

Theory and practice: Identifying the gaps in essential newborn care practice of nursing and midwifery students during their clinical practicum

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ABSTRACT

This study sought to determine the problems encountered by the nursing and midwifery students during the implementation of Essential Newborn Care (ENC) clinical practicum in the delivery room. It utilized multi-method, cross-sectional research design.

Two types of respondents were involved: clinical instructors, and nursing and midwifery students. Seven common problems in ENC protocol practice among CI and student respondents were identified. Moreover, bridging the gap between theory and practice remains a big challenge in the Nursing Education today, just as implementing quality ENC program, assails educators. Issues arose when the students' learned theories were not observed during the clinical practicum.

Keywords

Essential Newborn Care, Theory-practice Gap, Clinical Practicum

Introduction

Think of these embarrassing events - sealing the newborn's mouth with a tape and holding pacifier with a tape that brought not only national, but also international attention to nursing practice in the Philippines (Nelson, 2014; Montero, 2014; Vestil, 2014; www.inquisitr.com). Surely, no nursing school has taught birth attendants to do these inhuman acts. If the mandated Department of Health's (DOH) Essential Newborn Care protocol (ENC) had been followed strictly, humiliating circumstances like these would not have happened. It has been observed that the newborn care in the Philippines falls short below that of the World Health Organization (WHO) standard (DOH Administrative Order 2009-0025; Sobel, 2011).

According to Wilson (2008; 685), "The gap between theory and practice has long been identified as a problem in nursing and midwifery." Rafferty (1996, cited on Wilson, 2008) described theory and practice gap as an "embarrassing failure" in the nursing education. Vedam (2007) found in his

study that there was a "lack of congruity" between ideal and actual midwifery practices that support normal delivery in practicing their preceptors during their clinical practicum.

Clinical practicum is included in the nursing and midwifery curriculum to give students experiential learning on the actual setting. They are given the chance to practice the concepts they have learned in classrooms and demonstrate their skill under the supervision of CIs. It is observed that in their clinical duty students may encounter problems if the affiliated facility staff are not updated with the newly developed standards. New developments are constantly taking place in the health care, hence, standard practices learned years ago in school may no longer be applicable today and that re-learning is necessary. Sadly, such is the case on care of the newborn babies in the Philippines.

The gap was manifested by slow decline in neonatal mortality rate from 1990 to 2010. About 40,000 Filipino neonates die

every year. From the data gathered by the World Bank (2014) in 1990, the Philippines and Vietnam were facing the same dilemma; both nations were having approximate neonatal deaths around 45,000. In 2010 however, about 32,000 neonates died in the Philippines, as compared with approximately 18,500 in Vietnam. The Philippine Millennium Development Goal number four (MDG 4) is to reduce the neonatal deaths and improve children's health by 2015. At this current rate of decline MDG 4 will not be achieved. Worse still, even it was reported that fifty percent of neonatal deaths occurred at first 48-hours of newborn's life (AO 2009-0025). Sobel (2011) showed in his study that actions were not time-bounded and unnecessary procedures done in the first 28-hours of baby's life. There was no newborn care protocol standard in the Philippines before the implementation of AO 0029-0025 that mandated the ENC or the *Unang Yakap* program in 2009.

The ENC program was first launched in December 2009 through AO 2009-0025 and dubbed by the DOH as *Unang Yakap* (First Embrace), an evidenced-based practice on the four basic principles that ensure survival of newborns. These are: 1) immediate, thorough drying of the baby to promote breathing and thermoregulation in the first 30 seconds of baby's life; 2) immediate skin-to-skin contact to initiate early development of the baby's immune system in the first 90 seconds up to 90 minutes; 3) delayed cord clamping, cord is only cut when pulsation stopped or after 1- 3 minutes waiting; and 4) early initiation of breastfeeding. ENC protocol became a standard of care for newborns in all health facilities and all licensed birth attendants in the Philippines. Henceforth, if Essential Newborn Care (ENC), ENC protocol, or AO 2009-0025 were mentioned they would only mean the same.

Objectives

The general objective of the study is to establish if a theory-practice gap exists in the implementation of the ENC protocol during clinical practicum of the nursing and midwifery students. Specifically the research seeks:

1. To determine challenges encountered by CIs in teaching ENC protocol in their clinical area;
2. To establish any theory-practice gap in implementing the ENC protocol during nursing and midwifery students' clinical practicum; and
3. To determine the problems that affect students' compliance of the ENC protocol in relation to their practice during their clinical practicum.

Assumption

Presumably, the AO 2009-0025 is followed as standard of care for newborns, practiced and observed, as performed by the DR birth attendants.

Method

The investigation was limited to nursing and midwifery student-respondents' exposure to their affiliated health facilities with DRs and their application of the latest newborn care standard (AO 2009-0025). The foci of analysis dwelt on information on ENC protocol practice, their experiences, and evaluation of observed performance. The results and conclusion of this study covered only the student-respondents. To establish the presence of the theory-practice gap in the clinical practicum for ENC practice, a multi-method descriptive survey and cross sectional design were done. Two separate studies were conducted to come up with results.

Study 1 evaluated if problems exist in teaching the new newborn care protocol. It determined the point of view of the CIs' on their teaching of the ENC. The clinical instructors, who were present in Essential Intrapartum Newborn Care (EINC) training held in Dr. José Fabella Memorial Hospital in Metro Manila, were made as respondents due to very limited number of CIs' and affiliating institutions of the researchers where they are teaching. The general perception and experiences of the CIs on ENC in this study were purposely sought. The survey, focused

group discussion, and one-on-one interview with twenty-seven (27) CIs answered the question "What problems do they encounter in ENC implementation during their clinical practicum?" These respondents were a good source of information since they are nurses, midwives and nurse-midwives who supervise students in different health facilities with delivery rooms (DRs) such as hospitals, birthing clinics, Baranggay Emergency Obstetric Neonatal Care (BEMONC) and Rural Health Units. Being trained on the ENC protocol and in the frontline of implementing, the CI were among the best people to evaluate the program. Coming from eleven different nursing and midwifery schools in the Philippines, the educators were expected to provide common challenges they meet in teaching newborn management. The result of Study 1 prompted the researchers to look into the students' ENC protocol training, since they compose the future health professionals.

The second study determined the students' experience and their perceptions on implementing ENC in the DR during their clinical practicum. It specifically assessed the existence of theory-practice gap in teaching the procedure in the actual setting. The respondents were twenty (20) third year and fourth year students of Bachelor of Science in Nursing students and second year midwifery students from Palawan State University. These students completed their clinical practicum and had handled several delivery cases in the DR. The checklist was based on AO 2009-0025 used during their return demonstration in the classroom. They were asked to check the steps done and procedures observed or seen done by the health workers (doctors, nurses, midwives) in delivery rooms, as culled from in-depth interview and focused group discussion of five students. To verify students' reports, the CIs were interviewed.

Results

1.) *Challenges encountered by the Clinical Instructors in teaching ENC*

A. *Study 1. Clinical Instructors' Identified Problems*

Table 1

Problems Experienced and Perceived by the Clinical Instructors in implementing the ENC Protocol in their Area of Implementation (N=27)

Identified Problems Experienced and Perceived	f	Rank
1) Some health care providers had no ENC training.	11	1
2) Trained staff including doctors do not practice the protocol	9	2
3) There is low acceptance of the protocol, especially in private hospitals	8	3
4) Hospital policies are not congruent with AO 2009-0025	7	4
5) There is no monitoring/no evaluation to see if ENC is implemented	6	5
6) Most failed to do the 90 minute skin-to-skin contact due to lack of facility, manpower and willingness from the birth attendants to stay at bedside for 1½ hours for monitoring	5	6.5
7) Significant members of the family including mothers impose their traditional infant care practice.	5	6.5
8) Some do not follow the protocol. Physicians (OB, Pedia) neither follow it. Lack of collaboration between the two specialists.	4	7.5
9) Poor dissemination of ENC program.	4	7.5
10) Lack of time (in implementing the ENC)	2	9

Table 1 enumerates the ten different most common problems identified by the CIs in implementing ENC protocol during their clinical practicum. The top most answer was that the staff of the facility did not have formal training on the ENC protocol. The second problem identified was those who had ENC training did not apply what they had learned. The third perceived problem was the low "social acceptance" of the protocol. Top 2, 3 and 8 statements were attributed to the attitude of the birth attendants (midwives, nurse, and doctors). Some birth attendants who had been practicing "old" newborn care and "obsolete newborn management" could not readily accept the new procedure. If one birth attendant had been practicing an "old" newborn care procedure for several years, it would be difficult to change such habit.

2) *Study 2. The Theory-Practice Gap in implementing ENC protocol in nursing and midwifery students' clinical practicum*

A. *Nursing and Midwifery Students' Theoretical Knowledge of AO 2009-0025*

Table 2
The Distribution of Students' Level of Knowledge of ENC Protocol (n=20)

Rating	Verbal Interpretation	f	%
100 - 92	Outstanding	0	0
91 - 84	Very Satisfactory	4	20
83 - 76	Satisfactory	10	50
75 - 67	Fair	6	30
66 - 50	Needs Improvement	0	0
Total		20	100

Table 2 shows the results of the examination given to test the respondents' understanding of the standard newborn care and rationales for the actions. Fifty percent (50%) earned satisfactory rating while twenty percent (20%) got very satisfactory and thirty percent (30%) showed fair knowledge. A satisfactory result could mean that the student can do the ENC with minimal supervision when in clinical setting. Overall, the figures show that seventy percent (70%) of the respondents can perform the ENC protocol in an ideal setting.

B. Procedures of the ENC Protocol practiced, as observed by the Nursing-and-Midwifery Student respondents

Table 3
Essential Newborn Care Protocol Practiced by the Students and Observed from the DR Health Workers in the First 30-90 Seconds of Newborn's Life during their Clinical Practicum in the DR (n=20)

Actions that must be done to meet the objective of immediate drying of the newborn to stimulate breathing and establish thermoregulation to prevent infection and hypoglycemia	Practiced by the Students	Practiced by the DR Workers
1. Put on double glove just before the delivery	100%	100%
Actions in the First 30 Seconds of Neonate's of Life		
2. Used clean dry cloth to thoroughly dry the newborn by wiping face, eyes, head, front, back, arms, and legs.	100%	100%
3. Removed the wet cloth	100%	100%
4. Did quick check of newborn's breathing while drying.	95%	95%
5. Did not put the newborn on the cold/wet surface.	90%	90%
6. Did not bathe the newborn earlier than 6 hours of life.	90%	90%
7. Put the neonate on a warm surface, in a safe place close to the mother, if separated.	90%	90%

Actions in the First 90 Seconds of Neonate's of Life

8. Placed neonate prone on mother's abdomen or chest. Attempted to do the uninterrupted direct skin-to-skin contact of mother and baby.	80%	90%
9. Covered newborn's back with blanket and head with bonnet	100%	60%
10. Placed identification band on the neonate's ankle	95%	65%
11. Non separation of normal newborn from his mother	85%	65%
12. Left <i>vernix caseosa</i> on the baby's skin	80%	50%
13. Did not perform routine suctioning when baby was crying	100%	100%

Table 3 shows the time-bounded steps of the ENC protocol from beginning of bulging of the vulva to the expulsion of the fetus up to first 90 seconds of newborn's life. Expectedly, ALL of the ENC steps must be practiced by the student-respondents and ALL DR health workers observed or seen practice the procedure. It was reported that steps 1, 2, and 3 were one hundred percent (100%) practiced by the student-respondents and they reported that they had seen (observed) the health facility birth attendants did these steps. Ninety percent (90%) of the student-respondents in this study placed neonates on the abdomen or chest to have direct skin-to-skin contact with the mother, when they tried to practice their skill in newborn care, while only sixty percent (60%) of student-respondents saw professional birth attendants did it.

Eighty percent (80%) of the student-respondents did not wipe off the cheese like substance on the baby's body in their clinical practicum, while fifty percent (50%) of them reported that they observed the health facility's birth attendants. This white cheesy substance protects the newborn from infections, especially from E. coli bacteria, hence, the WHO (2009) discourages the early bathing of the newborn and wiping off *vernix caseosa*, because the neonates will be at greater risk of acquiring infection once it was removed. *Vernix caseosa* also helps newborn maintain warmth.

The actions practiced and observed in the first three minutes were properly sequenced, as ordered in the ENC, prohibited procedures such as doing a routine suctioning

and early washing or bathing of the baby was not done.

C. Observation of the ENC Protocol in the first 3-90 Minutes of Newborn's Life

As shown in Table 4 there is one hundred percent (100%) compliance to timely cutting of the cord, non-application of the chemical agent, quick check on newborn's breathing, color and pulse, non-bandaging of cord stump, and not doing foot stamping by the students and facility staff. Equally, both groups have fifty (50%) compliance to non-milking of the cord before cutting and clamping, thirty percent (30%) compliance to proper uninterrupted skin-to-skin contact of the mother and the baby for the first 0 – 90 minutes and eighty-five percent (85%) compliance to non-separation of the baby from his mother. Notably, too, students' complied with newborn assessment for birth defects and for injuries as well as administered Vit K injection and Crede's prophylaxis. Helping mother initiate breastfeeding and non-separation of baby vary from twenty-five percent (25%) to forty percent (40%) compliance by students is low, compared to seventy percent (70%) to one hundred percent (100%) compliance of the same by facility staff.

Table 4
Essential Newborn Care Protocol Practiced and Observed by the Student-Respondents in the First 3 - 90 Minutes of Newborn's Life (n=20)

Steps recommended in reducing incident of anemia in terms of newborns and intraventricular hemorrhage in preterm newborns, and early initiation of breast feeding and early immune system development of the newborn.	Practiced by the Students	Practiced by the DR Workers
Actions in the First 3 Minutes of Neonate's of Life		
1. Timely cutting of the cord (waited for the pulsation to stop or delayed clamping of the umbilical cord until 1-3 minutes)	100%	100%
2. Non-milking of the cord before cutting and clamping	50%	50%
3. Non-application of chemical agent, example are alcohol, betadine or hydrogen peroxide, on the cord stump	100%	100%
4. Quick check on newborn's breathing, color, pulse, appearance and activities during the second period (after 5 minutes) of physical assessment	100%	100%

5. Proper uninterrupted skin-to-skin contact of the mother and the baby from 0- 90minutes (1 1/2 hours duration).	30%	30%
6. Newborn assessment on the presence of birth defects	25%	70%
7. Newborn assessment on the presence of birth injuries	40%	80%
8. Helped mother initiate breast feeding	60%	90%
9. Non-separation of the baby from his mother	85%	85%
10. Counseled the mother on proper position for good latching	75%	100%
11. Encouraged mothers to breastfeed baby	80%	100%
12. Did not bandage the cord stump	100%	100%
13. Did not do foot stamping/markng baby for identification	100%	100%
14. Administered standard medications for newborns:		
Vitamin K injection	80%	100%
Crede's prophylaxis	35%	100%

Overall, it can be derived that with regard to this set of protocol, students and facility staff have the same percentage in compliance to at least six steps. However, as regards the remaining steps students reported low compliance, while facility staffs were observed to have high compliance at seventy percent (70%) to one hundred (100%).

Future birth attendants' lack of psychomotor skills on how to conduct proper physical assessment on babies may cause error and harm or possibly death. Birth injuries and birth defects, if detected early, may save the newborn's life, if addressed early with proper medical management. Thus, during clinical practicum, CIs should stress on the importance of assessment, not only the breathing, activity and circulation in the first 1- 5 minutes of baby's life but also the examination of birth injuries and less obvious birth defects that may cause death or irreversible damage, if not addressed promptly. There must be a separate assessment checklist to emphasize what to look for while examining the baby.

3.) Student-respondents' identified and perceived problems in the implementation of ENC Protocol

In the follow-up interview with the student-respondents they were asked about the problems encountered in implementing ENC protocol. They were also allowed to

clarify the meaning of their stated problems. The identified problems of nursing-midwifery student respondents are the following:

1.) Some affiliating hospital staff have no ENC training

Not all birth attendants have training on the ENC protocol. Training workshops for the ENC protocol is available only in places such as Manila, Cavite, Cebu City and Baguio City and none in Palawan. Seminars and updates on ENC protocol were conducted during conventions, meetings and professional organization's gatherings. Seminars are less expensive and available in Palawan, but a few hours seminar for birth attendants is incomparable to two weeks hands-on training.

2.) Some health facility policies are not congruent with ENC protocol

There is no monitoring for evaluating ENC protocol implementation. The DOH AO 2009-0025 standardized the newborn care in all government facilities; however, the local institution has no clear policy on ENC protocol which eventually resulted in incongruence in newborn care practice. If the national government mandate is followed, there will hardly be any problem in policy and regulations.

3.) The staff still does the old practice. Some do not follow the protocol.

Birth attendants are expected to use new neonatal care procedure. In ENC protocol time is bounded and they are pressured to accomplish their task at limited periods. Minor slips could be inevitable, old learned psychomotor skills would resurface which may lead to substandard practice.

4.) Some doctors do not allow the student-respondents to be present in the DR.

Clinical Practicum provides real-life setting for the respondents learning. It provides learners with variety of experiences and promotes development not only of

psychomotor skill but also of communication skill. If some doctors do not allow the student-respondents to be present in the DR, the respondents may handle fewer cases much less experience the skills necessary in the objective of ENC protocol, their learning (in this case how to perform ENC protocol) could be lacking.

5.) Lacking facility (beds, space, blankets) and time

Structure here refers to facilities such as beds and rooms; available manpower including type of professions; and standard practice and procedures of midwifery, nursing and medical practitioners. Lack of facility hinders standard practice. Big hospitals with only one or two delivery beds will not be able to cater the usual number of admissions. With limited resources, the quality of service will deteriorate. The delivery beds and delivery rooms must be vacated immediately by a postpartum woman so that it can be used by the next client. Postpartum mothers can have limited period to stay inside the DRs.

6.) Patient and significant members of the family do their traditional practice

Family members have no knowledge in the new newborn care standard. If not properly briefed, they tend to do their traditional newborn care practice. Oftentimes they would dress the baby when on their direct-skin-to-skin, bandage or clean the newborn's umbilical stump with alcohol.

Two of the objectives of teaching ENC to midwifery and nursing students are to equip them with knowledge and skills to do the protocol as well as teach and explain the procedure to other health workers and mothers. The core competencies that they need to learn are not only to know how to safely implement the ENC protocol but also to be advocates of the program and procedure. The student respondents included in this study were done with their clinical practicum rotations in the different DRs. Their answer

showed that only more than half of the students can do and teach the ENC without supervision. The family doing their traditional practice would not pose a problem, if the family were taught on ENC protocol.

7.) Some staff get angry with the student-respondents

There are student-respondent who reported that some of the staff of birthing facility get angry if students do not follow instruction opposed to the ENC protocol. One of the examples was the separation of the mother and the baby. They were asked to dress the baby and do anthropometric measurement.

Knowledge precedes action. In nursing and midwifery education know why (theory) is the first step a respondent should acquire to proceed to know how (application). Wilkinson and Leuven (2007) emphasized this method in their textbook. The theory that student nurses learned before their exposure maybe enhanced during their clinical practice. This type of learning from experience may not happen, if the practice is opposed to what is theorized.

Discussion

Ensuring the proper timing of actions for quality care to newborns is one dimensions of the newborn care in Philippines that has yet to meet the international standard. Without timely actions and proper sequence the four principles that need to be met for child's survival may not be achieved. According to AO 2009-0025 ENC "...should therefore be taught and re-learned by all health care providers."

The challenges encountered by CIs in teaching ENC protocol in their clinical area

CIs face challenges in teaching the ENC protocol in hospitals, health centers, birthing homes and BEmONC. All identified problems are concerned with external environment of the students. The first problem was the lack of training on ENC by

the birth attendants. Ranking second was the trained staff, including doctors, do not follow ENC, linked with rank 4 and 9 is about hospital policies are incongruent with the AO 2009-0025 and lack of collaboration between physicians with different specialties. There is an existing policy in other hospitals that a pregnant woman should stay only in the DR for one hour, while direct skin-to-skin contact needs one and half hour to be properly done.

In case of heavy traffic in the delivery room so that even if health facility staff allowed students to do the ENC protocol, at some point it would be impossible due to lack of facilities such as recovery beds, delivery tables and delivery rooms or often time absence of space in the delivery rooms or in recovery room. The hospital and some smaller health facilities were built only for small number of patients, but accommodate larger volume of clients than intended.

One of the CIs reported that one of the birth attendants said to her "*Alam ko ang ENC pero di ko gagawin.*" (I know the ENC (protocol), but I won't do it). Some birth attendants resist doing the procedure. Moreover, although new neonatal care standard is being implemented, there is no provision for the punishment or penalty for those who do not comply with it. The aforementioned incident sample statement implies that training alone does not assure that change (from old standard to new standard practice) will take place in the delivery rooms.

The theory-practice gap in implementing the ENC protocol during nursing and midwifery students' clinical practicum

The DOH divided the recommended actions of ENC for birth attendants into five significant periods: 1) the first 3 seconds; 2) the first 90 seconds; 3) the first three minutes newborn (180 seconds); 4) first 90 minutes (1½ hours) and lastly 5) the time after 90 minutes up to first 6 hours of newborn's life. The recommended actions are enumerated in Tables 3 and 4. The steps indicated in the tables are the goals of the birth attendants. To achieve the objectives of AO 2009-0025 all of the indicated steps should be done in a given approximate time and duration. In the DR, to

meet the four principles of the ENC, one of the procedures that the birth attendants, including nursing and midwifery students, should master are the steps of the ENC protocol.

First 0 - 90 Seconds of Newborns Life

The actions in these steps must be done to meet the objective of immediate drying of the newborn to stimulate breathing and establish thermoregulation to prevent infection and hypoglycemia.

To establish breathing and thermoregulation, a newborn is placed on his/her mother's abdomen direct skin-to-skin and thoroughly dried on the first 30 seconds. The rubbing and patting action stimulates the newborn to breath, while preventing hypothermia by evaporation of the fluid on his/her body. While doing this, the birth attendant concurrently evaluates the newborn's breathing and still does so when the wet cloth is changed to a dry one after 30-60 seconds. Students and birth attendants had almost one hundred percent (100%) compliance with this procedure.

In these steps the students and DR staff had high compliance (80%-100%). Assessment of the newborns breathing, circulation, pulsation, activity and appearance that indicate their chance for survival is divided into two periods, the first 1 minute and 5 minutes. If a baby scores high in on-going assessment the next step of ENC for normal newborns is followed. The new baby is not dressed; but placed prone on the mother's chest, his/her bonnet, his back covered with blanket, usually done after more than a minute at approximately 90 seconds. The mother's skin should touch her baby's skin. The dyad (the mother and baby pair) should not be separated, remaining in uninterrupted skin-to-skin contact for 1½ hours. Ninety percent (90%) of the student-respondents initiated this uninterrupted direct skin-to-skin contact of mother and baby while sixty percent (60%) only reported that they observed the facility staff initiated the said step. If the cord is short, the baby temporarily stays on the abdomen until the cord is cut. This high compliance on direct skin-to-skin prompted follow-up questions for

verification because in the study of Liao, Manalon and Mangcucang (2011) and Study1, this step has the least compliance. Step 9 of Table 3 (extended up to Table 4) starts the direct uninterrupted skin-to-skin contact that should last for 1½ hours. When asked about the longest period that a newborn should stay on the mother's chest, only thirty percent (30%) answered "one and half". Most student-respondents believed that the direct skin-to-skin contact is necessary only for few minutes or after the perineal repair the baby could be removed from the chest. Newborns were dressed earlier than the prescribed time of the AO 2009-0025. This error in understanding must be corrected by the CIs. Emphasis on duration of skin-to-skin contact must be explained for the baby to get maximum benefit.

First 3 - 90 Minutes of Newborns Life

After thorough drying to facilitate bonding between mother and her newborn the 14 steps in Table 4 are recommended by the AO 2009-0025. The procedure must be accomplished, as suggested, to achieve the following benefits. Through uninterrupted skin-to-skin contact and early initiation of breast feeding, it is expected that the baby will be warmed and fed with colostrums; thus, the likelihood of hypothermia, infection, and low blood sugar is reduced. Delaying of clamping the cord decreases the possibility of anemia to term babies and intraventricular hemorrhage to preterm babies. If all the steps of Table 3 were accomplished, the baby had a good chance of survival in the first minutes. If all the steps in Table 4 are correctly implemented, a baby is believed to have a higher chance of survival in the next 5 years. He has a higher chance of having more developed immune system. The three most important steps that the student-respondents mostly fail to do were the 90 minute uninterrupted skin to skin contact (30%), assessment of the newborns for injuries and defects (25%-40%) and administration of Vit K (35%) and eye ointment (30%). Such steps are significant in the child's survival and failure to do them may cause harm, if there is present problem. The skin-to-skin contact provides warmth and breast feeding usually occurs at this period, milk will provide nutrition to the baby, pacifier and prelacteals

are not necessary, if the dyad are not separated; better yet minimize baby's crying. Crede's prophylaxis prevents blindness and evaluation for birth defects and injuries prevents untimely death. The child will also benefit from the mother's normal flora. The child has protection from these bacteria, antibodies from the mother could be transferred through placenta and milk. His immunity will be initiated in the early contact with the mother. These failures of students to comply with relevant steps on newborn care management must be addressed and corrected.

As discussed before, *vernix caseosa* must not be removed. Crawling reflex will diminish if amniotic fluid is removed on baby's hand, the smell of the fluid will initiate his crawling reflex to look for the mother's nipple. The first bathe of a baby must be six (6) hours after birth. Unlike the old practice, which bathes baby immediately a few minutes after birth, delayed bathing will protect the newborn from hypothermia; thus, preventing hypoglycemia and weak immune system.

The students' identified gaps in the practice of the ENC in the delivery rooms are summarized and shown in Figures 1 and 2 in Appendix A.

The problems that affect students' compliance with the ENC protocol in relation to their clinical practicum

CIs and students in this study are all aware that there is a problem in implementing the ENC. Out of seven (7) identified problems by the students five resembled those of the CIs: (1) DR staff had no training on ENC protocol; (2) there was incongruence in the policy regarding ENC and regulations inside the DR; (3) doctors, nurses and midwives do not following the ENC protocol; (4) lack of facilities such as bed, delivery tables, rooms, etc; and (5) post partum mothers and their relatives imposed their own newborn care practices.

Still some professional birth attendants would like to practice the steps in AO 2009-0025. The student-respondents' observed shortcomings in their ENC practice can be attributed to the proposition of Gagne

(1965) and Gagne and Briggs (1974 as cited in Tornay and Thompson, 1987) in that each stimulus-response connection must have been previously learned. There is a chain of steps learned in subparts and generalized to create the desired skill. In times of extreme pressure old learned practice may re-emerge, mistake may happen in following the new procedure. Slips like these in times of pressure are unavoidable.

Student-respondents are active information processors, and although they observed newborn care different from the procedure they practiced and memorized, they paid attention to the deviations and ask questions. The student-respondents may later imitate the observed newborn care practice or may correct the deviation and do the prescribed protocol. Later in life they will likely imitate their CI or the staff, depending on the students' perception of the model who resembles them more. Bandura (1961), as cited by McLeod (2011), offered an explanation to this to the effect that children observe the people around them behaving in various ways. They pay attention to the characteristics of these observed models so as to encode their behavior. Much later, they may imitate or copy the behavior based on their perception of their similarity to that model. Skinner (1968) said that modelling is the first and vital step in learning motor skills; learners duplicate the movements they observe from their models.

Number of Rehearsals

Some facilities enabled some respondents to ideally practice the ENC protocol. However, these facilities have few clients – only a few can experience the actual newborn care and do ideal interventions. Sometimes some doctors' order would not allow students to help and observe in the DR. This may result to missing opportunity to observe and lack rehearsals to do the ENC procedure. Not everyone can observe the actual procedure; hence, respondents' experience may become limited, as opposed to Kolb's (1984:38) definition of learning that is a process where knowledge is created through experience. Lack of experience could mean lack of new concept to guide the

students-respondents in the choice of action for future experiences.

In health facilities such as birthing clinics where the staff were trained on ENC protocol the student-respondents had the chance to practice proper newborn care. This type of environment promotes healthy learning in that students can act consistently with socio-cultural norms; moreover, it may reduce their anxiety in the clinical area. But, there are health facilities whose staff, instead of being advocates of the ENC protocol expressed resistance. One of the students quoted a staff telling them "*Noon naman walang ENC, buhay naman lahat.*" (in the old days, there was no ENC, but all survived). This social resistance is detrimental to the respondents' learning and of course to the newborns.

Tornyay and Thompson (1987: 65) suggested that learning complex psychomotor skills varies among individual learners. Some need more time for practice to learn a specific skill. Manual dexterity, attitude, motivation, confidence, intelligence and age are some of the factors that should be considered in learning psychomotor skills.

Respondents have different learning styles (Kolb, 1984). Different people naturally prefer a single style. Various factors influence a nursing and midwifery student's style such as their social environment, educational experience or basic cognitive structure of the individual. The presence of gaps in the practice of the ENC has detrimental effect to "doers" and "visual" learners.

Conclusion

The dedication to give quality care embeds in nurses and midwives. Not only does the CIs encounter offer challenges in the clinical area, but also the student-respondents as well, specifically in the delivery rooms.

The study found out that not all the steps and procedures of the AO 2009-0025 were practiced as standard of care for newborns of nursing and midwifery students during their clinical practicum. Not all procedures were observed, as done by

professional birth attendants of health care facilities where students were affiliated with.

There is evidence of the theory-practice gap in implementing the ENC protocol during the nursing and midwifery students' clinical practicum. The most notable among the gaps in the first 90 minutes were the uninterrupted direct skin to skin contact, wiping off of *vernix caseosa* and the discouraged milking of the cord. Administration of medication was also seen as one of the shortcomings and the proper newborn care assessment for birth injuries and defects.

It was found that those students who have higher level of knowledge of ENC protocol had experienced and observed more cases and handled more newborn care. They were the ones who reported that they had one hundred percent (100%) done the newborn care protocol as recommended.

The seven students-identified perceived problems in implementing the ENC protocol can be factors influencing their clinical practice and learning. This may likely become a barrier in their psychomotor skills and cognitive development regarding newborn care.

There are factors identified as barrier to ENC practice in the clinical practicum. Bridging the gap between theory and practice is a big challenge in the Nursing Education today. In implementing quality ENC program, educators and students face challenges beyond their control. Issues arose when the students' learned theories were not observed during the clinical practicum.

Recommendations

Clinical practicum was included in nursing and midwifery students' curriculum to provide students actual learning to strengthen their cognitive (knowledge), attitude and psychomotor ability.

The academe must provide the best environment for the students to learn the ideal nursing actions by operating or establishing its own birthing clinic not only to

lessen the barriers in students' learning, but also decrease the challenges CIs encounter in teaching ENC protocol.

There should be DOH evaluation and monitoring in the practice of ENC protocol in all levels of health care facilities.

The government should conduct observational-study in delivery rooms to determine the problems in the ENC so as to comply with and address these problems.

The DOH, as the head agency, in collaboration with the academe in Palawan must conduct ENC training to all birth attendants.

Conduct longitudinal studies on strategies in bridging theory-practice gap in the students' clinical practicum, the effectiveness of these strategies and their consequences to the students when they are in professional practice. The latter should be included in school's tracer studies.

The nursing and midwifery students may conduct campaigns and give health education in the community about the ENC program during their community exposure.

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