Intervention Technique to Increase Awareness of Maternity Competency Standard of Intern Students at Antenatal Unit.

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*Abstract: A maternity nursing staff that performs according to global occupational and professional standards can offer safe care service for women and newborn. **Aim:** This study aimed to identify the effectiveness of an intervention technique to increase Intern Students Awareness of Maternity Competency Standards at Antenatal Unit. Design: A quasi-experimental research design, pre posttest research design was utilized (time-series one group). **Sample:** A purposive Sample of 70 female intern students in the Faculty of Nursing at El-Minia University was included in this study. **Tools of data collection:** Socio-Demographic, Maternity Competency Standards Checklist and Knowledge assessment sheet. **Results: T**he percentage of students who were classified at the poor or the average level in terms of their knowledge or performance on maternal competency standards decreased significantly in posttest 1 compared to the pretest. There was a notable and substantial increase in the percentage of students who were classified at the good level in posttest 1 compared to the pretest. This pattern of findings continued over in posttest 2 and posttest 3. Secondly, students" mean scores of knowledge, performance, and overall competency increased significantly (p < .001) in the posttest 1 compared to the pretest, but it did not change significantly in posttest 2 or posttest 3 compared to posttest 1. **Conclusion**: It concluded that using an intervention technique increased awareness of the maternity competency standards among intern students during antenatal care. The conclusion of the research findings supported the research hypothesis. The researcher **recommended** maternal competency standards should be part of the academic and professional preparation of intern students and the evaluation plan at the faculty of Nursing.*
Keywords: Intervention technique, maternal competency standards, awareness, Intern Students.

I. Introduction

Competency is defined as specific characteristics that a person desires to demonstrate to be powerful in an activity. These characteristics involve work-related behavior (i.e., task performance), motivation (i.e., feeling, emotions, and value of the job), and technical information /skills (i.e., professional knowledge related to the job). This definition highlights that competency is a multi-faceted assemble. It is far a complicated combination of knowledge, overall performance, skills, values, and attitudes (**World Health Organization, 2011).**

The success of maternity competency requirements is of first priority to make sure the delivery of a safe secure maternity care. The most recent statistics published by the annual report of World Health Organization (WHO) highlights that maternal death global has reduced by using fifty-six % in view that 2010. However, a total of seven thousand women nevertheless die each year in Africa due to some preventable causes before, during, and after the time of giving birth. In North Africa, two thousand women die every 12 months and eighty % of these women had been not suffering serious pregnancy or delivery troubles. It turned into brilliant that the WHO annual report highlighted that nurses" professional abilities were often held accountable for these deaths because sixty-six % of nurses who treated those cases were now not aware of maternity competency standards and that fifty-four % of these nurses did not exercise these competency standards in real life conditions (**Ibrahim and Elshafie, 2016).**

Practice standards are an important component of quality assessment programs in associations that offer maternity care service. They act as independent validated and properly-hooked up criteria of "best practice" to which the overall performance of health staff can be compared. They will additionally serve as benchmarks to the high level of performance. In order to make certain that women and newborn are receiving a professional safe care service, it is crucial to make sure that maternity nursing staff is capable of carrying out according to global well-established occupational and professional standards (**Stephenson, et al, 2015**).

A maternity nurse is a nursing professional who affords care to expectant mothers before, at some stage in and after childbirth. Most maternity nurses will focus on supporting women for the duration of the labor and delivery process – working at the patient's side to monitor both mother and baby, and to inspire, coach, teach, help and support. Others may additionally care for women who are experiencing complications before birth or provide postpartum (after delivery) care, at the university level; the focal point is on intern students" recognition of maternity competency standards. This consists of both knowledge and practice of worldwide maternity competency standards of practice that allows you to make sure that those students are capable of supply a safe maternity care when they graduate **(Chapman and O'Neill, 2010).**

The antenatal period over the world is a chance for an adverse outcome for the woman and her infant, it has been estimated that twenty-five percent of maternal deaths occur at some stage in being pregnant. While risks in pregnancy cannot be completely eliminated, they may be reduced through effective, affordable, reachable and perfect maternity care. To be most effective, health care ought to start early in pregnancy and continue at regular intervals. Good care sooner or later of pregnancy is important for the fitness of the mother and the improvement of the unborn baby. Pregnancy is a crucial time to promote healthy behaviors and parenting capabilities, desirable antenatal care links the woman and her family with the formal health system, increases the opportunity of using a professional attendant at birth and contributes to maximum health level through the life cycle. Insufficient care for the duration of this time breaks an important link in the continuum of care, and affects both women and babies: Therefore, it is recommended that all mothers see a trained provider at least 4 times all through pregnancy **(Cheng, et al, 2014).**

Justification of the problem:

The most important health discrepancy in the world in maternal mortality with maximum deaths occurring around the labor, delivery and postpartum duration. The latest statistics published by the **World**

Health Organization (WHO) revealed that approximately 830 women die each day from preventable causes associated with pregnancy and childbirth and that ninety-nine % of all maternal deaths arise in growing international locations. The maternal mortality ratio in growing international locations in 2015 is 239 per 100 000 live births as opposed to twelve per 100 000 live births in advanced international locations, twenty-five percent of them happens during pregnancy.

The presence of professional qualified competent nurses, optimal student learning for high-quality maternity care is a leading factor in warding off maternal death and disability. There are demands for the intern students to acquire, accumulate and maintain necessary knowledge, a professional approach to action (attitudes and ethical behaviors) and a set of competencies that allow them to practice as a competent and caring nurse clinician and consequently supply a safe maternity care carrier according to worldwide requirements. The application and utility of maternal competency standards can make the difference between life and death for each the mother and the baby. So the purpose of this study will be done to evaluate the effect of an intervention technique Increase Awareness of Maternity Competency Standards of Intern Students at Antenatal Unit.

Aim of the Study:

To evaluate the effectiveness of an intervention technique to Increase Awareness of Maternity Competency Standards of Intern Students at Antenatal Unit.

Research hypothesis:

Using an intervention technique will increase intern students' awareness of maternity competency standards in the antenatal area.

II. Subject and Methods

A quasi-experimental research design was utilized to accomplish this study. It was conducted in the Obstetric and Gynecology Department in the Obstetric and Gynecology Hospital at El-Minia University. A purposive sample of 70 intern students was enrolled in the study, All sample participants were assigned to one group because this was a quasi-experimental time-series one group, pre-test, post-test research design.

Tools and technique of data collection:
1. Socio-demographic characteristics:

The researcher constructed a questionnaire sheet after reviewing the related literature it was used to collect data such as age, residency, and a number of competency training sessions attended.

2. Maternity Competency Standards Checklist (MCSC) standard 1:

The Maternity Competency Standard Checklist is a behavioral checklist that aims at measuring intern students" level of performance in real life maternity nursing situations according to four maternity competency standards MCSC has 110 items that are divided over four competency standards. The researcher used standard 1only in this study.

Standard 1: Antenatal history, physical examination, and basic care:

This standard describes that intern students provide high-quality antenatal services by taking comprehensive antenatal history, conduct the high-quality physical examination, and provide help with care provision. It includes 34 items divided over 4 sub-standard.

Scoring system:

The MCSC can be completed by a staff member, a trained nurse, a researcher, or anyone who is familiar with these four maternity competency standards. Each of the items on the MCSC is rated on a two-point frequency scale (i.e., 0 = No, 1 = Yes). A score of zero means that the behavior described by the statement was not observed by the rater. A score of 1 means that the behavior described by the statement was observed by the rater. Scores of the four main standards can sum to obtain an overall total score that describes the maternity competency for a particular student. A high score indicates a high level of competency of the maternity standards, whereas a low score indicates a low level of competency of these standards.

3. **Knowledge assessment sheet**

This test was designed to measure intern students" knowledge of the information embedded within the standard 1 of maternal competency as described by the MCSC. The development of the Knowledge Test in the present study utilized two sources (a) workbooks that accompanied some textbooks on midwifery and maternity care, and (b) midterm and final exams of previous years conducted in the Faculty of Nursing at El-Minia University. This Knowledge Test contained 10 multiple choice questions regarding antenatal care.

The scoring system:

Knowledge questions were given a score zero (0) if the student answered the question incorrectly and a score of 1 if the student answered the question correctly. The scores of the correct answers to the questions for a test can be summed up to obtain a student's knowledge score of the standard. A high score indicates a high level of knowledge regarding antenatal standards, whereas a low score indicates a low level of knowledge.

Pilot study: After preparation of the tools of data collection, they were pre-tested on 10% of the total study sample (7 students). The purpose was to evaluate the applicability and clarity of the tools, assessment of the feasibility of fieldwork, and detect any possible obstacles that might face the researcher and interfere with data collection. The pilot study also served to determine the time needed to complete the tools. Necessary modifications were done based on the findings of the pilot study in order to strengthen the content or for more simplicity and clarity.

Fieldwork description (procedure):

An official written letter was obtained from the Dean of the Faculty of Nursing at Minia University as an approval for data collection to conduct the study. The letter explained the study purposes and its main procedure; the data for the present study was collected over a period of 7 months from early March 2016 to end of September 2016. The students were recruited to participate in the study during their internship in the study setting. .**implementation phase** was divided into **three phases:**

The Pretest phase:

Data collection for the pre-test continued for two weeks; from early to mid-March, 2016. The researcher administered two measurement tools as a pretest; standard 1 in the MCSC and the Knowledge Test. The researcher visited the study setting 4 days a week from 9:00 AM to 2:00 PM to administer the measurement tools. For the MCSC, the researcher observed the students as they work in groups during their internship in the study setting. The number of students in any group was above seven, but the researcher observed every student individually. It took the researcher 30 minutes on average to fill in the MCSC for each student. All data collection of the MCSC occurred in the Obstetric and Gynecology Hospital. The researcher; therefore, administered the Knowledge Test in two groups. Group 1 included students who do their internship at Obstetric and Gynecology Hospital, whereas group 2 included students who do their internship at Minia University Hospital. It took 30 minutes for students on average to answer the questions of the Knowledge Test

The intervention Phase:

The aim of the intervention is to increase students" awareness of maternity competency by acquiring satisfactory knowledge and practices about maternity competency standard regarding antenatal care. The application of the intervention technique continued for almost 3 weeks; from mid-March to mid-June, 2016. The intervention technique consisted of 4 sessions: one introductory session, 2 sessions to increase students' awareness of maternity competency standard regarding antenatal care, and one conclusion session. There was a training session for the standard run for two hours. The number of sessions held per week varied depending on students' workload, the researcher applied the intervention technique in two groups. Group 1 refers to the first group of students who do their internship at Obstetric and Gynecology Hospital, whereas group 2 refer to the second group of students who do their internship at Obstetric and Gynecology Hospital and has just swapped from Minia University Hospital. The total number of hours of the intervention technique for each group was 8 hours (2 hours x 4 sessions).

The Posttest and follow-up phase:

The researcher administered to the post-test (Time 1) immediately after the end of the intervention technique. To capture possible changes in students" awareness of maternity competency over time, the researcher re-administered the same posttest to the same students over two points of time (Time 2 and Time 3) with one month separate

Ethical considerations:

The study protocol was approved by pertinent research and ethics committees at the Faculty of Nursing in El-Minia University. Permissions to conduct the study were obtained from pertinent authorities. The aim of the study was explained to the participants, along with the benefits and any potential risks or discomforts. Oral consent was obtained from the students after the researcher explained the general aim of the study. Participation was a volunteer and any student could deny participation at any time at no cost. Data was kept confidential and was used solely for research purposes.

Limitations of the study:
- Small sample size (70 students) may limit the power of the data statistical analyses.
- All participants were female. This may undermine the generalization of the findings to a male population.

III. Statistical analysis

Results

Table (1): shows that the mean age of all students was 22.5 and that the majority of students (58.6%) were in the age range of 22-23 years. Most of the students (81.4%) were enrolled in the Faculty of Nursing with only (18.6%) enrolled in the Institute of Nursing. Slightly less than three-quarters of the students (71.4%) didn't attend any training sessions on maternal competency. A total of 54.3% of the students lived rural areas and 45.7% lived in urban areas.

Table (2): shows that in the pre-test, the students were divided equally to poor (50%) or average level (50%) in terms of their knowledge about antenatal care. In posttest 1, the percentage of poor students, average, and good students were (11.4%), (58.6%), and (30%) respectively. In both posttest 2 and posttest 3, the percentage of poor students was similar to that of posttest 1 The percentage of average students increased in posttest 2 compared to posttest1 and it was the same in posttest 3 compared to posttest 1. The percentage of good students was the same in posttest 2 compared to posttest 1 but decreased very slightly in posttest 3.

Table (3): shows that there were significant differences ($p < .001$) between the pretest and posttest 1 in students" knowledge in antenatal care. Specifically, students" mean scores of knowledge in this area have increased significantly in the posttest 1 compared to the pretest. In contrast, there were no significant differences ($p > .05$) between posttest 1 & posttest 2 , between posttest 2 & posttest 3 in students" knowledge in antenatal area. .

Table (4): shows that there were significant differences ($p < .001$) between the pretest and posttest 1 in students" performance in; antenatal care, In contrast, there were no significant differences ($p > .05$).

Table (5): shows that in the pre-test, nearly two-thirds of the sample of the study (63.5%) were classified at the poor level in terms of their overall maternal competence in antenatal care. As low as 3% of the students were classified at the good level. In posttest 1, the percentage of average increased (47.9%).The percentage of

average students increased slightly in posttest 2 (49.3%).The percentage of good students was the same (42.9%) in posttest 2 and posttest 3 compared to posttest1.

Table (1): Distribution of the students according to their demographic characteristics (*N*=70)

Variables	No	%
1-Age		
< 22	14	20
22 - 23	41	58.6
> 23	15	21.4
X+SD	22.5 ± 0.9	
2-Qualifications:		
- Enrolled in Faculty of Nursing	57	81.4
- Enrolled in Institute of Nursing	13	18.6
3-Training sessions attended		
Yes	20	28.6
No	50	71.4
4-Residency:		
Rural	38	54.3
Urban	32	45.7

Table (2): Percentage distribution of the students according to their knowledge about antenatal care over four measures (Pretest, Posttest 1, Posttest 2, Posttest 3) (*N*=70)

Level of students' performance in antenatal care (score=0-34)	No	
Pretest		
Poor <17 (<50%)	54	77.1
Average 17 – 23.8(50-70 %)	12	17.1
>23.8-24 (>70-70.6 %) Good	4	5.7
Posttest 1		
Poor <17 (<50%)	5	7.2
Average 17 – 23.8(50-70 %)	26	37.1
>23.8-31 (>70-70.6 %) Good	39	55.7
Posttest 2		
Poor <17 (<50%)	4	5.4
Average 17 – 23.8(50-70 %)	27	38.9
>23.8-28 (>70-70.6 %) Good	39	55.7
Posttest 3		
Poor <17 (<50%)	4	5.4
Average 17 – 23.8(50-70 %)	26	39.2
>23.8-28 (>70-70.6 %) Good	40	57.1

Table (3): Comparison of the intern students according to the mean of their overall performance in the antenatal care (pre, post 1, post 2, and post 3) (N=70)

Variables/ Measures	X±SD	t. test of Pretest vs. Posttest 1	t. test of Posttest 1 vs. Posttest 2	t. test of Posttest 2 vs. Posttest 3
Antenatal care				
Pretest	65.6 ±9.4	-		
Posttest 1	72.6 ±9.7	29.6 (*p* < .001)		
Posttest 2	72.3±9.4		1.33 (*p* > .05)	
Posttest 3	72.7±9.5			1.47(*p* > .05)

Table (4): Percentage distribution of the students according to their overall maternal competence in antenatal care over four measures (Pretest, Posttest 1, Posttest 2, Posttest 3) (*N*=70)

Level of students' overall maternal competence in antenatal care (score=0-44)	No	%
Pretest		
Poor <22 (<50%)	44	63.5
Average 22 – 30.8(50-70 %)	24	33.5
>30.8-31 (>70-70.6 %) Good	2	3.0
Posttest 1		

Poor <22 (<50%)	7	9.2
Average 22 – 30.8(50-70 %)	34	47.9
>30.8-31 (>70-70.6 %) Good	30	42.9
Posttest 2		
Poor <22 (<50%)	6	7.8
Average 22 – 30.8(50-70 %)	34	49.3
>30.8-31 (>70-70.6 %) Good	30	42.9
Posttest 3		
Poor <22 (<50%)	7	9.2
Average 22 – 30.8(50-70 %)	33	47.9
>30.8-31 (>70-70.6 %) Good	30	42.9

Table (5): Comparison of the intern students according to the mean of their competence in antenatal care over four measures (pre, post 1, post 2, and post 3) (N=70)

Overall maternal competence	X±SD	t. test of Pretest vs. Posttest 1	t. test of Posttest 1 vs. Posttest 2	t. test of Posttest 2 vs. Posttest 3
Antenatal care				
Pretest	61.3±4.2	-		
Posttest 1	66.3±5.1	26.5 ($p < .001$)		
Posttest 2	65.9±4.8		1.17 ($p > .05$)	
Posttest 3	66.1±4.9			1.11($p > .05$)

IV. Discussion

The presence of a highly qualified competent nurse; a nurse who's properly organized to enhance health care service, is the cornerstone of the effective healthcare team. Since a maximum of maternal deaths is preventable, the presence of a professional, qualified, competent nurse can make the distinction between life and death **(Clark, et al, 2016).** A competent nurse performs an important function inside the wonderful stories associated with maternity care and can independently manipulate the care of healthy newborns and mothers all through the childbearing cycle. Therefore, the development of clinical abilities in nursing college students at some stage in their clinical practice is critical because this could make contributions towards their future professional and caring skills. Professional caring empowers patients and contributes to their well-being and health. Clinical training can decorate the ability of nurses to be powerful being concerned practitioners. **(Cheng, et al, 2014).**

In the light of the previous outline, the researcher conducted this study to identify the effectiveness of an intervention technique to increase awareness of Maternity Competency Standard of Intern Students at the Antenatal unit, using quasi-experimental research time-series design based upon core maternity competency standards. Intern students do not maintain necessary competencies to deliver a safe maternity care.

Regarding sociodemographic characteristics of the study sample, the current study revealed that intern students were almost divided equally between rural and urban areas. This finding emphasized the contextual diversity of the sample of the present study in a way that could support the generalization of the findings and consequently fostered the external validity of the intervention technique. The majority of them were enrolled in the bachelor level, this is an important characteristic of the sample because prior knowledge was found to facilitate the implementation of an intervention technique as students appeared to be well-informed, cooperative, and interested, and almost three quarters of the students didn't attend any training sessions on maternal competence standards.

Similar to the current study findings **(Fernandez, et al, 2012)** conducted a study that aimed toward developing nursing students and nurses' cognizance of applying infection control procedures, suggested that when participants have been informed about the aims, content, and procedures of the intervention technique, they have been much more likely to be cooperative, supportive, useful, helpful, and relaxing. These results confirmed the significance of familiarizing contributors with the intervention technique or the training program.

Competent nursing care is the potential to perform assigned responsibilities in ways that help the consumers of nursing care to resolve their problems and meet their desires and expectancies. To be able to fulfill their responsibilities of care to the patients and to meet patients' expectations, that is gratifying to the patients, several researchers recommended that knowledge, abilities, attitudes, cognitive, psychomotor and affective attributes should be regarded as crucial components of competency**(Falgen and Cris, 2015).**

The current study hypothesis was that using an intervention technique will increase intern student awareness regarding Maternity Competency Standard at antenatal area; this hypothesis is confirmed by these study findings that showed a positive effect of the intervention technique in increasing students' awareness of

maternal competency standards concerning the level of knowledge and performance within antenatal care.

Concerning intern students' level of knowledge regarding antenatal care, the present study showed that the poor or the average level in terms of their knowledge on maternal competency standards decreased significantly in posttest 1 compared to the pretest. Meanwhile, there was a notable and substantial increase in the number of students who were classified at the good level in posttest 1 compared to the pretest. This increase in the percentage of students classified within the good level continued over three points of time with one month separate (posttest1, posttest2, and posttest3). These findings suggest that intervention technique applied by the researcher benefits intern students in term of level of knowledge.

The current study also revealed that very few students were classified at the good level in the antenatal area in pretest stage. This means that before applying the intervention technique, the vast majority of participant students had either poor or average level of knowledge of maternity competence standard in antenatal care, However after implementing the intervention technique (i.e., posttest 1), the percentage distribution of the students showed that students who were classified either at the poor or the average level decreased considerably in antenatal area compared to the pretest. This means that the intervention technique helped student's positively either poor or average level in the pretest to increase their knowledge of maternity competence standard.

On the same line with **(Fuzen, 2014)** studied the effect of the educational program on the level of knowledge regarding gynecological disorders revealed that, before usage of educational sessions, most of the students (eighty-four %) had poor knowledge. After the educational classes, there was an enhancement of knowledge score. It found that the mean scores of posttest were been considerably higher after educational program application compared to their values at pretest in all variables.

According to the present study finding, students' mean scores of knowledge in areas of antenatal care increased significantly ($p< .001$) in the posttest 1 compared to the pretest. However, students' mean scores of knowledge in this area did not change significantly in the posttest 2 compared to the posttest 1 ($p> .05$) or in posttest 2 compared to posttest 3 ($p> .05$).

These study findings had been in the same line with the findings suggested by **(Holmes, and Hanson, 2015)** who developed an intervention technique based upon problem solving approach to develop knowledge of maternal competence standards within several areas, showing a significant differences ($p< .001$) between the pretest and posttest in students' expertise of the focused regions favoring the posttest. This confirms the steadiness of retention rate of college students' level of understanding, college students would possibly have located the getting to learn material offered through the intervention technique easy to understand and grasp because it is intently related to their previous expertise.

Supporting current study findings a study carried out to investigate the outcomes of a nurse internship program initiated at **(Holmes, and Hanson, 2015)** that become designed to increase new graduate nurses' scientific competence, confidence, luxury, and comfort. Using a quasi-experimental design, the experimental group scored significantly higher on organizational core abilities than the control group. Those nurses have been more comfortable with their leadership and management roles following the intervention. Organizations can also want to recall a nursing internship program as a way of enhancing the paintings environment.

Contrary to the prevailing study findings a study performed by (**U.S. Navy hospital, 2016**) who used an intervention approach to increase undergraduate nursing college students' knowledge of maternal competence requirements, discovered that there have been no significant differences ($p> .05$) between pretest and posttest 1,2 in students' level of knowledge, this differences can be due to the differences in mean by which student was taught cognitive abilities and student interest between two research studies.

The high number of maternal morbidity and mortality displays that nursing students do not maintain necessary skills to supply a safe maternity care. For this reason, there is a need for those students to collect and preserve a set of abilities that enable them to practice as a competent and caring nurse clinician and therefore supply a safe maternity care according to worldwide requirements. The application of maternal competence standard scan makes the distinction between life and death for each the mother and the baby **(Samgreen, 2012).**

Regarding students' performance level on maternity competence standards in area of antenatal care, present study showed that during Pretest the vast majority of students were classified at the poor level with a small percentage of students classified at the average or the good level of performance, this confirmed the lack of application of standard for practice as an important component of quality assessment programs in maternity healthcare service.

As regard to students' level of performance, the present study revealed that the percentage of students who were classified at the good performance increased substantially compared to the pretest. This means that the intervention technique helped students belong to a poor category or average category in the pretest to increase and develop their performance skills of maternity competence standards in the antenatal area and consequently move to the good category in the posttest. Notably, this increase in the percentage of students classified within the good level continued over three points of time with one month separate (posttest 1, posttest

2, and posttest 3).

The current finding locating disagreed with a study performed by **(Cheng, et al, 2014)** who conduct a study to discover the impact of training program for nursing students, concluded that Students perceived a high level of their scientific competence both before and after finishing the clinical training program

The current study finding also supported by a study by **(Elliot and Bradley, 2013)** who design an intervention approach using the World Health Organization guidelines to increase students' competencies concerning the procedures to be taken to to provide a secure antenatal care to women, reported significant differences (p< .001) between the pretest and posttest in students' performance on the procedures of antenatal care favoring the posttest. This similarity placed a legitimate that the two intervention technique were obtrusive to be effective in developing students' skills regarding maternity care

in line with a study finished by **(Huge and Kator, 2014)** that supported the positive impact of intervention technique to increase college students' skills to cope with some labor complications including placenta previa, breech position, and nuchal cord based upon suggestions of the American Congress of Obstetricians and Gynecologists, students' training and application of intervention techniques must be used accurately and as an educational tool that complements exceptional of maternity care.

The present study findings became congruent with a study done by **(Goswami, et al, 2015)** who conducted a study to assess and compare understanding and practices regarding BLS among Nursing Students before and after administration of training program, found out The mean of post test knowledge score became higher than the mean of pre-test knowledge score and the mean of post-test practice scores was higher than the mean of pre-test practice scores, For that reason, the training program became powerful in improving the knowledge and practices of Nursing Student.

Concerning the effect of the intervention technique on increasing students' overall competence using maternity competence standard in antenatal care. The present study showed that most of the college students have been classified at the poor level with almost one-third of the students classified at the average level in this area during pretest while a small percentage of college students categorized at the good level.

After implementation of the intervention technique This percentage increased significantly, This suggesting that students' lack of both knowledge and skills in this area, have been improved by application of intervention technique that helped students improve their overall competence in antenatal area by increasing their knowledge and performance skills, also the way in which the content of the intervention technique was presented might have also contributed positively towards improvement students' performance on the posttests compared to the pretest

Similarity, A study by **(Kellaghan and Stufflebeam, 2012)** clarify the effect of an educational program on caring behavior and professional self-perception in nursing students using a controlled pre/post-test study design., the study findings favored the effect of the educational program due to the fact there has been increased knowledge and understanding of caring principle and related ideas, a more holistic approach to care, enhanced caring practices, and improved self-perception in the study group in comparison with the control group during different periods of assessment

According to researcher point of view, Competency assessment is always outcome oriented; the goal is to evaluate performance for the effective application of knowledge and skill in the practice setting. Competency evaluation methods address affective, cognitive, and psychomotor domain. Competencies can be generic to clinical practice in any setting and have to be significant at maternity health service.

Incongruent with present study **(Sherwood and Barnsteiner, 2017)** studied the impact of a Pre-graduation clinical training program on scientific competence of nurse college students in Taiwan that Students extensively increased their scientific competence after finishing the training program. The preceptors commonly rated the students with an excessive scientific competence score; however, the preceptors' scores were lower than the students' self-rated rankings. The students' pride with their preceptors positively motivated their decision to stay working in the hospital or unit where they obtained the practicum.

The preceding results disagreed with a study executed through **(Bifftu, et al, 2016)** that aimed to evaluate perceived scientific competence amongst nursing college students after training program In this study, more than half of the study contributors perceived themselves as incompetent. There are numerous factors that can account for the significant increase in college students' knowledge and overall performance on maternity competence standard after implementing the intervention technique. It is miles feasible that students were relatively inspired and strongly enthusiastic to learn and apprehend the material and activities provided via the intervention technique. College students might have determined these material and activities interesting, difficult, beneficial, and updated **(Maslow, 2013).**

The present study emphasized that there is important evidence concerning the positive effects of the intervention technique in increasing students' awareness of maternal competency standard in the area of antenatal care. Students' awareness included both knowledges about the maternal competency standard and

performance (implementation) of maternal competency standard this supported our research hypothesis

V. Conclusions
Based on the results of the present study, it is concluded that:

There were significant differences ($p < .001$) between the pretest and posttest 1 in students" overall maternal competency in the area of antenatal care. Specifically, students" mean scores of overall maternal competency in this area have increased significantly in the posttests (1, 2, and 3) compared to the pretest.

Using an intervention technique increased awareness of the maternity competency standard among internship nurse students in the area of antenatal care. Students' awareness included both knowledge about the maternal competency standard, and performance (implementation) of maternal competency standard, these research findings supported the research hypothesis.

Recommendations

In the light of the results of present study, the following recommendations are suggested: Intensive training program should be implemented to develop intern students" awareness of maternal competency standards in other areas such as labor complications. , Maternal competency standards should be part of the academic and professional preparation of intern students at the Faculty of Nursing. , Maternal competency standards should be integrated into the evaluation plan of intern students.

Further researches are needed to be conducted on maternal competency standards to Investigate the obstacles and hardships that hinder the development and/or implementation of maternal competency standards in maternal healthcare facilities.

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