced knowledge.** This focused on the extent to which participants believe they can develop leadership skills through simulation. Participants stated that simulation would enhance critical thinking, allow them to gain more experience, increase knowledge and improve their ability to manage the unit effectively. Table 2 presents selected variable on simulation and leadership skills of the sampled respondents. Almost 47% of the sampled respondents indicated that they were extremely comfortable with their leadership skills. 87% believed that simulation aids in critical thinking, 93% reported that simulation enhance clinical setting and all opined that simulation helps in patient safety.

Table 2

<table>
<thead>
<tr>
<th>Details</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Usage of Simulation to assist nursing practice</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>13 (86.7)</td>
</tr>
<tr>
<td>No</td>
<td>2 (13.3)</td>
</tr>
<tr>
<td><strong>Increasing performance with the use of simulation in the clinical setting/hospital</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>14 (93.3)</td>
</tr>
<tr>
<td>No</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td><strong>Usage of Simulation to enhance critical thinking</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>13 (86.7)</td>
</tr>
<tr>
<td>No</td>
<td>2 (13.3)</td>
</tr>
<tr>
<td><strong>Usage of Simulation to ensure patient safety in the hospital</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>15 (100.0)</td>
</tr>
<tr>
<td>No</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td><strong>Usage of Simulation to develop leadership skills</strong></td>
<td></td>
</tr>
<tr>
<td>Minimally useful</td>
<td>1 (6.7)</td>
</tr>
<tr>
<td>Somewhat useful</td>
<td>8 (53.3)</td>
</tr>
<tr>
<td>Extremely useful</td>
<td>6 (40.0)</td>
</tr>
<tr>
<td><strong>Perceived comfortable with leadership skills</strong></td>
<td></td>
</tr>
<tr>
<td>Minimally</td>
<td>8 (53.3)</td>
</tr>
<tr>
<td>Somewhat</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Extremely</td>
<td>7 (46.7)</td>
</tr>
</tbody>
</table>
Theme 2: Useful tool. Participants focused on the how they feel about the use of simulation to develop their leadership skills. The participants stated that simulation gave them insight into how to approach a matter, it allow for improvement in management skills. One participant explained that during the process of simulation one can make corrections during the process until they because very comfortable at leading other staff. Another participant felt that the use of simulation will help her to gain more knowledge and improve leadership skills.

Theme 3: Challenging. On the area of being in-charge of the unit/ward in the absence of the ward manager participants indicated that it was very frustrating, it is a lot of responsibility and accountability. One participant stated that she was very nervous. Others believed that it require team work and support from members of the health team.

Theme 4: Improved preparation. In response to the question on “what impact would simulation training in leadership have on the nurses management of the patient and the ward?” The participant felt that simulation training in leadership would be good because it would reinforce what they know, provide additional information and better prepare them to deal with unplanned events. One participant felt that the simulation training will prevent the occurrence of errors, strengthen the decision-making process. Others felt that this training will help them to lead and manage the ward better and improve the care they give to the patients.

Theme 5: Experience is important. Participants expressed that the number of years one work will certainly influence how they feel about the use of simulation. It will also influence ones willingness to accept a new way of teaching especially if another method had worked very well for them. One participant stated “well experience has broaden my perception in a positive way, and I strongly believe simulation is an effective tool that can be used to help new nurses develop their leadership skills”. Another participant expressed that she do not think years of experience alone will influence ones perception of the use of simulation to develop leadership skills but rather ones apprehension of the unfamiliar method.

Theme 6: Build confidence. For the question on “How can simulation training in leadership help to improve your experience when you are the charge nurse”? In responding to this question some participant felt that simulation training will give them needed experience in dealing with difficult situation, enhance critical thinking as well as time management. Others stated that it prepares them for what to expect and teaches skills that will help them resolve management issues on the ward. Also, it better equip them to manage the challenges associated with being in charge of a ward, improve one on one interaction, improve confidence and improve skills level when performing nursing task.

Theme 7: Both methods. The participants believed that both traditional method and use of simulation to teach leadership skills is necessary. They felt that after the tradition method it should be followed up with the use of simulation to concretize the information. One participant indicated that she was a visual learner and more practical. Therefore, traditional classroom and lectures does not work well for her. Another stated that based on her experience, she thinks traditional teaching method and simulation complement each other. I prefer hands on as I tend to grasp more of what is being taught, which intern boost my confidence level and leadership skills.

In regard to the question, “Does the use of simulation help you in your nursing practice?” the majority of the sampled respondents indicates yes (86.7%, n=13; Table 2)

Simulation Index: Prior to constructing an index for simulation, a reliability analysis was done, and it was revealed that the three sub-items had a Cronbach alpha of 0.630. This means that the construct is relatively good to assess simulation. The three items used to measure simulation are 1) To what extent does the use of simulation impact your level of confidence? 2) How would you rate the effect of simulation on your nursing practice? and 3) Indicate your level of hesitancy to the use of simulation. Hence the Simulation Index is the summation of the mean of items 6, 7 and 11 on the instrument.

Table 3 presents the descriptive statistics for the Simulation Index variable. The findings revealed that the Simulation is highly used among the sampled nurses (2.1±0.4, 95%CI: 1.97-2.4, out of 2.67).
Table 3
Descriptive statistics for Simulation Index

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.1889</td>
</tr>
<tr>
<td>95% Confidence Interval for Mean</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1.9771</td>
</tr>
<tr>
<td>Upper</td>
<td>2.4007</td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>2.1914</td>
</tr>
<tr>
<td>Median</td>
<td>2.3333</td>
</tr>
<tr>
<td>Variance</td>
<td>.146</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.38249</td>
</tr>
<tr>
<td>Minimum</td>
<td>1.67</td>
</tr>
<tr>
<td>Maximum</td>
<td>2.67</td>
</tr>
<tr>
<td>Range</td>
<td>1.00</td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>.83</td>
</tr>
<tr>
<td>Skewness</td>
<td>-.310</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-1.367</td>
</tr>
</tbody>
</table>

Summary: The current findings revealed that simulation has a positive influence in imparting knowledge, aiding in practice and skills, and enhance leadership competences of the sampled nurses.

V. DISCUSSION

Shapira-Lishchinsky (2014) explored nurses’ ethical decision making in team simulation in order to identify the benefit of simulation for authentic leadership (p. 60). The researcher showed how team-based simulation helped nurses and physicians overcome the barriers of ethical dilemmas that arise between. The results showed that team-based simulation (TBS) prepared nurses to deal with ethical dilemmas because it provides a safe and forgiving learning environment (Shapira-Lishchinsky, 2014, p. 67). The findings also revealed that in order to develop authentic leaders in nursing it may be beneficial to emphasize the four components of authentic leadership namely (1) balanced processing, (2) internalized moral perspective, (3) relational transparency, and (4) self-awareness, to create a sense of empowerment and improve decision making outcomes (Shapira-Lishchinsky, 2014, p. 68). Reylan, Mete, Sayiner, and Celik, (2018) conducted a cross-sectional descriptive research to determine the views of midwifery students about simulation found that 95.4% of the participants were willing to take simulation education and stated that simulation education would improve their critical thinking and reduce anxiety during clinical practices (p. 240). Reylan et al., (2018) contend that simulation education aid in developing health workers professional competence, interpersonal interaction, decision-making and problem-solving, and increase their performance level (p. 239). This showed the importance of simulation in the learning process and how it can help nurses integrate knowledge and skills with active learning opportunities.

According to Alfes (2011) students who were exposed to simulation showed greater signs of self-confidence when compared with students taught with traditional method (p. 89). He further indicated that simulated experiences with beginning students as well as the need to provide a multitude of interactive learning methods that challenge students at their current competency level have been effective in teaching leadership skills (Alfes, 2011, p. 92). The findings from this study revealed that most participants believed that implementing simulation training for students would help to improve their performance, and build confidence. It was also noted that most participant attitude was positive towards the use of simulation to develop their leadership skills.

Implication for Nursing: Registered nurses are expected to perform at optimum standard and provide high quality care to patient after completing training and in the absence of the ward manager. However, there has been an inconsistency with their knowledge base and their ability to effectively manage the ward. Simulation may provide an alternative to the traditional teacher-centered approach to helping nurses develop leadership skills. It prepares the nurses to be better equipped to provide safe effective care and work as contributing members of the healthcare team. The literature has shown that the use of simulation to develop leadership skills
help to improve the critical thinking and decision-making skills, to build the confidence level of nurses and has also proven to improve the effectiveness of nursing care.

VI. CONCLUSION

The overall result indicated that the incorporation of simulation training to develop nurses’ leadership skills has a positive effect as it enhances their critical thinking and decision-making skills, and management skills. It was also noted from the study that, most nurses felt generally more confident when performing nursing skills when they are in charge of the unit/wards.

Benner (1984) suggested that experiential learning experiences can be used to assist the novice and advanced beginning nurse with assessment, identifying nursing interventions, and providing safe and accurate care for their patient. Benner (1984) suggested that experiential learning experiences can be used to assist the novice and advanced beginning nurse with assessment, identifying nursing interventions, and providing safe and accurate care for their patients.

REFERENCES


22. What is leadership skills? Retrieved June 25, 2019 from searchcio.techtarget.com/definition/leadership...


26. Growing future nurse leaders to build and sustain healthy work environments at the unit level. OJIN: The Online Journal of Issues in Nursing, 15(1),

