

Nursing Students ‘perception about Practical Learning and Theory-Practice Gap

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Abstract

The nursing profession is composed of two main parts: the theoretical part, which reflects the knowledge that is received in the classroom; and the practical part, which focuses on improving students’ skills in the clinical area.

This study aims to evaluate the perception level of nursing students related to their practical learning and theory-practice gap. **Research design:** Descriptive, Cross sectional study. **Study setting** was Nursing College Taibah University (Saudi Arabia).. **Subjects:** The subjects of the present study included 300 nursing students enrolled in Nursing College. **Results:**

the study found that; half of the sample was in age group 18-23 years, also half of the sample had previous qualification, The Cronbach's Alpha value ranged from (.65 α to .86 α) which are acceptable, the result showed that the instrument is reliable, all the subscales were a statically significant at $P \leq 0.05$. **Conclusion:** The results of this study supports the need to reconsideration in the practical skills training in nursing education, as well as emphasized to observe gap in the knowledge and the practicing among nursing students. **Recommendation:** Nursing education must reconsider current methods to practical learning and quest to invent methods to better prepare future nurses, conducting continuing education for the faculty in principles of teaching and learning to enhance their teaching behavior and interpersonal skills.

Key words: **Nursing Students, perception ,Practical Learning, Theory, Practice Gap**

1. Introduction

For many decades there has been ongoing argumentation about what it means to be a competent nurse and how clinical competence develops and is assessed (Sally 2014). Currently, providing nursing care with high quality is a requirement which count on the nursing competency. So Clinical nursing

competency is qualification and competence in the areas of psycho-physical, clinical skills, critical thinking, cognitive, problem solving and power to promote education through academic learning and clinical experience, leading, eventually, to standards and safe care (Sally et al 2014& Safadi et al 2010).

The last thirty years converge on dynamic nursing teaching from hospitals to the colleges. .other point of view width that nursing is a practice discipline and the students' clinical practice is considered to be the essence of nursing teaching (Jonsén et al., 2013) It was put that theory as being complementary to practice and they anticipate more concentration on taught in the practical area (Landers, 2015). This opinion was originated from the ability of clinical education to provide students with real life events that enable them to develop apply and evaluate their own understanding of concepts being studied (Ranse and Grealish, 2007). However, another author did not eliminate the importance of theory in nursing education (Stockhausen, 2005). They emphasize that theory provides students with the chance to structure a zone of powerful examples that acquired from trail (Ahmad Saifan et al,2015)

On other hand, The nursing profession is composed of two main parts: first

one; the theoretical part which reflects the knowledge that is received in the faculty, which defined as a set of principles devised to elucidate a lot of fact or phenomena, particularly one that has been repeatedly examined or is generally recognized and can be used to make predictions about naturalistic phenomena.. This part should provide the basis for understanding the reality of nursing (Nabolsi et al., 2012). In faculty, nursing students are educated the theoretical basis for all procedures, diseases, interpersonal skills and requirements to be a nurse. The second part; practical part which focus on enhancing skills in the clinical setting, that defined as act of doing something; performance or action. (Manal,H,M. 2014).

Likewise, the practical part equips nursing students with a mechanism to extend classroom learning into the nursing practice environments (McKenna & Willard, 2009). Both of these are part of improving nursing and health care system. The relationship between theory and clinical practice, both internationally and nationally, has always been a concern in nursing education. Many authors have s proposed that education in the clinical environment participates in molding the professional development of student nurses (Budgen & Garmoth, 2008). But, many studies have pointed out the discrepancies between theory and practice. (Ehrenberg & Haggel, 2007).

Furthermore, the literature show there is a gap between the theory and training components of teaching nursing (Allan, 2011; Chan, 2013; Landers, 2000; McKenna & Willard, 2009). sundry reasons for this gap, 1) using abstract meanings to clarify some procedures in the clinical setting students found it; 2) difficult to connect what they learned in the classroom with the facts they faced in the complex clinical setting, 3) the complexity and the continuous change in the clinical area (Nabolsi, et al., 2012 & Chan, 2013), 4) The development in nursing education and the move across higher education also increased the gap (Fairbrother & Ford, 1998; McKenna & Willard, 2009) and 5) The clinical instructor's behavior during the practical learning may either support or block the learning and practice of student nurses (Clark & Holmes,2007; Maben et al. 2006; Sedgwick and Yonge, 2008).

As well, from the student perspective the theory practice gap has been noted as; 1) demanding and sometimes left them confused and uncertain about their roles and practice (Ousey& Gallagher, 2007), 2) the clinical instructors were not qualified enough to meet their needs, 3) The instructors did not know how to deal with students and how to be supportive for them and 4) the laboratories on models was totally different from the real complex

clinical setting.

Moreover, student perceptions of link between skills taught at faculty and those used in clinical practice are important in ensuring that students are adequately willing for clinical placement and that consistency exists to ensure safe practice. (Ajani & Moez, 2011). Thus, it could be argued that even very effective theoretical education in the academic context can be of little use when the student facing the complexities of the clinical situation (Smith et al., 2007). Whyte et al., 2009, suggests that cognitive mechanisms and skills required for excellent and expert level rendering gained through deliberate practice, for this reason, the researchers conducted this study to explore the nursing students' perception related to practical learning and the existence of theory practice gap in their education.

1.1. Significant of study

Prior literature found an evident gap between theory and practice in nursing teaching and training (Hartigan et al., 2009). That phenomenon was substantive as a gap between what is educated' and skilled' in nursing", where the theory focuses on what the best for patient care, however the clinical teaching concentrate on the actuality of nursing action.

2. Subjects and methods:

2.1. Aim of the study

The present study aimed to explore Nursing Students' perception about Practical Learning and Theory-Practice Gap.

2.1.2 Research questions:

1. Is there a positive relationship between theory and practical?
2. Is a demonstration the most teaching strategy used by clinical teacher?

2. What the most the most teaching strategy used by clinical teacher?

2.2. Subjects and methods:

4.2.1. Study design and setting

Descriptive cross-sectional design was utilized in this study. The study was conducted in Nursing College at Taibah University (Saudi Arabia).

2.2.2 Subjects of the study:

The subjects of the present study included nursing students (Students **matinee** and bridge) enrolled in Nursing College - Taibah University . The actual number of nursing students 300 from 500 from four, sixth and eighth levels' because courses with clinical practice included in the curriculum of these academic years.

Exclusion criteria:

Nursing students (matinee and bridge) at first and second level **consider a preparatory year before specialty** because courses with clinical practice were not included in the curriculum of the mentioned academic levels.

2.3. Tool of the study

The questionnaire that utilized in this study adapted from (Nxumalo 2011)

- (1) Responses on demographic profile which contained socio-demographic data of nursing students included their age ,social status and previous qualification.
- (2) practical learning which comprised information that reflecting perception of nursing students to practical learning, clinical practice experience and availability of sufficient resources during clinical practice (18 items).
- (3) learning strategies preferences, which consisted of perception of nursing students toward their preferred learning strategies (14items).
- (4) assessment, which screened perception of nursing students toward formative and summative assessments as well as barriers, encountered during assessment(11 items).
- (5) theory practice gap which covered perception of nursing students to aspects inducing theory-practice gap as differences between the

simulated skills and the actual clinical procedures in the wards, teaching strategies used by the nurse educator and discussion between nursing students and nursing educator and preceptor about the application of theoretical subjects on the practical training(15 items).

2.3.1. Scoring System:

- Section (1): frequencies, percentage.
- Section (2): It is a likert like scale with two options of yes (2 marks) or no (1 mark).
- Section (3): It is a likert like scale with two options of yes (2 marks) or no (1 mark).
- Section (4): It is also a likert like scale with two options of yes (2 marks) or no (1 mark).
- Section (5): It is a likert like scale with five options; all the time (4) marks, sometimes (3) marks, don't known (2) marks, least time (1) mark and never (0) mark

3. Methods of data collection:-

1- The approval to conduct the study will be obtained from Dean of Nursing College in Taibah University, (Saudi Arabia). after clarifying the aim of the

study to help in the study conduction and facilitate data collection. The sample will be notified about the purpose of the study and about the right to accept or refuse to participate. Complete confidentiality of any obtained information will be ensured. They further handed with the study instrument and a full explanation provided on how to fill the instrument.

2-Development of the tools after review of literatures.

3.1.Validity:

The developed instrument tested for its content validity through five expert's who revised the tools for clarity, relevance, applicability, comprehensiveness, understanding, and ease for implementation and according to their opinion minor modifications was applied.

3.2.Ethical consideration:

Written consent was obtained from students' to agree to participate in the present study.

3.3.Pilot study:

A pilot study conducted in (10 %) of the total sample size, who were selected randomly, in order to test the relevance; language clarity and applicability of the study tool; and to estimate time needed to complete the initial tool. Based on the pilot study, the modifications were applied as translate the questionnaire into Arabic. The change needed well done.

3.4.Data collection:

The duration of data collection was **four year** starting January 2016- April 2016.

3.5. Statistical design

Data were collected and fed to statistical package of social sciences (SPSS) version 20 at the survey was checked and entered into a database on a personal computer. Descriptive statistics including frequency, percentage, mean and standard deviation were used to describe different characteristics.

-Reliability analysis for internal consistency of questionnaire “The Cronbach's alpha value”

-Univariate analyses including: ANOVA test was used to test the significance of results of quantitative variables.

-The significance of the results was at the 5% level of significance.

4. Discussion

Nursing graduates expected to provide compassionate, safe, and effective care in multiple settings while keeping abreast of rapid advances in healthcare (Benner, et al. 2010). Nurses are accountable for delivering high quality, evidence-based, patient-centered care to diverse populations of all ages ((IOM) 2010). Nursing care is determined by the way nurses use

knowledge and skills to appreciate the uniqueness of the person they are caring for (Warelow, Edward and Vinek 2008). The current study conducted in Nursing College, Taiba University among three hundred of nursing students , which they were between 18 to 30 years old, The findings of the present study revealed that; half of the sample was in age group 18-23 years old, more than two third of the sample was single, also half of the sample had previous qualification.

❖ **Responses on clinical experience:**

The most (54.7%) of nursing students in this study indicated that they have been oriented to the clinical practice prior to clinical placement. These findings similar to results of the study conducted by Manal that her study found that; the majority of nursing students indicated that they have been oriented to the clinical practice prior to clinical placement (Manal 2014). Also the results of current study consistent with the results in a study conducted by Nxumalo who found that student nurses are orientated prior to placement in the clinical areas (Nxumalo 2011). While the results of this study indicated that the majority (67.3%) of nursing students oriented to the clinical setting and supervised by their clinical Teachers.

These results in line with the findings of Manal study who found that

nursing students oriented to the clinical setting and supervised by their clinical preceptors (Manal 2014), whereas contradicted with the findings of Nxumalo who reported that many of the student nurses orientated by the senior professional nurses in the wards (Nxumalo 2011) . In addition, Carson and Carnwell found that orientation was undertaken by nurse educators (Carson 2007).

Nursing students in this study noted that there were lists of planned activities on arrival in the clinical setting. These results opposed the results of Manal who found that there were no lists of planned activities on arrival in the clinical setting (Manal 2014), whilst the results in this study similar to findings of Nxumalo who revealed that most of the respondent given lists of planned activities (Nxumalo 2011).

Respondents of this study further reported that had inadequate supervision from clinical preceptors because of the shortage in the college staff and each preceptor supervised many students; "64.7% Supervision not occurs all the time". The study of Manal and Nxumalo supported this result, in their studies; supervision reported as inadequate for guidance and support of student nurses (Manal 2014), (Nxumalo 2011). Were, these results related to shortage in number of nursing educators and clinical preceptors compared

to the number of the students and the job tasks assigned to them (Manal 2014).

❖ **Responses on availability of resources :**

Most of nursing students in the current study were of the opinion that there were insufficient resources during placement in the clinical practice as models for simulated learning experiences, equipment and instruments. These results in line with Nxumalo and Manal which they found the majority of the student nurses reported that there were insufficient resources during placement in the clinical practice (Manal 2014), (Nxumalo 2011).

Results of this study indicated shortage in human resources, mainly clinical preceptors and nursing educators and clinical preceptors were more available than nursing educators were, these results related to shortage in number of nursing educators and clinical preceptors compared to the number of the students and the job tasks assigned to them. The same results recorded in the study of Nxumalo. Findings of different researchers are not consistent with the above results as the nurse educators and clinical preceptors reported as not available due to large number of student nurses to supervise, lack of time and overload of academic work (Carson 2007), (Mabuda et al 2008).

However, Hennessy et al asserted that adequate staff and equipment in training enhances the standard of clinical training (Hennessy et al 2006). In their study, Dee and Stanley found student nurses prefer human resources and print resources to electronic resources in clinical practice however, they suggest that talking to nurse educators and clinical preceptors can be the first step in highlighting these teachers awareness to interests in specific topics and subjects.

❖ **Responses on formative and summative assessments:**

Nursing students in the current study signified that formative assessment used in their clinical practice, these results supported by (Bartfay 2004), Nxumalo and Manal who noted that Many of student nurses indicated skills demonstration on patients as the preferred strategies that used during formative assessment for clinical competencies (Manal 2014), (Nxumalo 2011).

More than half of respondents were of the opinion that formative assessment re-enforced their learning while only 20% of them viewed it as providing feedback on their progress. These results almost similarity findings of Manal (Manal 2014), whilst the results of current study disagreed by studies done by Quinn and Hughes and Nxumalo who viewed

that the majority of the student nurses are of the opinion that formative assessments test their clinical and theoretical knowledge followed by provision of feedback on their progress (Nxumalo 2011), (Quinn 2007).

Regarding barriers encountered during formative assessments, the majority of respondents were of the opinion that they experienced a lot of stress during assessments while nearly half of them did not know what to expect, these findings in line with the study conducted by Manal (Manal 2014). On the other hand, the researches represented other barriers to formative assessments. While Nxumalo reported that many of the student nurses felt that, some assessors were stricter than the others were and that assessment done only periodically (Nxumalo 2011).

Respecting summative assessment, more than two third of nursing students in this study noted that the summative assessment conducted at the end of the courses while more than half of them signified that it test their comprehension of the subject field. The results of this study nearly similarity the findings of Manal (Manal 2014). Also ,the current study results confirmed by Nxumalo as student nurses were of the opinion that summative assessments done at the end of the course to indicate whether they have passed or failed (Nxumalo 2011).

Concerning barriers of the summative assessment, nursing student were of the opinion that it did not assessed their level of competence and they were not prepared for the examination. The study by Manal supported these findings (Manal 2014) . While Nxumalo viewed that many of the student nurses revealed that not providing feedback after summative assessment as a major barrier (Nxumalo 2011).

❖ **Responses on aspects inducing theory-practice gap:**

Based on results of the current study, more than half of respondents reported that they were not encouraged by nursing educator to discuss aspects of practical experience in class during theoretical instruction. These results contradicted the findings of Manal as the majority of respondents reported that they encouraged by nursing educator to discuss aspects of practical experience in class during theoretical instruction but in a long intervals (Manal 2014).

Regarding aspects that learned through the discussion with the nurse educators, only one third of respondents in this study specified that discussion assisted them to find a link between the theory and practical learning, whereas, in the study of Manal half of respondents specified that discussion assisted them to find a link between the theory and practical

learning (Manal 2014). In the study of Nxumalo , the majority of student nurses directed that discussions of the meaning of clinical experiences during theoretical instructions helped them to link theory with practice (Nxumalo 2011).

Nickitas mentioned that nurse educators must model moral courage for student nurses as well as ways to address problems directly rather than ignore them. “Sidestepping problems and broken systems can lead only to greater frustration and disappointment”, Speaking and listening to students for the express purpose of enhancing relationships is valuable (Nickitas 2008). Majority of respondents in this study identified lectures as the most commonly used teaching strategy by nursing educators followed by group discussion. These findings in line with results' study of Manal which she identified lectures as the most commonly used teaching strategy by nursing educators followed by demonstration and group discussion (Manal 2014).

While in the study of Nxumalo , many of the student nurses indicated group discussion followed by lectures as a teaching strategies used by nurse educators (Nxumalo 2011). Flanagan and McCausland acknowledged that to think critically and function effectively in a complex and dynamic professions such as nursing, many learning skills are necessary for

knowledge acquisition and information processing. Teaching around the cycle encompasses traditional lectures, active learning strategies, collaborative learning, and problem solving as a balanced and effective approach to teaching (Flanagan 2007).

Concerning encouragement by clinical preceptors during clinical experience to talk about theoretical learning experiences instruction; more than two third of the respondents in this study did not encouraged to compare theoretical knowledge with what they do in practice. In addition, they did not encouraged applying the nursing process more comprehensively. These results inconsistent with the findings of Manal that she found; about half of the respondents were encouraged to compare theoretical knowledge with what they do in practice also they were encouraged applying the nursing process more comprehensively (Manal 2014).

McKenna et al. further explained a form of reflection is to encourage student nurses to talk about their experiences in clinical practice, offer a more integrated approach to classroom theory and its application in practice. Majority of the nursing students in the current study revealed that there was a gap between the theoretical knowledge and the actual practice in the clinical setting (McKenna et al 2009). Morgan and Carson and Carnwell

were of the opinion that there were perceived differences by student nurses pertaining to the reality of practice and idealism of theory (Morgan 2006), (Carson 2007).

The researchers commented that the existence of theory-practice gap in nursing has been an issue of concern for many years as it shown to delay student learning. While the study of Essani& Ali (2013) viewed the gaps between knowledge and practice, as perceived by the candidates, were classified into five major categories: (1) medication (34%), (2) skills (28.3%), (3) knowledge (13.36%), (4) handling of code blue and intubations (12.6%), and (5) operating medical devices (11.58%).

❖ **Responses on practical learning**

According to this study, most respondents indicated that "sometimes/always" was the simulation laboratory located at the Nursing College and there were an availability of access to it. Manal and Nxumalo further confirmed this result (Manal 2014), (Nxumalo 2011). The majority of respondents in this study further indicated that "sometimes/ always" were they accompanied by clinical preceptor to the simulation laboratory, while in the study of Nxumalo; the students accompanied by nurse educator alone or with the clinical preceptor (Nxumalo 2011). Morgan viewed the responsibility of

accompaniment of student to the simulation laboratory nurses as both the nurse educators and clinical preceptors (Morgan 2006). Respondents of this study revealed that "sometimes/ always" was the teaching strategies used for practical learning were alternating between demonstrations, lectures and group discussion.

The results provide strong support for utilization of both lecture notes and structured group discussion. While Nxumalo showed that the majority of the student nurses indicated demonstration as the most used teaching strategies utilized by the clinical accompanist (Nxumalo 2011). Anderson and Kiger explained that demonstrations help maximize student nurses' confidence in relation to social learning theory. A confidence building approach includes use of clinical demonstrations on models in simulation laboratories and accompanied by feedback, praise, humor, and mindfulness training. Sharing stories and experiences, as well as allowing students to practice during demonstrations leads to learning in a safe environment (Anderson 2008).

Pertaining to the results of the current study, most of respondents reported "Never/Rarely" that the demonstration of skills done by their supervisors in the simulation laboratory. These findings inconsistent results of the study conducted by Manal, who found most of the sample that the

demonstration of skills done by their supervisors in the simulation laboratory (Manal 2014). However, Jefferies and Rizzolo stated that qualified faculties who have trained in simulation assume the educator role during the simulated learning experience, clinical staff or staff specific to the patient simulation laboratory can play the educator role. In either case, it is important for the educator to have knowledge of the simulation and the material it covers (Jeffries 2006).

Hoffman et al. added that students participating in the simulated learning experience must come into the simulated clinical environment prepared for the simulation with a basic knowledge of the material and dressed appropriately for the clinical experience. In this study, nursing students revealed that they obtained feedback from their supervisors after the simulation sessions (Hoffmann 2007). According to Hanson and Stenvig , positive feedback can increase self-esteem whereas negative feedback can discourage and frustrate the students (Hanson 2008).

Results of this study further presented that less than half of the nursing students had opportunity to practice skills during simulation sessions. these results in line with study of Manal (Manal 2014), nevertheless, Scully was of the opinion that, mastering a skill in the classroom can help facilitate closing

the theory-practice gap when applying the same skill to the clinical setting (Scully 2011). The need for adequate practice time in a controlled setting in university laboratories is essential. These results were opposed to the findings of Nxumalo who revealed that the majority of student nurses had the opportunity to practice skills (Nxumalo 2011). The simulated experience is not just a flat experience but also rather one rich with dimension (Lasater 2007).

More than half of the nursing students in this study viewed that the clinical accompaniment was beneficial for them. While these results were incompatible with the previous study of Manal that she found The majority of the nursing students in her study viewed clinical accompaniment had minimal benefits for them (Manal 2014), whereas , the results of the current study similiary to findings of Nxumalo who found the student nurses indicated that clinical accompaniment was beneficial towards professional growth (Nxumalo 2011). In a study by Lasater it was found that the reaction of the students was favorable to the scenarios presented during simulation and students felt the simulation was a superior method to just reading about a particular disease or condition (Lasater 2007).

❖ **Descriptive of Subscales (ANOVA & Reliability Tests):**

The results illustrates that; The Cronbach's alpha value ranged from (.65 α to .86 α) which are acceptable, the result showed that the instrument is reliable. Also the study shows that the age, marital status and all the subscales were a statically significant at $P \leq 0.05$.

5. Conclusion

The results of this study supports the need to reconsideration in the practical skills training in nursing education, as well as emphasized to observe gap in the knowledge and the practicing among nursing students. It is clear that all themes mentioned by the students play an important role in nursing education in general. There were some similarities between the results of this study with other reported studies and confirmed that some of the factors are universal in nursing education. Educators and clinical preceptors must display the knowledge and skills required to promote theory-practice integration, to enhance nursing students' education, which in turn will optimize high standards of patient care relevant to clinical practice. Clinical skills laboratories are essential to help students develop the collaborative skills required for a profession like nursing.

Recommendation

For achieving the goal of merging theory and practice in the delivery of

nursing education and patient care is for nurse educators;

1. They have to spend time in clinical practice,
2. Updating their clinical skills
3. Re-experiencing the realities of practice.
4. Conducting continuing education for the faculty in principles of teaching and learning to enhance their teaching behavior and interpersonal skills.
5. Assessing both written work and performance reality of the clinical environment.

For students

1. Reduce anxiety in students and help them work more effectively with the discrepancies.
2. Change in nursing practice should initiate with change in the educational curriculum of the nursing programs.
3. Nursing faculty should initiate change in the curriculum with a focus on changing and improving nursing practice as well as having a liaison between the education and the practice areas in the educational setting, as well as the clinical setting.

4. Improving collaboration between clinical areas and educational institutions and developing preceptors' lecturer role.
5. Faculties of nursing need to be concerned about supplying students with adequately prepared simulation laboratory and other needed resources.

References

1. ReOusey, K, and P Gallagher. "The theory-practice relationship in nursing: a debate." *Nurse Educ Pract*, 2007: 199-205.
2. (IOM), Institute of Medicine. *Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing. The future of nursing: Leading change, advancing health.* 2010.
[www.iom.edu/Reports/2010/The-Future-of Nursing-Leading](http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading)
(accessed 9 22, 2016).
3. Ahmad , Rajeh Saifan, Abu Safieh Haneen , Milbes Ruba , and Shibly Rawan . "Suggestions to close the gap in nursing education:Nursing students' perspectives." *International Journal of Advanced Nursing Studies*, 2015: 62-68.
4. Ajani, K., and S. Moez. "Gap between knowledge and practice in nursing. ." *Procedia Social and Behavioral Sciences*, 2011: 15:3927–3931.

5. Allan, H T, P Smith, and M 'Driscoll. "Experiences of supernumerary status and the hidden curriculum in nursing: a new twist in the theory–practice gap? ." *Journal of Clinical Nursing*, 2011: 20(5-6).
6. Anderson, E. and Kiger, A. "“I felt like a real nurse”–student nurses out on their own." *Nurse Education Today*, 2008: 443-449.
7. Bartfay, W. J., Rombough, R., Howse, E. and LeBlanc, R. "The OSCE approach in nursing education: Objective structured clinical examinations can be effective vehicles for nursing education and practice by promoting the mastery of clinical skills and decision-making in controlled and safe learning environments. ." *The Canadian Nurse*, 2004: 18-25.
8. Benner, P, M Sutphen, V Leonard, and L Day. "Educating nurses: A call for radical transformation. ." *Stanford, CA: Jossey-Bass.*, 2010.
9. Budgen , G, and L Gamroth. "An overview of practice education models. ." *Nurse Education Today*. 5 5, 2008. <http://dx.doi.org/10.1016/j.nedt.2007.05.005> (accessed 9 22, 2016).
10. Carson, A. and Carnwell, R. "Working in the theory–practice gap: the lecture practitioner’s story. ." *Learning in Health and Social Care*, 2007: 220–230.

- 11.Chan, Z. "A systematic review of creative thinking/creativity innursing education." *Nurse Education Today*, 2013: 33(11), 1382-1387.
- 12.Deer et al, C. and Stanley, E.E. "Information-seeking behavior of nursing students and clinical nurses: implications for health sciences librarians." *Med Libr Assoc*, 2005: 213-22.
- 13.Dolan. "Assessing student nurse clinical competency will we ever get it right?" *Clin Nurs*, 2003: 132-41.
- 14.Ehrenberg, A.C., and M. Ha'ggbloM. "Problem-based learning in clinical nursing education: Integrating theory and practice." *Nurse Education in Practice* , 2007: 7: 67–74.
- 15.Flanagan, N.A. and McCausland, L. "Teaching around the cycle: strategies for teaching theory to undergraduate nursing students." *Nurs Educ Perspect*, 2007: 28(6):310-4.
- 16.Hanson, K.J. and Stenvig, T.E. "The good clinical nursing educator and the baccalaureate nursing clinical experience:and praxis." *J Nurs Educ*, 2008: 38-42.
- 17.Hennessy et al, D., Hicks, C., Hilan, A. and Kawonal, Y. "The training and development needs of nurses in Indonesia:." *Human Resources for Health.*, 2006: 4-10.

- 18.Hoffmann, R. O'Donnell, J. and Kim, Y. "The effects of human patient simulators on basic knowledge in critical care nursing with undergraduate senior baccalaureate nursing students. ." *Simulation in Healthcare*, 2007: 110–114.
- 19.Jeffries, P. R. and Rizzolo, M. A. "Designing and implementing models for the innovative use of simulation to teach nursing care of ill adults and children: A national,multi-site, multi-method study." *New York, NY: National League for Nursing.*, 2006.
- 20.Johnson, J.P. and Mighten, A. " A comparison of teaching strategies: lecture notes combined with structured group discussion versus lecture only." *Nurs Educ*, 2005: 22-44.
- 21.Lasater, K. " Clinical judgment development: Using simulation to create a rubric. ." *Journal of Nursing Education*, 2007: 496-503.
- 22.Mabuda et al, B.T. Potgieter, E. and Alberts, U. "Student nurses' experiences during clinical practice in the Limpopo Province." *Curationis*, 2008: 19-20.
- 23.Manal, Hamed. "PRACTICAL LEARNING AND THEORY-PRACTICE GAP AS PERCEIVED BY NURSING

- STUDENTS." *International Journal of Current Research*, 2014: 5084-5093.
- 24.McKenna et al, L., Wray, N. and McCall, L. "Exploring continuous clinical placement for undergraduate students." *Advances in Health Sciences Education*, 2009: 327-335.
- 25.Moeti et al, M.R., van Niekerk, S.E. and van Velden, C.E. "Perceptions of the clinical competence of newly registered nurses in the North West province." *Curationis*, 2004: 72-84.
- 26.Morgan, G. "Memory and Marginalization. Aboriginality and Education in the Assimilation Era'l." *Australian Journal of Education*,, 2006: 40-49.
- 27.Murathi et al, L.A. DavhanaMaselesele, M. and Netshandama, N.O. "Clinical teaching of student nurses by unit managers of selected hospitals in Limpopo Province." *Curationis*, 2005: 13-20.
- 28.Nabolsi , M, A Zumot, L Wardam, and Abu-Moghli. "The Experience of Jordanian Nursing Students in their Clinical Practice." *Procedia - Social and Behavioral Sciences*, 2012: 46(0), 5849-5857.
- 29.Nickitas, D.M. "Leadership and Management. In Hogan,Mary Ann, NCLEX Review." *New Jersey. Prentice Hall.*, 2008: 37-53.

- 30.Nxumalo, S.J. "Factors that affecting theory-practice integration of student nurses at a selected campus of a Nursing College in the Limpopo Province." *Master thesis.University of South Africa.*, 2011.
- 31.Quinn, F.M. and Hughes, S.J. "Quinn's principles and practice of nurse education." *Fifth edition*, 2007: p.268.
- 32.Scully, N.J. "The theory-practice gap and skill acquisition: An issue for nursing education." *Collegian*, 2011: 93-98.
- 33.Smith, K, S Clegg, E Lawrence, and M Todd. "The challenges of reflection: students learning from work placements. ." *Innovations in Education and Teaching International*,, 2007: 44(2), 131-141.
- 34.Warelow, P, K L Edward, and J Vinek. "Care: what nurses say and what nurses do. ." *Holist Nurs Pract.*, 2008: 146-53.
- 35.Whyte, J, P Ward, and D W Eccles. " The Relationship Between Knowledge and Clinical Performance in Novice and Experienced Critical Care Nurses. ." *Heart Lung*, 2009: 38:517-525.

Table 1: Socio-demographic characteristics

Items		No	%	X ²	P value
Age	18-23	150	50.0	60.6	.000*

	24-29	109	36.3		
	>30	41	13.7		
	Total	300	100		
Marital status	Married	107	35.7	164.	.000*
	Single	187	62.3	5	
	Divorce	6	2.0		
	Total	300	100		
Previous qualification	Yes	150	50.0	0	^{MC} P=1.000 (insignificant)
	No	150	50.0		
	Total	300	100.		

X²: Chi-Square test

^{MC}P: Monte Carlo corrected P-value

*significant at P≤0.05

As the table shown that; half of the sample was in age group 18-23 years old (50.0%) with significant differences (X²=60.6, P=.000*), more than two third of the sample was single (62.3%) with significant differences (X²=164.5, P=.000*), also the table shows that 50% of the sample had previous qualification with insignificant differences (X²=0, ^{MC}P=1.000).

Table 2(A): Responses of nursing students on clinical practice experience

Practical learning, clinical practice experience items	No		Yes		Total	
	No	%	No	%	M (SD)	Significance test
Orientation to the clinical practice prior to placement in the wards.	136	45.3	164	54.7	1.55 (.499)	$X^2=2.61$ $P=.106$
Orientation by senior professional nurse in the ward.	188	62.7	112	37.3	1.37 (.484)	$X^2=19.25$ $P=.000^*$
Orientation by clinical teacher.	987	32.7	202	67.3	1.67 (.470)	$X^2=36.05$ $P=.000^*$
Orientation by nursing educator.	127	42.3	173	57.7	1.58 (.495)	$X^2=7.05$ $P=.008^*$
Availability of lists of planned activities on arrival in the clinical setting.	130	43.3	170	56.7	1.57 (.496)	$X^2=5.33$ $P=.021^*$

Supervised by clinical teacher.	71	23. 7	229	76.3	1.76 (.426)	X^2 =83.21 $P=.000^*$
Supervised by nursing educator.	16 8	56. 0	132	44.0	1.44 (.497)	X^2 P4.038*
Supervised by a 'Senior professional nurses in the ward.	22 5	75. 0	75	25.0	1.25 (.434)	X^2 P75000*
Supervision occurs all the time.	19 4	64. 7	106	35.3	1.35 (.479)	X^2 =25.81 $P=.000^*$
Clinical instruction helping me to master skills.	17 7	59. 0	123	41.0	1.41 (.493)	X^2 P9.002*

X^2 : Chi-Square test

***significant at $P \leq 0.05$**

The table revealed that the responses on “Supervised by clinical teacher” had the highest mean (Mean=1.76, SD=0.42) with 76.3% of the sample answered Yes, with significant differences ($X^2=83.21, P=.000^*$). Whilst the

responses on “Supervised by a 'senior professional nurses in the ward” had the lowest mean (Mean=1.25, SD=0.43) with 75% of the sample answered No with significant differences($X^2=75,P=.000^*$). Also the table shows that Responses of nursing students on clinical practice experience were statistically significant at $P\leq 0.05$, **except** responses on “Orientation to the clinical practice prior to placement in the wards” was insignificant with significant differences($X^2=2.61,P=.106$)

Table 3(B): Responses of nursing students on availability of resources during clinical practice

Availability of sufficient resources items	No		Yes		Total	
	No	%	No	%	M (SD)	Significance test
Availability of adequately prepared simulation laboratory.	24	82.	52	17.	1.17 (.379)	$X^2=128.0$ $P=.000^*$
Models for simulated learning experiences.	22	74.	78	26.	1.26 (.43)	$X^2=69.12$

					9)	P=.000 *
Monitors.	25 8	86. 0	42	14. 0	1.14 (.34 8)	X² =155.5 P=.000 *
Availability of instruments or written procedures to follow during simulation sessions.	26 8	89. 3	32	10. 7	1.11 (.30 9)	X² =185.6 P=.000 *
Other resources.	96	32. 0	20 4	68. 0	1.68 (.46 7)	X² =38.88 P=.000 *
Insufficient provision of nursing educators.	17 0	56. 7	13 0	43. 3	1.43 (.49 6)	X² =5.33 P=.021 *
Insufficient provision of clinical	25	84.	48	16.	1.16	X²

teacher.	2	0		0	(.36 7)	=138.7 P=.000 *
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X²: Chi-Square test

***significant at P≤0.05**

The table illustrates that the Responses on “Other” resources.” Had the highest mean (Mean=1.68, SD=0.46) with 68% of the sample answered Yes with significant differences(X²=38.8 ,P=.000*), Responses on “Availability of instruments or written procedures to follow during simulation sessions.” Had the lowest mean (Mean=1.11, SD=0.30) with 89.3% of the sample answered No with significant differences(X²=185.6,P=.000*). Also the table appears that all the Responses of nursing students on availability of resources during clinical practice were statistically significant at P≤0.05.

Table 4(C): Responses of nursing students on formative and summative assessment

Formative & summative assessments items	No		Yes		Total	
	No	%	No	%	M (SD)	Significance test
The use of formative assessments.	95	31.	20	68.	1.68	X ² =39.

		9	3	1	(.46 7)	14 P=.000 *
In formative assessments, skills demonstrated on patients.	24 5	81. 7	55	18. 3	1.18 (.38 8)	X²=120 .3 P=.000 *
In formative assessments, skills demonstrated by simulation.	19 7	65. 7	10 3	34. 3	1.34 (.47 6)	X²=29. 4 P=.000 *
It provided feedback on my progress.	24 0	80. 0	60	20. 0	1.20 (.40 1)	X²=108 .0 P=.000 *
It re-enforced my learning.	17 6	58. 7	12 4	41. 3	1.41 (.49 3)	X²=9.0 1 P=.000 *

I did not know what to expect.	15 3	51. 0	14 7	49. 0	1.49 (.50 1)	$X^2=0.1$ 20 $P=.729$
I experienced a lot of stress during assessments.	82	27. 5	21 6	72. 5	1.72 (.44 7)	$X^2=60.$ 25 $P=.000$ *
At the end of a course.	13 8	46. 0	16 2	54. 0	1.54 (.49 9)	$X^2=1.9$ 2 $P=.166$
To test my comprehension of the subject field.	16 0	53. 3	14 0	46. 7	1.47 (.50 0)	$X^2=1.3$ 3 $P=.248$
I was prepared for the examination.	17 1	57. 0	12 9	43. 0	1.43 (.49 6)	$X^2=5.8$ 8 $P=.015$ *
My level of competence was assessed.	17 2	57. 3	12 8	42. 7	1.43 (.49 5)	$X^2=6.4$

					5)	P=.011 *
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X²: Chi-Square test

***significant at P≤0.05**

The table demonstrates that the responses on “I experienced a lot of stress during assessments.” Had the highest mean (Mean=1.72, SD=0.44), with 72.5% of the sample answered Yes, with significant differences(X²=60.25,P=.000*). Whilst the responses on” In formative assessments, skills demonstrated on patients.” had the lowest mean (Mean=1.18, SD=0.38), with 81.7% of the sample answered No, with significant differences(X²=120.3,P=.000*). As the table shown that; responses on “I did not know what to expect.”, ” At the end of a course” , and “To test my comprehension of the subject field.” Were statistically insignificant differences (P>0.05).

Table 5: Responses of differences between the stimulated skills & the actual clinical procedures, teaching strategies used by the nurse educator & the application of theoretical subjects on the practical training

Aspects of theory-practice gap items	No		Yes		Total	
	No	%	No	%	M (SD)	Significance

						test
Encouragement to discuss aspects of practical experience in class with the nurse educator.	171	57. 0	129	43. 0	1.43(.4 96)	χ^2 =5.88 $P=.015$ *
Help me to search for connections to my previous experiences.	206	68. 7	94	31. 3	1.31(.4 65)	χ^2 =41.81 $P=.000$ *
Compare my clinical experiences with what I learn in theory.	193	64. 3	107	35. 7	1.36(.4 80)	χ^2 =24.65 $P=.000$ *
Discussion of subjects by the nurse educator periodically.	178	59. 3	122	40. 7	1.41(.4 92)	χ^2 =10.45 $P=.001$ *
Demonstration.	156	52. 3	142	47. 7	1.48(.5 00)	χ^2 =0.658

						P=.417
Group discussion.	116	38. 7	184	61. 3	1.61(.4 88)	X² =15.41 P=.000 *
Lectures.	33	11. 0	267	89. 0	1.89(.3 13)	X² =182.5 P=.000 *
Compare theoretical knowledge with what I do in practice.	184	61. 3	116	38. 7	1.39(.4 88)	X² =15.41 P=.000 *
Clarify difficult concepts.	81	27. 0	219	73. 0	1.73(.4 45)	X² =63.4 P=.000 *
Apply the nursing process more comprehensively.	205	68. 3	95	31. 7	1.32(.4 66)	X² =40.33

						P=.000 *
There's a gap between theoretical knowledge and practical skills.	68	22. 7	232	77. 3	1.77(.4 19)	X² =89.65 P=.000 *
Aseptic technique is maintained during simulation and not done in the real practice setting.	199	66. 3	101	33. 7	1.34(.4 73)	X² =32.01 P=.000 *
During simulation one uses imagination and in the real practical setting one becomes clear.	120	40. 3	178	59. 7	1.60(.4 91)	X² =11.28 P=.000 *
Not all theoretical knowledge can be applied in practical skills.	76	25. 5	222	74. 5	1.74(.4 37)	X² =71.53 P=.000 *

X²: Chi-Square test

***significant at P≤0.05**

The table shows that the responses on “Lectures.” Had the highest mean (Mean=1.89, SD=0.31), with 89% of the sample answered Yes, with significant differences($X^2=182.5, P=.000^*$). Whereas, the responses on “Help me to search for connections to my previous experiences.” Had the lowest mean (Mean=1.31, SD=0.46), with 68.7% of the sample answered No, with significant differences($X^2=41.81, P=.000^*$). Also the table appears that Responses of nursing students on aspects inducing theory-practice gap were statistically significant at $P \leq 0.05$, except the responses on “Demonstration.” Were insignificant ($X^2=0.65, P=.417$).

Table 6: Response of nursing students on practical learning

Perception of nursing students toward their preferred learning strategies	N	R	IK	ST	A	Total
	No (%)	M (SD)				
Simulation laboratory found at the nursing college.	48(16.0)	60(20.0)	36(12.0)	93(31.0)	63(21.0)	3.21 (1.39)
Availability of access to the simulation	54(18.0)	84(28.0)	36(12.0)	80(26.7)	46(15.3)	2.93 (1.3)

laboratory.						7)
Nurse educator.	17(5.7)	47(15. 7)	21(7. 0)	91(30. 3)	124(41 .3)	3.86 (1.2 6)
Clinical teacher.	8(2.7)	32(10. 7)	27(9. 0)	100(33 .3)	133(44 .3)	4.06 (1.0 9)
Teaching strategies used by clinical teacher.	2(0.7)	2(0.7)	8(2.7)	44(14. 7)	244(81 .3)	4.75 (.60)
Lectures.	24(8.0)	65(21. 7)	2(0.7)	141(47 .0)	68(22. 7)	3.55 (1.2 7)
Group discussions.	13(4.3)	69(23. 0)	5(1.7)	137(45 .7)	76(25. 3)	3.65 (1.2 0)
Demonstration.	25(8.3)	60(20. 0)	24(8. 0)	96(32. 0)	95(31. 7)	3.59 (1.3 3)
Demonstration of skills	47(15.	110(36	10(3.	78(26.	53(17.	2.93

by the supervisor.	8)	.9)	4)	2)	8)	(1.4 0)
Availability of opportunity to practice skills during simulation sessions.	78(26.0)	58(19.3)	40(13.3)	98(32.7)	26(8.7)	2.79 (1.36)
Availability of feedback on performance after the Simulation sessions.	100(33.3)	50(16.7)	38(12.7)	75(25.0)	37(12.3)	2.66 (1.46)
I gained more confidence to perform a skill.	54(18.0)	28(9.3)	45(15.0)	74(24.7)	99(33.0)	3.45 (1.47)
Clinical accompaniment is beneficial to my professional growth.	68(22.7)	52(17.3)	17(5.7)	87(29.0)	76(25.3)	3.21 (1.39)

N=Never, **R**=Rarely, **IK**=I Don't Know, **ST**=Sometimes, **A**=Always

As the figure shown that; the responses on “Teaching strategies used by clinical teacher.” Had the highest mean (Mean=4.75, SD=.60) with 81.3% of the sample answered “ALWAYES”, whereas the responses on “Availability

of feedback on performance after the Simulation sessions.” Had the lowest mean (Mean=2.66, SD=1.46)) with 33.3% of the sample answered “NEVER”.

Table 7: Descriptive of Subscales (ANOVA & Reliability Tests)

Subscales	N	α	Mean item scores	Mean scale	SD	Significance test
1. Practical learning, clinical practice experience	10	.69	1.49	14.9	2.4	F=39.9 P=.000*
2. Availability of sufficient resources	7	.65	1.27	8.9	1.6	F=100.0 P=.000*
3. Formative & summative assessments	11	.65	1.44	15.9	2.4	F=44.5 P=.000*
4. Aspects of theory-practice gap items	14	.78	1.52	21.3	3.3	F=65.1 P=.000*
5. Perception of nursing students toward their preferred learning strategies	13	.86	3.4	44.6	10.4	F=85.7 P=.000*

F: ANOVA test *significant at $P \leq 0.05$ α : Reliability (Alpha)

N: number of items

The table illustrates that; The Cronbach's alpha value ranged from (.65 α to .86 α) which are acceptable, the result showed that the instrument is reliable. Also the table shows that all the subscales were a statically significant at $P \leq 0.05$.