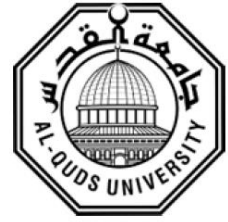


**Deanship of Graduate Studies**

**Al-Quds University**



**The Effect of A midwifery Educational Program on  
Graduates' Knowledge, Attitudes, and Practices in  
Gaza Strip: Perception of Graduates and Supervisors**

**Taghreed Mohammed Abu Hadaf**

**M. Sc. Thesis**

**Jerusalem- Palestine**

**1440 / 2018**

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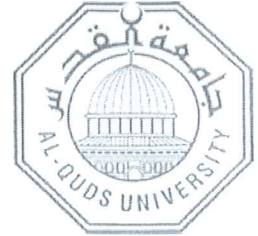
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**Al-Quds University**

**Deanship of Graduate Studies**

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**Thesis Approval**




**The Effect of A midwifery Educational Program on Graduates'  
Knowledge, Attitudes, and Practices in Gaza Strip: Perception of  
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**Jerusalem – Palestine**

**1440 / 2018**

بسم الله الرحمن الرحيم

قال تعالى:

"وقل ربي زدني علما"

(طه: من الآية 114)

قال تعالى:

"يرفع الله الذين آمنوا منكم والذين أوتوا العلم درجات "

(المجادلة: من ال آية 11)

قال تعالى:

"قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ إِنَّمَا يَتَذَكَّرُ أُولُو الْأَلْبَابِ"

(الزمر: من الآية 9)

## **Dedication**

*To who came with me towards the dream .. Step by step*

*We sow .... together..... harvested ... together*

*We will stay together in Shaa Allah*

***To my dear husband with my love***

*To the spring of tenderness, who was always praying  
to see me in this place*

*To my beloved mother*

*To the spirit of my father, who has had the first footprint in my life*

***To my brothers and sister, my heart and their families***

*To all who helped me to complete this research and gave me help  
and extended a hand to help and provided me with the information  
necessary to complete this research*

Taghreed Mohammad Abu Hadaf

## **Declaration**

I certify that this thesis submitted for the degree of Master, is the result of my own research, except where otherwise acknowledged, and this study (or any part of the same) has not been submitted for a higher degree to any other university or institution.

### **Signed:**

Taghreed Mohammad Abu Hadaf

....../....../....

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Finally, heartfelt thanks are due to my husband for his love and support.

## **Abstract**

The perceived knowledge, attitudes, practices (KAP), and satisfaction of graduates from an educational program and their workplace supervisors are important as a kind of evaluation for program's success. Although the professional diploma in midwifery program was started in Palestine College of Nursing (PCN) in the year 2013 as a postgraduate specialty for nurses and it had about 72 graduates from three courses, it was not evaluated by the graduates and their workplace supervisors for its effect on the KAP of the graduates. This study aimed to assess the perception of the graduates of the professional diploma in midwifery educational program and their workplace supervisors about the effect of the educational program on graduates' KAP as well as their satisfaction from the program. The researcher used a cross-sectional design and used purposive samples of 60 graduates who were eligible to participate and responded and 50 participants from their workplace supervisors. The researcher used two valid and reliable questionnaires for the graduates and their supervisors. The findings of this study revealed that, the mean percentage in knowledge and attitude according to graduates' perception was 86.0 % for each, while for practice it was 88%, while according to their supervisors' perception the mean percentage of knowledge and practice were 82% and 84% for attitude. The overall mean percentage of the graduates' satisfaction from the professional diploma in midwifery was 78%, the highest satisfaction was from lecturers, clinical instructors and number of hours by 92%, 90%, and 86% respectively, while the lowest satisfaction was from class teaching environment, skill laboratory, and clinical training environment by 52%, 60%, and 70% respectively. The study showed no statistically significant relationship between age and both practice and knowledge while there was statistically significant difference between attitude and age, as well there was positive significant correlation between KAP as total and satisfaction ( $r = 0.271$ ,  $P < 0.036$ ). The study concluded that the perceived effect of the program on the KAP of graduates was high positive as well as for the quality of faculty members, while the learning environment in theory and clinical placement needs to be improved, thus the study recommended further strategies to be taken in future courses regarding improving the learning environment of students.



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## List of Abbreviations

AICPD	Arab institute for continuing professional development
ANOVA	Analysis of variance
BOCES	Board of cooperative education services
BSE	Breast self-examination
CI	Confidence interval
EBP	Evidence-based practice
ECEPC	European certificate in essential palliative care
GDHRD	General directorate of human resource development
GPs	General practitioners
HCWs	Healthcare workers
HPV	Human papillomavirus vaccine
ICM	International confederation of midwives
KAP	Knowledge, attitudes, and practices
Max	Maximum
MBBS/MD	Bachelor of medicine/bachelor of surgery
Min	Minimum
MOH	Ministry of health
n	Number of the subjects
NGOs	Non-governmental organizations
NKASRP-C	Nurse's knowledge and attitudes survey about pain—chinese version
NORWAC	Norwegian aid committee
NP	Nurse practitioner
NSW	New south wales
PCN	Palestine college of nursing
PCQN	The palliative care quiz for nurses
PHC	Primary health care
PMP	Pain management program
SPSS	Statistical package for the social sciences

# **Chapter one**

## **Introduction**

### **1.1 Background:**

Nurses who have postgraduate professional diploma in midwifery educational program are expected to have better knowledge, attitude, and practice in midwifery than their original experience from their original bachelor of nursing program. General nurses who are working in obstetric and women's health areas need to develop reflective skills and valid midwifery knowledge and practice (Bibiana & Cherian, 2014). Midwife educators and practitioners can promote nurses and enhance their learning by expanding the scope of practice, encouraging self-assessment and the development of reflective and professional skills for obstetric and delivery department (Casey et al., 2017). Clearly, nurses can work in a wide different of medical specialties, so nurses plan and provide nursing care to patients in the hospital, at home or in other settings (PineauStam et al., 2015). It is also possible for nurses to develop career pathways in research, clinical, management and education roles (Truglio-Londrigan, & Lewenson, 2017).

Although nurses can work all previous jobs, nevertheless they have little practices and experiences for pregnant woman care, labor, delivery, childbirth and newborns that cause many complications during pregnancy, childbirth and the immediate postnatal period in obstetric and delivery department (Gaillard et al., 2014). The new Studies showed about 800 women and more than 8000 newborns die every day due to complications during pregnancy, childbirth and the immediate postnatal period (Mpemba et al., 2014). So, in the late 20th century, many countries start teaching nurse-midwives that have the formal education of a nurse and the hands-on experience of a midwife (Dawson et al., 2015).

Midwives are 'with woman 'and providing the family with supportive and helpful relationships such as they share the deep and profound experiences of childbirth. So, in the last century, midwives were already recognized as highly trained and specialized professionals in obstetrics. In addition, each year, approximately 3 million babies are stillborn so many of these lives could be saved if every birth were attended by a trained midwife (Renfrew et al., 2014). Nurses need competency-based training, as well as regular refresher training and support for midwifery sections. They need more training to enable them to acquire and maintain competencies to provide a high quality of care to women and newborns (Mumtaz et al., 2014).

Last statistics for 2010 in the Ministry of Health (MOH) in Gaza strip reported a lot of complication during pregnancy and immediate postnatal period, especially among obstetric and delivery department and lowering satisfied patients about delivery department services (van den Berg et al., 2015). Therefore, MOH in Gaza strip suggested and induced the Norwegian Aid Committee (NORWAC) as an international organization supports the Palestinian people to help employed nurses in obstetric and delivery department to be enrolled without study fees in the professional diploma of midwifery educational program at Palestine College of Nursing (PCN) in Gaza Strip after being accredited in the year 2012. The program aimed to improve the knowledge, attitudes, and practice of nurses working in maternity departments in Gaza strip. The program is designed to reflect the academic and professional development needs of midwives and to prepare competent midwives as practitioners, educators, leaders, researchers, and counselors who can contribute to health promotion of women and newborns in Gaza strip (MOH, 2016).

In March 2013 the first program of professional diploma in midwifery for nurses with bachelor degree was started in PCN that affiliated to the MOH. number of them and classification as place of work are Twenty-seven participants from nurses in obstetric and

delivery in MOH hospitals and primary health care clinics and Non-governmental organizations (NGOs) hospitals and clinics. In addition, lecturers and instructors in the professional diploma in midwifery program were with high experiences. In the same way, after the first group of the diploma graduated in November 2014, second group was enrolled with 18 participants and started directly in December 2014 with NORWAC financial support. Finally, in July 2016 third group was started by 25 participants and graduated in November 2017. The diploma curriculum is consisted of 38 credit hours (23 theory and 15 clinical practice), which is distributed into five semesters including the summer semesters. The curriculum includes both theory and practice elements that have 30% theory to 70% practice within the range of International Confederation of Midwives (ICM) standards, the program was based on the credit hour system of which mean one credit hour of theory equals 16 classroom contact hours and one credit hour of practice equals 56 hours of clinical practice per semester (16 weeks) (General Directorate of Human Resource Development (GDHRD)-MOH, 2016).

## **1.2 Problem statement**

Professional diploma in midwifery as any new educational program needs to be evaluated for its benefit on the graduates and the services they provide in their workplace. Since the last group jointed the program has graduated in the year 2017 and there was no formal research or evaluation study taken to assess the effect of the educational program on the graduates' Knowledge, Attitude, and Practice (KAP). The opinions from graduates and their workplace supervisors are very important in judging the effect of the educational program on the graduates KAP and the service they provide in their workplace. Lack of evaluation for the Professional Diploma in Midwifery program could decrease the benefit of lessons learnts and hinder the improvement potentials from the program and its graduates that will affect the quality of services they provide.

### **1.3 Justification**

Evaluation of the effect of professional diploma in midwifery educational program on the KAP of graduates is highly recommended as an indicator on the success of the program in inducing positive change, the researcher of this study was one of the graduates from the first course of the professional diploma in midwifery program at PCN and had an interest to assess the effect of this program on the KAP of the program's graduates as well as to assess the graduates' satisfaction level from the program as perceived by the graduates themselves and their workplace supervisors who have direct contact with the graduates in their workplace before and after having the diploma, as well as the findings of this study will be reflected on the future plans for the program by the PCN and MoH as the main stakeholders in teaching and employing graduates who in turn may influence the quality of services they provide based on their KAP that influenced by the program.

### **1.4 The main aim**

To assess the perception of the graduates of the professional diploma in midwifery educational program and their workplace supervisors regarding the effect of the program on graduates' knowledge, attitudes, and practices (KAP)

### **1.5 Objectives**

1. To identify the perception of the professional diploma in midwifery educational program's graduates regarding the program's effect on their KAP.
2. To assess the supervisors' perception of the effect of the professional diploma in midwifery educational program on graduates' KAP.
3. To assess the level of graduates' satisfaction from the program.
4. To determine the differences in the level of graduates' perception of KAP with regard to their demographic factors.

5. To determine the differences in the level of graduates' satisfaction with regard to their demographic factors.
6. To recommend strategies that may help in improving the program for future courses.

### **1.6 Research questions:**

1. What is the graduates' perception level about the effect of professional diploma in midwifery educational program on their KAP?
2. What is the supervisors' perception of the effect of professional diploma in midwifery educational program on graduates' KAP?
3. What is the effect of professional diploma in midwifery educational program on the satisfaction level of the graduates?
4. What are the differences in the level of graduates' perception of KAP with regard to their demographic factors?
5. What are the differences in the level of graduates' satisfaction from the the program with regard to their demographic factors?
6. What are there recommend strategies that may help in improving the program for future courses?

### **1.7 Context of study**

#### **1.7.1 Demographic characteristics of Gaza strip:**

Gaza strip constitutes part of the Palestinian territories, with an area of 365 Km<sup>2</sup>, lying on the coast of the Medite editerranean Sea. Gaza strip is a highly populated area with a total population of 1,881,135 inhabitants in mid-2016 (Palestinian Central Bureau of Statistics, 2016).

### **1.7.2 Palestine health care system**

The Palestinian health care system is divided into Governmental, Non-Governmental Organizations (NGOs), the private sector, United Nations Relief and Works Agency for Palestinian Refugees in the Near East (UNRWA), MOH is responsible for a significant portion of both Primary Health Care (PHC) and secondary care. The MOH is the main provider of health services through 13 hospitals and 56 PHC in GS. On the other hand the NGOs run 57 PHCs in GS (MOH, 2011). The main provider of labor health services are four major hospitals. The major hospitals is Elshifa Medical Complex, Nasser Medical Complex, ELemaraty and El Aqusa Hospital.

### **1.7.3 Palestine College of Nursing**

Palestine College of Nursing is an educational institute, which belongs to, supervised and funded by the Ministry of Health (MOH). It is specialized in teaching nursing and midwifery. The college has been established in 1997. It is an extension to the qualified school of nursing that was established in 1976. The registered nurses who have successfully graduated from the College are qualified to work locally, nationally as well as internationally at different health care settings. Presently, there is an enrolment of direct entry baccalaureate regular students, Associate degree nursing students, postgraduate specialties and upgrading programs both in nursing and midwifery.

The Nursing programs are planned to meet the health needs of the Palestinian population. The program adheres to the Palestinian Curriculum Framework and the Palestinian National Health Plan. The programs emphasize the importance of primary health care and adhere to World Health Organization (WHO) policies, strategies and recommendation regarding health promotion, prevention, and education taking in consideration the Alma

Atta Declaration (1978) principles toward achieving the WHO's goal to obtain "health for all" (PCN, 2018).

**Highlights of nursing and midwifery history at PCN include (PCN, 2018):**

- 1976 PCN, (formerly Qualified School of Nursing) was established with the 1<sup>st</sup> program, 3 years diploma level.
- 1996 Licensed practical nurse-registered nurse upgrading program (LPN-RN) was implemented and graduates awarded 3-year diploma certificate.
- 1997 a Bachelor degree in nursing (BSN) program approved by the Ministry of Higher Education was implemented.
- 1999 RN-BSN upgrading program was implemented
- 1999 licensed practical midwife-Registered midwife upgrading program was implemented.
- 2000 a Bachelor program in midwifery was established and implemented.
- 2001 Associate degree in nursing program has been implemented (2-year program)
- 2001 Bachelor in nursing curriculum was evaluated and refined
- 2002 Post-graduate high diploma in midwifery program was established but failed to get the accreditation.
- 2002 Associate degree program in oral and dental health nursing (2 years) was implemented.
- 2002 Associate degree in midwifery program (2 years) was implemented.
- 2002 Post-graduate diploma in critical nursing care and pediatric nursing care have been planned /developed and not implemented y.



- 2009 Bachelor in nursing and midwifery curriculum was evaluated and refined
- 2013 Post-graduate Professional Diploma in Midwifery was established and accredited (with supporting fund from NORWAC).
- 2015 Bachelor in nursing and midwifery curriculum was evaluated and refined.

#### **1.7.4 Professional diploma in midwifery educational program**

Enhanced professional midwifery practice is a work-based modular postgraduate degree specifically geared towards the needs of practicing and registered midwives. It is practice focused but also supports the participants to develop skills in reflection and critical thinking. However, work-based learning is participants centered approach where the participants direct their own learning objectives so they reflect on what is important to their roles in their practice and use these practical issues to drive forward their learning within the modules. On the other hands, nurses who completed the program are autonomous learners who can think more critically and apply theory, experience and academic literature to the development and enhancement of their practice. Finally, they have gained not only academic and enhanced clinical skill, but also a number of transferable skills and this can only be of benefit to the midwife in terms of employability and will become able to provide the standards of care for mothers and babies and the ability to work independently with responding to changing emergency in gynecology department (Furber et al., 2004).

Professional diploma educational program in midwifery is targeting registered nurses with bachelor degree in nursing who are working in the hospitals and primary care clinics at MoH and NGOs facilities. Midwives must demonstrate compassion, autonomy, critical decision-making skills, competence, and professional accountability. Midwives work in partnership with women providing support, advice, and care, enabling women to make informed choices during pregnancy, birth and early motherhood. Also, midwives make a

unique contribution to public health and are able to influence the health and wellbeing of women, children, and families (GDHRD, 2016).

This professional diploma prepared participants to meet the requirements of the mother and child care to become a midwife. It prepares participants to become an emotionally intelligent worker, critical thinker, highly competent, and advocate for childbearing women. Also, participants have the opportunity for academic advancement through a strong emphasis on research and evidence-based practice. By completing the professional diploma, participants will gain more experience within delivery suite; ward areas and community health services related to midwifery. The master plan of the professional diploma in midwifery educational program is illustrated in Annex 1, the diploma was 38 credit hours (23 theory and 15 hours practice) for five semesters of 16 weeks each (PCN, 2015).

GDHRD in 2016 reported that the MOH in Gaza strip suggested and induced international organizations which support the Palestinian people to provide a fund for different professional diploma programs for the MOH employed staff, some of these were implemented by external or internal institutions. the external institutions such as Arab Institute for Continuing Professional Development (AICPD) by video conference system as Infection Control, Quality Management of Healthcare Services, Medical Statistics, Diagnostic Radiology, and finally the Professional Diploma in Patient Safety that supported by Arab Medical Union and others. In contrast, the internal organization which implemented the professional diploma in midwifery was Palestine College of Nursing–MOH. All external or internal professional diploma programmes that were mentioned did not assess the impact of these programs on graduates themselves and/or the quality of services they provide in their workplace (GDHRD, 2016).

## **1.8 Definitions of study terms**

### **Professional diploma in midwifery educational program**

Is a professional diploma program that designed by PCN to prepare nurses with a bachelor degree to become a certified nurse-midwife. The diploma is consisted of 38 credit hours (23 theory and 15 clinical practice), the theory and practice elements were 30% and 70% respectively that match the standard of International Confederation of Midwives (ICM), as well as it is accredited from the Ministry of Education in Palestine.

### **Evaluation of Educational Program**

Program evaluation a useful technical tool for determining if program is meeting its stated goals. Specialists submit reports that help administrators to decide changes in curriculum content or direction (Jacobs, 2017).

### **Programs' graduates**

The nurses who have a bachelor degree in nursing who were enrolled in the professional diploma in midwifery educational program at PCN and passed the requirements of the program successfully to be a certified as a nurse-midwife.

### **Supervisors**

Are the managers either from head nurses or clinical nurse managers who work in the healthcare institutions in the Gaza Strip and supervise the performance of program's graduates in their workplace.

### **Knowledge**

Is a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Knowledge can refer to a theoretical or practical understanding of a subject (Knoblauch, 2012).

### **Attitude**

A predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. Attitude influences an individual's choice of action, and responses to challenges, incentives, and rewards. The four major components of attitude are **effective**: emotions or feelings, **Cognitive**: belief or opinions held consciously, **Conative**: inclination for action, and **evaluative**: positive or negative response to stimuli (Noe et al., 2006)

### **Practice:**

Practice means doing something regularly in order to be able to do it better. A practice is one of these periods of doing something (Drucker, 2012).

**Perception (operational)**

Are the organization, identification, and interpretation of sensory information in order to represent and understand the presented information or the environment (Pitcher, 2015). The researcher used 5-points Likert Scale questionnaire to measure the perception of graduates and their workplace supervisors on graduates' KAP after their graduation from the professional diploma in midwifery educational program. The levels of KAP were classified as high (80-100%), moderate (60-79%), and low (less than 60%).

**Satisfaction (operational)**

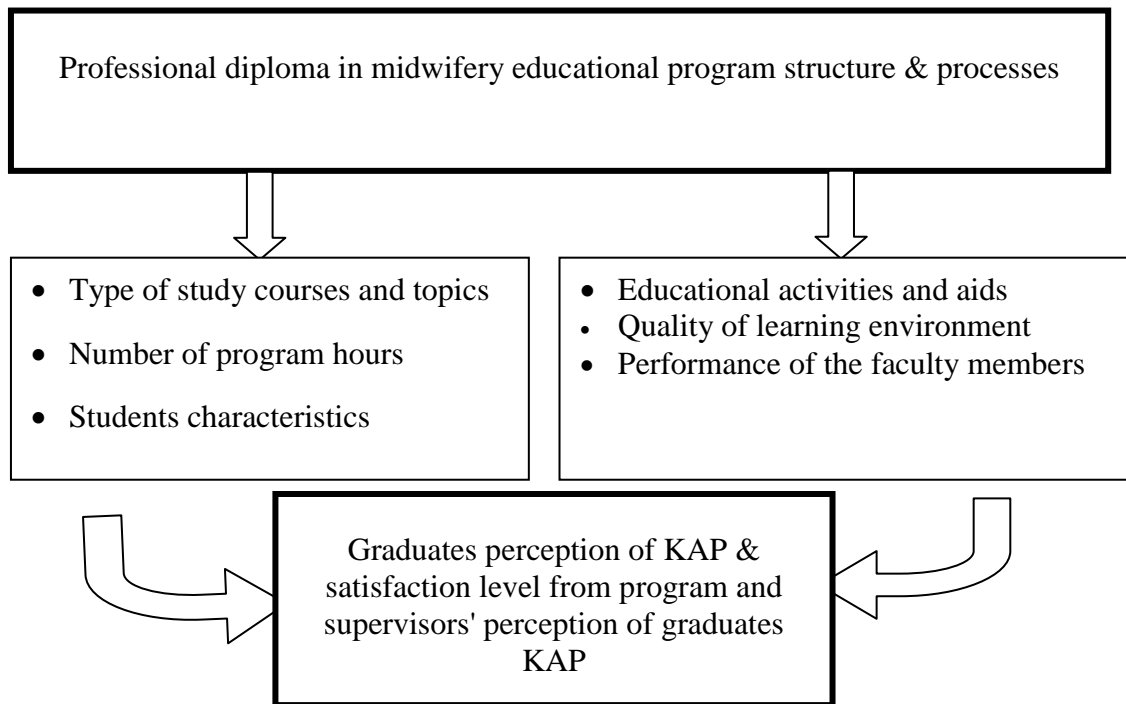
A pleasant feeling that someone get when receives something wanted, or when someone has done something he wanted to do (Hill & Brierley, 2017). The researcher used 5-points scale to measure the satisfaction of graduates from the program and having score of 5 points classified as high, 3 points for moderate, and 1 point for low satisfaction levels.

## Chapter two

### Literature Review

#### 2.1 Conceptual framework

The conceptual framework is the map that guides the design and the implementation of the study and its effect mechanism for illustration and summarizing the study variables.



**Figure 1.1: Theoretical formwork**

Figure 1.1 illustrated the theoretical framework that designed by the researcher. Initially, the program structure included type of study courses and topics, number of program hours, and type of students and faculty members. Stürmer, et al., (2013) showed positive relation between type of study courses and topics and KAP. On the other hand, long-term number of program hours impacts on knowledge and practices (Custers et al., 2010). Regarding

item program processes such as educational activities and aids, quality of learning environment, educational activities and interactions between students and the faculty, recent study showed that there are relations between program processes and KAP. They recommended methods of teaching that can help to enhance interactions between teachers and students in addition to improving the effectiveness of learning (Lou et al., 2012). Finally, both program structure and processes as independent variables lead to program outcome as dependent variables which is the perception of graduates on their KAP and perception of workplace supervisors on graduates' KAP as well as the satisfaction level of graduates regarding the program.

### **2.1.1 Knowledge**

Is an expertise skill, and acquired to a person through education and experience as well as the understanding of theoretical or practical subject regarding some concepts related to data, awareness, information, facts and finally familiarity gained by experience of a situation fact. Generally, Plato's formulation of knowledge starts in philosophical debates as "Justified true belief". In the past, present and future; no single agreed knowledge definition and also no prospect of one theory, consequently, there are a lot of competing theories (Durst & Wilhelm, 2012).

Also, Knowledge can be gained by anyone through education, analysis, practice and feeling. Although it is an intuitive and not easy to structure, it cannot be captured by machines, and it is a difficult to transfer. We always speak about a "knowledgeable person," and we think about someone as well concluded and informed, and thoroughly good in certain field. We increase our knowledge through others commendation and they share their knowledge with us. Finally, we create good knowledge when we sum our knowledge with other experts (Baldwin et al., 2011).

Knowledge is also defined as a belief that is correct, acceptable and lead to measurement by methods that depend on the truth compared to false answers (Engel et al., 2017). The results indicate that a person recognizes or does not recognize something. Such methods of measurement have a lot of disadvantages that can be decreased by increasing sample size and giving us a good idea regarding graduates' certainty (Landauer, 2017).

#### **2.1.1.1 The effects of knowledge on behavior**

The objectives of an individual are affected by knowledge and it let individuals organize, formulate and attain their goals. Knowledge affords direction to our lives which allows us to recognize goals, to infer and know events, and to reply in accordance with the changeful needs, purposes, and wishes. For instance, our opinion affected by the data we receive through our senses (taste, sight, touch, smell, and hearing) and the others knowledge we own that allows us to discuss them. In contrast to the generally phrase, "Seeing believes", it is knowledge, attitude, and wishes that structure our observation by concluded the information of our senses. An individual's attitude and performance depend on both a gained knowledge that has been through education and experience as well as the sensory receptors and the human body systems such as muscles, etc (Visweswara, & Chandra, 2011).

The process of gaining and keeping knowledge (and beliefs) in our mind is called education and is created of all the human experiences from the first of his/her life to this time. Generally, education and learning has been known as the relatively continuous modification of the human attitudes potential (of an organism) which improve his/her practice. The behavior that is modified is the knowledge of a human. A human can control a lot of knowledge as a result of culture, but such knowledge remains an unknown power until the human uses it to do action – to complete something such as solving a certain problem and understanding the mechanism of an idea. Despite its inaccessible direct



measurement, its power of influence over performance can be overwhelming (Hunt, 2003). Education courses are very important in our health system and patient safety because they improve and increase our acquired knowledge (Becker, 1994).

As an outcome of this increased acquired knowledge as a result of coaching and learning, humans nowadays has a higher performance and a good level compared to previous times. Surely, the experiences and communicating with others in addition to good environment will lead to increase the level of knowledge that is gained and acquired by a person. Evolution of knowledge before testing performance is a complex task but it illustrates the advantage of identifying the defects of knowledge and culture before they are detected by mistakes in work or other accident fatal incidents. To be beneficial from someone, the knowledge must not be acquired only but it has to be kept or remind as well. It is not sufficient for leaders, managers and trainers to be concerned only with the gaining of good knowledge by trainees. They must also be interested in the levels of knowledge so that trainees will have the knowledge ready-made to them in future times. If the acquired knowledge does not be used, the person won't be able to retrieve it from his/her memory, e.g. he/she will forget the training ideas before using them in the future. Therefore, a lot of training and educational programs failed to achieve its purposes (Wolbers & Hegarty, 2010).

#### **2.1.1.2 A practical way to measure a person's knowledge**

To measure anything means to give a number of distinctive (knowledge) to a subject (human) or situation depend on a group of rules (scale). It is a scale that the measure is assigned to, and it defines the meaning of the number. The presently used multiple choice question (MCQ) or any others epistemic scales can be referred to as a "set of rules" by which the scales (numbers or scores) or any measurements are created. However,

knowledge may be functionally defined. recently, most methods used to detect someone's knowledge on a certain topic seeks the composing exam items that represent this topic without any biased, i.e. not effected by the test takers' demographic data, such as gender (male /female) or ethnicity, which might influence the levels of knowledge. To identify whether someone possesses knowledge on, say, simple summation, we can give questions that are measure of the topic, such as 'What is the sum of  $14+ 15$ ?' (Streiner et al., 2015).

The aim of this exam practice is to show which choice a person selects and assume that his/her answer we know (if a true answer is choice) or his/her answer unknown (if the true answer is unselected) how to sum two numbers. On the other hand, the exam taker can select the true answer lack knowing how to sum it, e.g. in the above instance, the select of being correct by guessing one from four = 25% (Hunt, 2003).

The previous scale depends on a choice he correctly answered that implies that the person who selected a true answer but unsure his/her answer or who select it by chance possesses knowledge exactly equal to a person who is select real true and extremely sure of it. Likewise, in today's MCQ if a false answer is selected by person, then it can be indicated simply to give us idea that she/he does not know the best correct answer, i.e. is illiterate. This conclusion is misleading. Exclusively, she/he may be very sure that the answer which she/he selected is not true and, thus, may be misinformed– which is unlucky and worse than being illiterate. A sure but mistaken belief used with assurance as a basic for making decisions and actions, may lead to fatal errors in performance sometimes with terrible results (Board of Cooperative Education Services, BOCES, 2010). For instance, if a degree of education or a license exam is being prepared and managed to a professional (for example, a nurse, lab technician or leader), it is very important to make the identification of the false answers between the subjects who:

- Is not sure at all as to whether a false selected answer which a person gave is true and thus the false belief is not likely to be employed in practicing the profession.
- Strongly believes that the selected false answer is true, so, may be this person use the erroneous belief in making decisions and action (Hunt, 2003).

### **2.1.1.3 Knowledge management**

Currently, Knowledge Management is identified by methods used by organizations to distribute, find and create knowledge according to their needs; for example, to reuse and educate across the organization. On the other hand, programs of knowledge management are naturally joined to organizational goals and also concerned about the success of specific outcomes, for example, shared experts, enhanced performances and maintained novelty at upper levels (Dalkir & Liebowitz, 2011). The aim of knowledge management is not to collect the whole knowledge in the organization, but to manage the knowledge properly in order to achieve the objective of the organization which is more important. In brief, knowledge management involves applying the collection abilities of the internal workforce to realize specific organizational goals. State agencies should feel free to use tools of data and information on the following pages as essentials inside their organizations. It is important to be a beginning for sharing experience to allow those who still in the organization to keep the quality outcome of the production of the organization (Hislop, 2013).

Exchange and sharing high level of knowledge or expertise must occur constantly among employees. Currently, in many cases, it is not; and this need becomes pressing when a valued employee is ready to superannuate or change positions (O'Dell & Hubert, 2011). When an organization have plan of knowledge transfer, it is important to answer the following questions: does the organization need to hire new employees and rearrange the duties? are these duties still important to the organization mission? does the organization

need to update the place description? will the organization place be changed when the employee leaves?.

Knowledge perception is a foundation of knowledge. It is very important to understand the basics of this point that are related to concepts like correct design, action, and justification of doing something. It is considered as the guidelines to assess the source of our knowledge and it is the source of original knowledge because it is the source of justified facts and beliefs about everything around us (Alston, 2017).

#### **2.1.1.4 Knowledge transfer**

Continuous knowledge management will lead to knowledge transfer between different organizations through open discussion with friends, students, professional experts at work, and through training programs. During the last century, a lot of technology methods have played important role in increasing the knowledge transfer facility from one organization to another around the world through the easy communication systems and the use of lots of new online programs (Chang et al., 2012). The aim of transferring knowledge to others is important for any health organization because of the following:

1. Sudden knowledge loss in an organization may destroy the organization if it is not remedied by transferring knowledge
2. Evolution and understanding how critical the knowledge loss will be
3. Finally, develop programs to transfer knowledge in critical knowledge loss and a plan of action to easily transfer it (Mei, 2012).

In fact, the importance of knowledge transfer has recently been discussed and applied among lots of organizations because of the high percentage of workforce (employees or manager) which is nearing to retirement age for late ten years. These workforces have a lot

of acquired experience and knowledge about process of work and how to solve many problems, and how to prevent problems arise. Losing their knowledge and experience could considerably reduce efficiency in addition to increase costly mistakes, surprising quality problems and finally significant defects in performance or services (Hennekam & Herrbach, 2013).

Clearly, younger employees are faster to turnover as a result of the increasing competition between organizations regarding salaries and compensation packages which increase the mounting concern about the organization ability to keep acceptable performance levels. Knowledge transfer programs save critical knowledge by focusing on key areas. Some of the immediate benefits of knowledge transfer programs (Dalkir & Liebowitz 2011) are:

1. They recommended reusable documentation of the important knowledge required in job roles.
2. They recommended fast training and knowledge transfer when carried out by individuals who can either use the transferred knowledge themselves or have responsibility of training and mentoring with managing people within an organization.
3. They decrease the impact of the employee who stops working suddenly.
4. They improve and increase the outcome of the organization if faster turnover redesign.
5. They help in successful planning.
6. They prevent the loss of knowledge held only in employees' heads when they leave the organization or retire
7. They increase and enhance employees' development.

### **2.1.2 Attitude**

Attitude is a mental state of readiness, rearrangement by experience or dynamic control on the persons' response to all the goals and situations to which it is related. A general

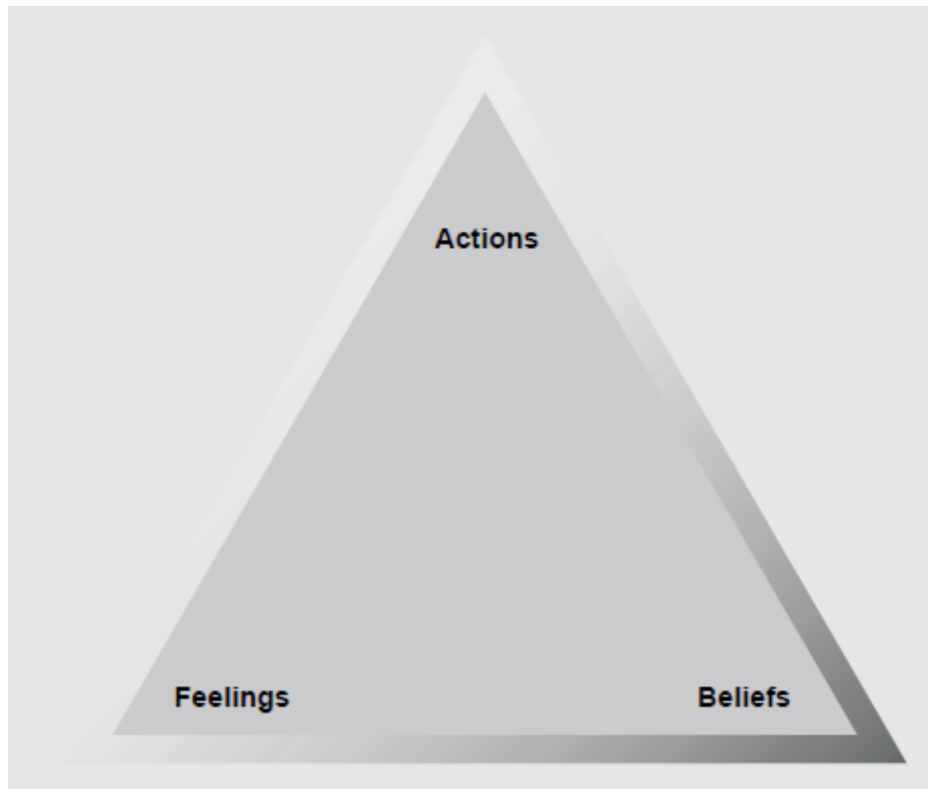
definition of attitude is a mind or a tendency to work in a specific and certain way due to both a person's experience and mood (Copaci et al., 2017).

Usually, when we examine an individual's attitude, we test and explain his/her behavior.

Attitudes are collection of things we tend to call personality in addition to behaviors, motivations and... ect. For example, we easily understand if anyone says, "he has a good attitude regarding his work" versus "he has a bad work attitude" (Pickens, 2005). When we point out to someone's attitude, we are describing the behaviors and emotions of someone.

In fact, someone attitude toward adherence of medicine encompasses his/her thought about the topic and how his/her (feels) regarding this topic, in addition to his/her behaviors (e.g. actions) and combine all this as an outcome of attitude to prevent future health problems.

Figure (2.1) shows the tri-component of attitudes. An attitude includes three components: 1) a feeling or effect. 2), cognition (a thought/belief), and 3) behavior or action (Mason & Butler 2010).



**Figure (2.1). Tri-component Model of Attitudes**

Undoubtedly, the benefits of attitudes are to identify how we see states, how we believe, feel and act toward the object situation. As demonstrated in the tri-component model, attitudes include feelings, thoughts, and actions. Attitudes may not be complex for an enduring measure of an object or subject (e.g., “I like someone better than others employee”). On the other side, attitudes measure emotional reactions to anything (e.g., “I don’t like nervous people” or “Sam makes me in a bad mood”). Finally, attitudes also offer us internal beliefs and thoughts about object or subject (e.g., “my friend should work harder” or “Jane dislike working in this organization”). In brief, Attitudes let us perform in a certain way toward an object or subject (e.g., “I write clear word in patients’ file because it makes me angry when I can’t read person else’s writing”) (Asiegbu et al., 2012). Although the cognition and feeling components of attitudes are internal to a human, we can view a person’s attitude from his/her resulting performance.

Perceptions of attitude are very closely related perception of action and it is often changeable, because they control each other in both external and internal ways. However, the effect perception of attitudes regarding the perception of action depends on the mechanism of action. So, people can make easy action to improve his/her attitude (often through self-perception processes). However, person may create deeper thought of the design of their actions (behavior dissonance). Finally, Self-perception is a theory situation where actions improve attitudes because people feel their attitudes by observing their own action and the situations in which their action occurs (Philbeck and Witt, 2015).

#### **2.1.2.1 Cognitive dissonance theory**

A Viennese physician Alfred Adler (1870–1937), who design the hypothesis of individual psychology, emphasized that a human attitude in the direction of the situation had an important influence on his/her performance. Dr. Alfred said that a human's Tri-component Model of Attitudes (thoughts, feelings, and behaviors) is connected with one's social and physical surroundings and that the direction of effective will be changed according to our attitudes. Also, he said that it will be changed in accordance with the social world and our social world is influenced also by our attitudes. Clearly, interactions between social and physical surroundings can cause a defect between both a person's attitude and behavior and this is referred to as cognitive dissonance. Cognitive dissonance is defined as any conflict that someone perceives between two or more of one's attitudes and behavior. On the other hand, Festinger in 1957 stated that any irregularity structure in attitudes that is make human uncomfortable will enhance the human to decrease the conflict (Pickens, 2005).

#### **2.1.2.2 Formation of attitudes**

The final outcome of education, communication with others, and our experiences with people is called attitude formation. Attitudes often affect our action and enhance our



behavior, which as a result effect what we choose to remember (not often the equal as what we hear). Similarly, like most things, those are educated or effected by our experience, attitudes can be measured and also changed (Bridenball & Jesilow 2008).

### **2.1.2.3 Measurement of attitudes**

Thurstone & Chive (1929) were the designers of the attitude scale to assess workers. It was generally used in any institute to obtain information regarding to workers' attitudes toward their work environments. This information regarding attitudes is helpful for healthcare leaders to identify if management is “doing the true things” for keeping and enhance satisfaction of employees (Mbindyo et al., 2009).

Lowe et al., (2003) recommended that the employees who feel their work environments as “good” (duties, salary, work time, communication relationships, etc) makes them feel good about coming to work and they report elevated job satisfaction that increase morale and enhance commitment in organization. Health worker attitude surveys are usually designed using five-point Likert type (strongly disagree, disagree, natural, agree and strongly agree) or three-point Likert type frequency (never, very and often) response formats. However, organizations need to be careful regarding the design of employees' attitude surveys to ensure that problem site is not unnoticed. Morrel-Samuel design sixteen guidelines for organizations to take when designing workers' attitude survey (Morrel-Samuel, 2002).

### **2.1.2.2 Changing attitudes**

To change attitude among individuals you need to know their emotional and belief components. How would you convince someone else to begin an exercise when they may say, “I don't have enough money” or “I'm just too sad” or “I don't want to risk factors being injured”? One method would be to challenge person's behavior by giving new

information. For instance, give details to someone about how you manage time in your day and, as a result, both your blood glucose and triglyceride decreased (Bearman et al., 2015). This is a behavior approach when someone is presented with new data and information. Providing new recommendation is one procedure for changing a human attitude and therefore his/her behavior. Several studies showed that attitude transfer takes long time and needs a lot of effort with good design, but it can be done. Commonly, it is very difficult to change a person's attitudes quickly. Also, Leaders need to understand that attitude modification takes long time and they should know that changing the attitude does not occur rapidly (Röder, 2015; Vogel & Wanke, 2016). Attitudes are created in human through time life through an individual's socialization development. An individual's socialization development includes process his/her formation beliefs and feelings during infancy and young years that influenced by family, culture and socioeconomic factors (Röder, 2015).

### **2.1.3 Practice**

Definition of practice is very realistic. Also, practice known as the frequently customary or repeated habitual and action. For example, the practice of waking up early, the practice of making coffee and the practice of morning exercise (Choe, 2014).

Practice is described as groups of activities that occur in different times daily or weekly. How these are designed, analyzed and labeled can be different from one person to another. Activities must be defined in a significant process, where the labels create sense for the individual and the practice being analyzed. Activities are established in practices. Activities are built according to knowledge, attitudes and abilities of those performed activities that are related to the community. Practice is achieved through knowledge and attitude to improve communicating between subjects. Moreover, it is routines or procedures applied in patterns through which the world is made sense of. In brief, practice

is human performing activities that are used to create knowledge and it has the highest importance to population (Wake, 2014).

## **2.2 The effect of the educational program on KAP in healthcare**

Suchitra & Devi (2007) illustrated the effect of education and training programs on KAP among several groups of healthcare workers (HCWs) on nosocomial infections. They evaluated the KAP among the HCWs according to nosocomial infections in 150 participants. The participants were divided to three equal groups (doctors, nurses, ward aides) and the number of subjects in each group was fifty. A questionnaire was given to each participant to measure their KAP regarding nosocomial infections. The KAP score system was devised to rank participants. After finishing education and training program they were subjected to series of questionnaires at intervals of 6 months, 1 and 2 years. Subjects in each group of workers were detected for compliance to washing of hand technique in the department after education and training time. The authors illustrated a raise in the number of employees in each group scoring as good and excellent after education and training questionnaire, but this decrease with the progress of time. Therefore, a total score compliance levels was measured among different employees according to hand washing practices changing. The compliance levels as total was 63% and aides department was high compliant among three groups (77 %). They concluded education and training program which has a direct effect on the KAP levels in the employee's groups.

Nursing KAP and barriers to evidence based practice (EBP) at an academic center in California were studied by Brown et al., (2009). They assessed nurses' KAP related to EBP nursing, and the relation of perceived barriers to organizers of EBP. The researchers used observational study and they conducted it during 2006 - 2007. The study included About 450 participants of nurses in academic center (response rate 45%). The researchers used

electronically structured questionnaires by using a safe website. They showed the first perceived organizational barriers were lack of nursing autonomy and time in addition to the lack of some facilitators to learning opportunities, such as availability and simplicity of resources culture building. In this study, the statistical test illustrated a significant association between barriers and KAP related to EBP. However, they concluded similar barriers to the adoption of EPB which have been global. Briefly, they recommended that leaders and managers must improve proactively support EPB to decrease organizational barriers in work environment.

Nurses' most frequently indicated demands to research implementation were suitable information, structural accessibility, and professional support. The most important points of attention were topics concerning nursing phenomena and implementation. Nurses' needs to be educated in nursing research and their implementations of this research were shown as being mainly of an exploratory manner. Their three barriers top to research utilization were lack of time (69.9%), lack of information-knowledge (45.4%) and lack of interest (25.9%). their significant differences between nurses of the two compared groups. Finally, they recommended participating nurses observed a lack in acceptable information and adequate organizational support, which inhibit them to implement research results in daily practice. So, these results highlighted the nurses' needs to use and implement research results in practice, as well as the promotion of positive attitudes towards research. These results are of special interest to nurse educators, employers and countries introducing nursing science to increase the clinical outcomes quality of care for patients (Breimaier et al., 2011).

Mathur et al., (2011) assessed KAP of doctors, nurses, laboratory technicians, and sanitary staff on biomedical waste management. They used cross-sectional study. They showed that the sanitary staff has less knowledge than the doctors, nurses, and laboratory technicians

about biomedical waste management. Regarding the knowledge of color coding and waste isolation, it was found that nurses and laboratory staff know better than doctors. They showed ignorant on all the counts regarding practices related to biomedical waste management in sanitary staffs. However, injury reporting was low through all the groups of health professionals. They recommended the importance of a training program about biomedical waste management; lack of correct and whole knowledge about biomedical waste management control practices of suitable waste disposal.

The use of knowledge, attitudes, and future use of evidence-based practice (EBP) among baccalaureate nursing students at two universities were assessed (Brown et al., 2010). The target groups were nursing students who were already positioned to influence the application of evidence-based practice within the nursing profession. The authors used a cross-sectional survey design and take a convenience sample of 436 nursing students (response rate of 63.3%) registered at two baccalaureate nursing programs at the start of 2007 fall semester in the United States. The surveys included a demographic questionnaire and three-part about knowledge, attitudes and behaviors questionnaire for EBP. EBP Knowledge, Attitudes toward EBP and use in future of EBP subscales statistically significant increase in mean scores with advancing academic levels. They moderate positive correlation with EBP use and future use of EBP in clinical decision-making and clinical preparedness. Concurrent multiple regression analyses showed that the clinical awareness and assurance in clinical decision-making were statistically significant for EBP use and future use of EBP. Clinically well-prepared nursing students with high self-confidence in clinical decision-making are most likely to use evidence-based practice, both in the present and the future.

School nurses' knowledge, attitudes, and perceptions of a role as an opinion leader, and professional practice regarding human papillomavirus vaccine (HPV) for youth were studied in 2015. The results showed overall, school nurses had knowledge about HPV and the vaccine, and positive attitudes toward the vaccine. They had less-than-enthusiastic perceptions of their role as opinion leaders regarding the vaccine and implemented few activities related to providing vaccine information. The model revealed a good fit ( $p < 0.010$ ), with knowledge directly related to attitudes, attitudes directly related to perceptions and practice, and perceptions directly affecting practice. In our model, perceptions functioned as a partial mediator. The authors concluded school nurses' practice regarding the HPV vaccine; the focus should be on increasing positive attitudes toward the vaccine and strengthening perceptions of their role as opinion leaders (Rosen et al., 2015).

The knowledge and attitudes of Student nurses towards domestic violence the study design cross-sectional. The survey was done to undergraduate nursing students registered in a three-year bachelor of nursing program across three grounds of a local university in New South Wales (NSW), Australia (Doranb & Hutchinson, 2017). The survey was taken when Students completed a pen and paper and they did it during class time. A descriptive and comparative analysis started. The results of this study showed that the common respondents were female, first-year student females aged 17–26 years. The domestic violence nature and consequences were understood by Many students, yet others inter the course of the program determine attitudes that reflect a limitation of understanding and misconceptions of domestic violence. Gendered and Stereotypical attitudes that showed the violence as a normal between intimate partner relationships and sustain victim-blaming attitudes were evident across the cohort. The author suggested that nurses must understand the relationship between exposure to violence and women's ill health and must be able to respond appropriately.

The impact of research education about attitude, skill, and understanding of evidence-based practice on student nurse was studied by Leach et al., (2016). The results showed Participants perceived inadequate skills in the explanation, assessment, and application of research result to clinical practice as being less of a limitation to evidence-based practice application post education, and contact to online critical evaluation tools as being significantly more useful in simplifying evidence-based practice acceptance post education.

Higgins et al., (2016) examined the impact of the prenatal mental health module on student midwives' knowledge, skills, and attitudes in addressing mental health issues with women. Results showed a comparison of the pre and post measures, based on paired samples t-tests, showed that the program statistically increased participants' knowledge and skills. Whilst students' self-reported attitudes towards women and mental health issues were already quite positive, they reported even more positive attitudes following the course. Written feedback provided by students also supported these positive findings. They suggested evaluation provides evidence that a module on prenatal mental health is effective at improving the self-reported knowledge, skills, and attitudes of student midwives towards women with mental health issues.

Attitudes and use of research and evidence-based practice were studied among Undergraduate nursing students' by (Ryan, 2016). The researcher illustrated them some factors nearby the attitudes and use of research and evidence-based practice were explained. It included the students' ability, beliefs, attitudes, and support abilities of wards and preceptors. They concluded that undergraduate nursing students are mostly good significant about using research for evidence-based practice, but they lack support and opportunity. Face cultural and attitudinal difficulty, and lack self-assurance to practice

independently in these students. Maybe improving utilization by further research and collaboration between educational facilities and clinical settings would be helpful.

Awareness and attitudes of nursing students towards the prevention of cervical cancer were studied. The results showed most of the students (84.0%) were not aware of other screening methods than Pap smear test and the burden of cervical cancer and its prevention ( $P < 0.001$ ). Approximately half of the respondents (49.9%) have no complete information about the HPV vaccine. However, the other half showed positive attitudes towards HPV vaccination and were eager to recommend HPV vaccine to their family and other members of the community. More than two-thirds of respondents exhibited a positive attitude and were willing to undergo Pap smear in the future. The study shows that the majority of the participants have poor information about cervical cancer prevention. Education would motivate nurses to participate actively in awareness raising, screening, and management (Abdallah et al., 2016).

To evaluate the effect of an educational program on acute care nurses' knowledge, attitudes and the perspective for family caregiver involvement in care for older adults with impairment of cognitive, a mixed-methods study that included a single group, pre-post design, and individual interviews was used. Forty registered nurses were recruited from four medical wards of one regional general hospital in South Korea. A 3-month educational program on care for older adults with cognitive impairment tailored to the specific learning needs of nurses and guided by adult learning principles was provided to participants. A purposive sample of 12 registered nurses who participated in the quantitative component, and a nominated sample of six family caregivers whose older family members were cared for by participating nurses, joined individual interviews.

The results showed that the educational program had a positive impact on nurses' knowledge of cognitive impairment and attitudes towards older adults. The qualitative data



indicated that educational programmes improved nurses' knowledge of cognitive impairment and their attitudes towards older adults with cognitive impairment. It also increased nurses' initial efforts to involve family caregivers in cognitive impairment care. The conclusion of this study was that education programs are effective to develop knowledge and attitudes of nurses', but need more research to identify the effect of education programs on practice change and patient health-related (Kang et al., 2017).

A cross-sectional survey in one rural region in Ireland among nurses working in care of older people settings was done to examine the palliative care knowledge and attitudes towards caring of dying patient. The results showed a total of 61 nurses filled the questionnaire. There was a significant relationship present between the level of knowledge and attitudes towards palliative care ( $p < 0.005$ ), highlighting that as participants' level of knowledge about palliative care increased, attitudes become more positive (Wilson et al., 2016).

A descriptive study was conducted to determine the attitudes of diploma nursing students towards adult clients of different ages in various health situations. The results indicated that nursing students demonstrated positive attitudes toward the elderly compared to younger clients for competence, benevolence, and health. In particular, the student nurses aged from 60 to 80-year-old men more positively than younger clients in both success and failure conditions. Education, age, and sex of the subject had no significance in the attitudes of student nurses. However, students with more past experiences with the elderly indicated more positive attitudes towards elders. Authors suggested future studies to be carried out to examine what exactly in the diploma nursing program promotes positive attitudes, whether attitudes of students affect their quality of care, and whether the person perception paradigm produces similar results in another school of nursing. Also, more

research is required to examine the effect of the specific health situations on the age-related person perceptions of diploma student nurses (Giardina et al., 2016).

Tse and Ho (2014) examined the effectiveness of a pain management program (PMP) in improving the knowledge and attitudes of healthcare employees in pain management by a quasi-experimental pretest and posttest study. Four participants as nursing homes and 88 staff joined the 8-week PMP. The researcher collected the demographics, the knowledge and attitudes about pain with the use of the Nurse's Knowledge and Attitudes Survey about Pain–Chinese version (NKASRP-C) before and after the PMP. A deficit in knowledge and attitudes about pain management was protruding before the PMP, and the results showed a significant increase in pain knowledge and attitudes from  $7.9 \pm SD\ 3.52$  to  $19.2 \pm SD4.4$  ( $p < .05$ ) after the 8-week PMP. Also, A PMP very important to develop the knowledge and attitudes of nursing staff and increase the ability of them to provide adequate and effective care to older persons in pain. Finally, PMP for nurses and all healthcare professionals is a key to improve care for older persons and to inform policy on the provision of pain management.

Crooks, et al., (2005) assessed the professional self-confidence among post-diploma baccalaureate nursing students. A study done by qualitative study, the focus groups were conducted to identify the components of professional confidence as apparent by diploma prepared registered nurses registered in a two-year student-centered, problem-based baccalaureate degree program. The student perception of professional confidence as improvement through 2 phases in the first phase, students take new knowledge and increase the ability to make critical thinking, which in turn enabled them to examine nursing practice and defend decisions with clarity and confidence and s clearly expressed an evidence-based nursing position in both academic and clinical environments with a sense of ownership and similarity with their personal values. The study concluded that any

post diploma programs should be built on knowledge, skills and abilities nurses implement in their practice settings.

Bush and Lowery (2016) studied postgraduate nurse practitioner education: impact on job satisfaction in programs to facilitate nurse practitioner (NP) transition-to-practice have been developed at public and private institutions across the United States, and they show there was no published evidence of their influence on NP job satisfaction. Also, results point out NP job satisfaction was managed to a convenience sample of 2 categories of NPs: first group without formal postgraduate education and a second group with a formal postgraduate education. Postgraduate education has a positive impact relation on NP job satisfaction. Knowledge of factors that impact job satisfaction is advantageous to employers, policymakers, and NPs considering postgraduate education opportunities.

KAP of Nigerian women towards breast cancer: A cross-sectional study was studied by Okobia et al., (2006). They recruited 1000 questionnaires from women from a semi-urban neighborhood in Nigeria in Jan and Feb-2000 by using interviewer-administered questionnaires designed to elicit socio-demographic information and KAP of these women towards breast cancer. The results illustrated poor knowledge of breast cancer among participants (Mean=42.3%) and practice of breast self-examination (BSE) was low (43.2%). Women with a higher level of education and employed in professional jobs ( $P<0.0001$ ) were significantly more knowledgeable about breast cancer. They recommended the establishment and sustenance of institutional framework and policy guidelines that will enhance adequate and urgent dissemination of information about breast cancer to Nigerian women.

KAP and barriers of effective communication skills during medical consultation among general practitioners' National Guard primary healthcare (PHC) in Saudi Arabia was studied. The study was seventy PHC physicians answered a structured questionnaire about

their KAP and barrier of effective communication skills during medical consultations (from Nov. 2009 to Jul. 2010). The results showed seventy of PHC physicians showed 35.7% residents, 40% specialized. The majority (85.7%), of the physicians, did receive training for communication skills. Also, they did note lack proper training (68.5%) as a barrier also. The mean score of practicing communication skills was low (37.2/60) and knowledge score (3.31/60) for the physicians. No Association between knowledge and practice was noted. In contrast, there was a positive correlation between age, years of experience and practicing communication skills was found ( $P < 0.005$ ). Practices were significantly related for residents, staff physicians, and specialists. They concluded that knowledge of communication skills can be improved by training and it does not affect the practice of communication skills among the physician if they do not have self-confident and have the good attitude of consciously applying that knowledge in his/her practice and improvement comes with work experience and age (Al-Zahrani et al. 2015).

In Sri Lanka, Vithana et al., (2015) studied the effectiveness of an educational intervention among public health midwives on breast cancer early detection in the district of Gampaha. Two Medical Officer of Health (MOH) areas in Gampaha district were selected by researchers and they were using random sampling as intervention and control groups. All the PHMs in the two MOH areas participated in the study, with totals of 38 in intervention groups and 47 in control groups. The participant was exposed to an educational intervention with the objective of using them to subsequently conduct the same among 35-59-year women in the community. Following the intervention, post-intervention assessments were conducted at one month and six months to assess the effectiveness of the intervention. Finally, they concluded that planned educational intervention had a significant impact on improving KAP of PHMs for early detection of breast cancer in the Gampaha district.

In Iran, Seighali et al., (2015) studied the effects of two different breastfeeding workshops on improving knowledge, attitude, and practice of participants. A cross-sectional study took place in fetal and neonatal research center (2011- 2012). The intervention composed of two different training courses in breastfeeding. Two workshops were held during three days in two parts: lectures and practical. Each speech regarded the most important aspects of breastfeeding. In the training part, a breastfeeding consultant managed the practical exercises. In the second workshop the lecturers used different methods (didactic, strategies to enhance active involvement, educational devices and so on). A questionnaire was used to evaluate participants' KAP before and after each workshop. The result illustrated among 40 participants in the first workshop, the average age was 37.78 years old, 32 were midwives-nurses and 8 were GPs residents. Twenty-six had children from which 19 breastfed successfully. Of 27 participants in a second workshop with an average age of 38.59 years, 19 were midwives nurses. Fourteen reported having children from which 11 breastfed successfully. Our data showed that both workshops improved participants' KAP scores significantly. No significant differences were seen between two groups' attitude before workshops ( $P\text{-Value} = 0.093$ ) but this difference, after the workshop was noticeable ( $P\text{-value} = 0.000$ ). The pertained background factors in changing KAP were having children, successful breastfeeding experience and age ( $P\text{-value} < 0.05$ ). In service breastfeeding training program improves KAP. However, the interactive, practical method is much more effective in changing attitudes of participants.

Hines et al., (2017) studied evidence-based practice education for better knowledge, attitudes, and practices in nurses and midwives. The authors conducted a cross-sectional study to evaluate the EBP knowledge, attitudes, and practices (KAP) of RNs and midwives who had participated in an EBP workshop and compared their results with those of nonparticipants. A total of 198 nurses and midwives responded to the survey, 91 who had

received EBP education and 107 who had not. The results showed a significant difference in terms of mean total KAP score which was significantly higher in the education group, indicating greater KAP in those respondents than those who had not received education ( $p = 0.004$ ). They concluded that participation in a single day of EBP education covering the basic steps of EBP results in nurses who have more positive attitudes, and greater knowledge and practice abilities in EBP than those who had not participated.

In Sudan, Impact of a designed in-service training program on nurse midwife's knowledge, attitude and practices at management toward postpartum hemorrhage Khartoum hospitals, Khartoum state were studied by Elgalil et al., (2018). Designed in-service training program was developed, implemented and assessed. A total number of 100 nurse midwives selected from six midwifery departments randomly. Sample design chosen was cluster sample. The midwives were enrolled and randomized in case and control group. Midwives in the case group received the training program. The KAP questionnaire was administered to both case and control group, pre-training and at final follow-up to assess the KAP regarding PPH. Official permission was obtained from hospitals' directorates and verbal consent by the participant. The study was implemented in three phases. Preparatory phase, intervention phase and post intervention phase and follow-up. An unstructured questionnaire was used to assess the knowledge and an observational check list was used to assess skills and practices in implementation of AMTSL, application of universal precaution, estimation of blood loss and use of utero-tonic drugs. TOT training program implemented for six senior midwives, two from each hospital, to participate in the training program and to carry on future in-service training program in their respective hospitals. At the end of the study, the KAP score of test group improved significantly. Regarding knowledge, the overall mean scores  $\pm$  SD increased from  $27.72 \pm 6.16$  pre-intervention to  $52.2 \pm 3.68$  after follow-up ( $P$ -value  $< 0.005$ ). Regarding skills and attitude, the results

showed a significant difference with (P-value < 0.005). The study showed that the impact of a designed in-service program was effective and nurse midwives could be important elements in management and prevention of PPH.

## **Chapter Three**

### **Methodology**

#### **3.1 Study design:**

The design of this study was descriptive analytic cross-sectional research. It is an appropriate design to study the effect of a midwifery educational program on graduates' knowledge, attitudes, and practices from the perception of graduates and their workplace supervisors) since this design is efficient in assessing the perception of the study subjects

#### **3.2 Study population**

The study population was 70 graduates from the 3 courses of the professional diploma program in midwifery at Palestine College of Nursing (PCN, 2018) as well as 70 from their workplace supervisors.

#### **3.3 Study settings**

This study was conducted at MOH & NGOs hospitals and primary healthcare clinics where the program's graduates are currently working mainly in Al-Shifa Medical Complex, Nasser Medical Complex, Al-Aqsa Hospital, El-Emaratti Hospital, Al-Kiwitti Hospital, Millitary Hospital and clinics, Al-Awda Hospital, and other places in clinics and colleges.

#### **3.4 Study period**

The study started in November 2017 and finished in July 2018

#### **3.5 Sampling and sample size:**

The researcher used a purposive sample from 60 participants who are the graduates of the three courses of the professional diploma in midwifery program. As well as 50 from their workplace supervisors (head nurses and clinical supervisors).



### **3.6 Eligibility criteria**

#### **3.6.1 Inclusion criteria**

All program graduates who are currently employed in healthcare organization from the 3 courses of the program and their workplace supervisors.

#### **3.6.2 Exclusion criteria**

- Supervisors who were lecturers or clinical instructors in the diploma
- Employed graduates in long vacation or outside the Gaza Strip during data collection period).

### **3.7 Ethical Consideration**

An ethical approval was obtained for the study from the ethical body of health research in Gaza Strip (Helsinki Committee) through the DGHRD-MOH. As well as an informed consent was obtained from all the graduates of the program & their supervisors (study subjects). An administrative approval from MOH & other relevant NGOs (employers of graduates) also was obtained (Annexes 2, 3 & 4, respectively). The researcher has explained the purpose and objectives of the study to all participants. The participation in this study was optional and confidential. Neither name nor personal data were mentioned.

### **3.8. Data collection and tools**

Data was collected through self-administered questionnaire for knowledge, attitudes and practice. The information gathered in these questionnaires revolves around the effect of professional diploma in midwifery educational program on graduates' knowledge, attitudes, and practices.

### **3.8.1 Questionnaires:**

Two questionnaires (one for graduates and another for their supervisors) were developed by the researcher after a long time of reading in the professional diploma in midwifery educational program at PCN documents and searching related perception of knowledge, attitudes, and practices questionnaires and how to measure or explore such topics using a Likert Scale. The questionnaires were reviewed by a panel of experts (annex 6) to evaluate its face and content validity, to ensure the reliability of the questionnaires reliability test was conducted to evaluate the ambiguity, length, and misunderstanding of the questionnaires. The questionnaires included 5 domains, first is demographic data for example including age, governorate, marital status, educational level,...etc, the second is for the perception of graduates' knowledge in relation to curriculum courses and topics which included 16 statements with 5 points score ranged from strongly agree (5 points) to strongly disagree (1 point) for each, the third is for attitudes in relation to professional and ethical attitudes of the midwives which included 10 statements with 5 points score ranged from strongly agree (5 points) to strongly disagree (1 point) for each, the fourth is for practice in relation to dimensions of midwifery practice in obstetrics and gynecology which included 16 statements with 5 points score ranged from strongly agree (5 points) to strongly disagree (1 point) for each, the levels of KAP were classified as high = 80-100, moderate = 60-79.9, and low = less than 60. The last one was for assessing their satisfaction level from the program in relation to duration of the program, faculty members, curriculum, clinical environment, ...etc. which included 3 statements regarding KAP with 5 point score for each (5 points = high satisfaction, 3 points = moderate satisfaction, and 1 point = low satisfaction), as well as their recommendation to improve the future courses (Annexes 5 & 6, respectively).

### **3.8.2 Duration of data collection**

After examining the validity of the questionnaires by the experts and after conducting the pilot study, the researcher and another data collector collected the data by using the self-administrated questionnaire with graduates and their supervisors, it continued for three months from January to March 2018

### **3.9 Response rate**

About 86% (60/70) of surveyed graduates answered the questionnaire properly and returned it in due date and 71.5% (50/70) of surveyed supervisors answered the questionnaire properly and returned it in the due date.

### **3.10 Data entry and analysis**

The researcher used Statistical Package of Social Science (SPSS- version 23) program for data entry and analysis. Frequency tables were used to describe the frequency of specific characters. Some statistical tests were used as appropriate such as percentage (%), means and standard deviation (SD), t-test to assess whether the means of two groups are statistically different from each other, One way analysis of variance (ANOVA) test to determine whether there are any significant differences among the means of more than two independent groups. As well as the researcher used Person correlation (r) to test correlation between KAP and satisfaction. Finally, Probability value (P-value) less than 0.05 was considered statistically significant, with confidence interval (CI) of 95%.

### **3.11 Pilot study**

A pilot study of 10 participants of midwifery diploma and 10 workplace supervisors (5 head nurses + 5 clinical managers) in health care institutions was done to test the reliability of the research questionnaires and check the feasibility of the study, minor modifications of

the questionnaires were done as appropriate and the questionnaires were included in the study sample.

### **3.12 Scientific rigor**

#### **3.12.1 Validity of the questionnaires:**

The questionnaires were evaluated by experts to assess all the components and the context of the instrument, in order to ensure that it is highly valid and relevant and their comments were taken in consideration, the questionnaires were formatted in order to ensure face and content validity, this including appealing layout, and logical sequences of relevant and clear questions.

#### **3.12.2 Reliability of the data**

Training of data collectors on the interviewing steps and the way of asking questions. This was assured standardization of questionnaire filling. Data entry was entered in the dataset on the same day of collection. Re-entry of 5% of the data after finishing data entry was done to assure correct entry procedure and decrease entry errors.

Table 3.1 shows the values of Cronbach's alpha for each field of the questionnaire and the entire questionnaire. For the fields graduate's questionnaire, values of Cronbach's alpha were in the range from 0.751 and 0.937. Cronbach's alpha equals 0.938 for the entire questionnaire, which indicates good reliability of the entire questionnaire. Regarding supervisor's questionnaire, values of Cronbach's Alpha were in the range from 0.825 and 0.864. Cronbach's alpha equal 0.994 for the entire questionnaire, which indicates good reliability of the entire questionnaire (Table 3.2).

**Table 3.1 Cronbach's Alpha for each field of the graduate's questionnaire**

<b>Paragraph</b>	<b>Cronbach's alpha</b>
Knowledge	0.895
Attitude	0.910
Practice	0.937
Satisfaction	0.751
Total	0.938

**Table 3.2 Cronbach's Alpha for each field of the supervisor's questionnaire**

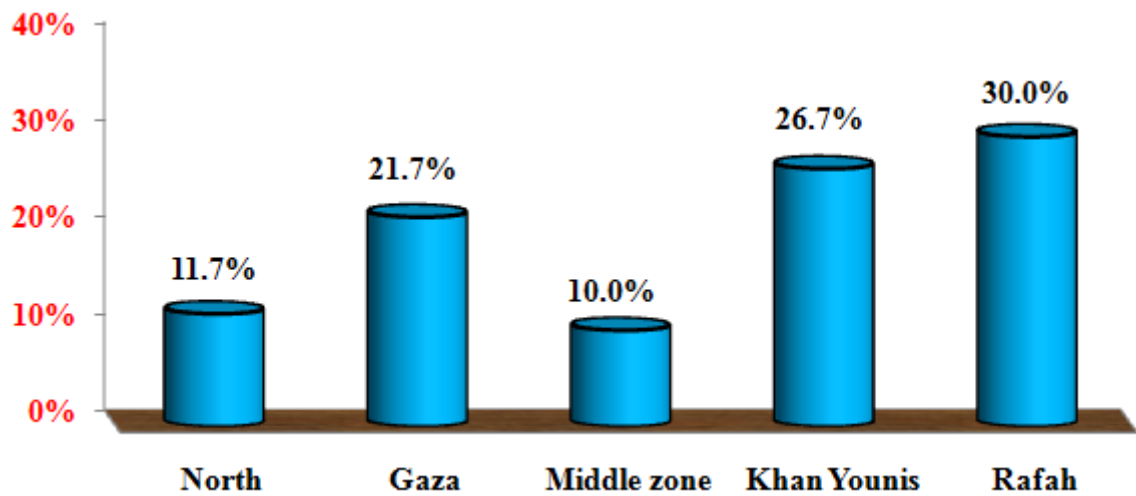
<b>Paragraph</b>	<b>Cronbach's alpha</b>
Knowledge	0.864
Attitude	0.825
Practice	0.832
Total	0.994

## **Chapter four**

### **Results and discussion**

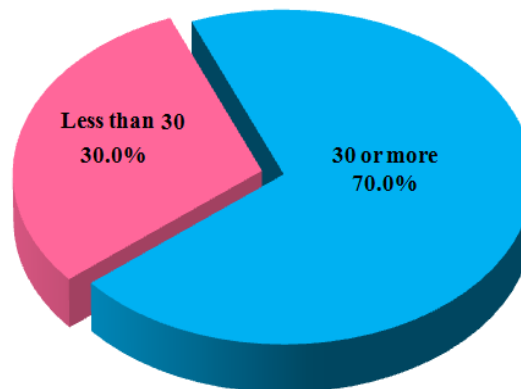
This chapter points out the results and discussion of the statistical analysis of the data, including descriptive analysis that presents the sociodemographic data of the study and the answers to the questions of the study. The researcher used a purposive sample from 60 participants who are the graduates of the three courses of the professional diploma in midwifery program and 50 from their supervisors. The response rate was 85.7% among graduates and 71.4 among their supervisors. The researcher used proper statistical calculation including frequencies (%) for categorical groups and mean (SD) for numerical data. However, the researcher used proper statistical tests such as one sample t test to investigate the items and domains of the questionnaire. Also, the researcher used two sample t-test, and Pearson Correlation coefficient to test the association of knowledge, attitude and practice with studied variables. The items are positive induct that the respondents agree with their content if the calculated t value is higher than the t value of 2.00 (or  $P \leq 0.05$  and the relative weight is higher than sixty percent. In contrast, negative is indicating to negative sense that the sample does not agree with its item if the calculated t value is lower than the 2.00 (or  $P > 0.05$  and the relative weight is less than 60%).

#### 4.1 Distribution of the graduates according to governorates and age



**Figure 4.1:** Distribution of the graduates' according to their governorate.

The number of graduates from North, Gaza, Middle zone, KhanYounis and Rafah Governorates was 7 (11.7%), 13 (21.7%), 6 (10%), 16 (26.7%) and 18 (30%), respectively (Figure 4.1).



**Figure 4.2:** Distribution of the graduates' according to their age groups.

Figure (4.2) showed the distribution of graduates according to their age groups, about two thirds (42 (70.0%)) of the graduates have age 30 years while 18 (30.0%) have age less than 30 years. the average (SD) of age was 35.2 (6.7) years.

**Table 4.1** Distribution of the graduates' according to their socio-demographic information

<b>Socio-demographic data</b>		<b>n</b>	<b>%</b>
<b>Marital status</b>	Married	44	73.3
	Unmarried	16	26.7
<b>Children number</b>	≤4	21	47.7
	>4	23	52.3
<b>Levels of education before entry to the program</b>	Bachelor	56	93.3
	Master	4	6.7
<b>Place work</b>	Al-shifa	15	25.0
	Nasser	10	16.7
	Alaqsa	4	6.7
	Emaraty	6	10.0
	PHC	5	8.3
	Others	20	33.3
<b>Workplace</b>	Governmental Hospitals	49	81.7
	Governmental PHC clinics	7	11.7
	NGOs PHC clinics	1	1.7
	NGOs Hospitals	3	5.0
<b>Experience (years)</b>	≤ 10	30	50.0
	>10	30	50.0
<b>Experience in maternity (years)</b>	≤4	26	43.3
	> 4	34	56.7
<b>Work position</b>	Head nurse	11	18.3
	Senior staff nurse	11	18.3
	Staff nurse	28	46.7
	Supervisor	10	16.7
<b>Period graduation groups (years)</b>	≤ 5	45	75.0
	>5	15	25.0
<b>Your work department area</b>	Gynecology	49	81.7
	Others	11	18.3

NGOs: Non-governmental organizations and **PHC**: Primary healthcare



Table 4.1 Distribution of the graduates' according to their socio-demographic information. About three fourths 44 (73.3%) of the graduates were married while 16 (26.7%) were unmarried. Additionally, demonstrated about half 23 (52.3%) of married graduates have more than 4 children with an average of children was about 5 children. Regarding educational level before entry to the program, most of the graduates were had bachelor certificate 56 (93.3%) while 4 (6.7%) were with a master degree (Figure 4.5). The distribution of the graduates according to their place work were 15 (25%), 10 (16.7%), 4 (6.7%), 6 (10%), 5 (8.3%) and 20 (33.3%) in Al-Shifa, Nasser, Alaqsa, Emaraty, PHC and others, respectively. Classification of the work type from governmental hospitals, governmental PHC clinics, NGOs PHC clinics, NGOs Hospitals were 49 (81.7%), 7 (11.7%), 1 (1.7%) and 3 (5%), respectively. the distributions of the graduates' according to their years of experience were the same between more than 10 years or 10 years less. On the other hand, the experience in the maternity department was four years or less were 26 (43.3%) while 34 (56.7%) more than 4 years (Figure 4.9). Regarding work position, the prevalence of head nurse, senior staff nurse, staff nurses' and supervisor were 11 (18.3%), 11 (18.3%), 28 (46.7%) and 10 (16.7%), respectively. Most of the graduates (45 (75.0%)) were period graduation 5 years or less while 15 (25%) were more than 5 years. On the other, the average (SD) period from graduation from last qualification and entry into the Professional diploma in midwifery program were 7.1 (5.3) years. Finally, 49 (81.7%) of the graduates were work in Obstetrics & gynecology departments department area and 11 (18.3%) work in other departments.

## 4.2 Distribution of the graduates' according to their responses about knowledge

**Table 4.2:** Distribution of graduates according to their perception about knowledge

Variable and level	n (%)	Mean (SD)	Min	Max	level
<b>Graduates' knowledge</b>		86 (8.5)	63.8	100	High
High (80 –100)	56 (93.3)				
Moderate (60 – 79.9)	4 (6.7)				

**n:** number of the subjects; **SD:** standard deviation; **Min:** minimum and **Max:**..maximum

Distribution of the graduates' according to their responses about knowledge illustrated in Table 4.2. The graduates were asked 16 questions by a five-point Likert related to the knowledge gained from the professional diploma of midwifery program. It was found that mean percentage of graduates' knowledge = 86.0 % and SD = 8.5 (minimum 63.8% and maximum 100%), Most of graduates' knowledge level was high (93.3%), and the rest were at the moderate levels by (6.7%). These results are congruent with the findings of Suchitra & Devi (2007) study about the effect of education programs on KAP among several categories of health care employees on nosocomial infections that found significant relation between continuing education and improvement of employees' knowledge. The professional midwifery program as any new education program for postgraduate nurse added more and specific knowledge that may help in health care.

**Table 4.3: Mean score of graduates' perceptions about Knowledge items**

<b>Knowledge</b>	<b>Mean±SD</b>	<b>(%)</b>	<b>t</b>	<b>P-value</b>	<b>Rank</b>
1. My knowledge about care of normal pregnancy case is improved	4.7±0.5	94	23.368	< 0.001	1
2. My knowledge about steps of normal vaginal delivery is improved	4.7±0.5	94	23.368	< 0.001	1
3. My knowledge about complicated pregnancy cases is improved	4.6±0.6	92	20.114	< 0.001	3
4. My knowledge about postnatal dangerous signs of the mother is improved	4.4±0.7	88	16.494	< 0.001	4
5. My knowledge about use of partogram is improved	4.4±0.7	88	19.703	< 0.001	4
6. My knowledge about neonatal assessment is improved	4.4±0.6	88	16.494	< 0.001	4
7. My knowledge about complicated delivery is improved	4.4±0.7	88	17.737	< 0.001	4
8. My knowledge about dangerous neonatal signs is improved	4.4±0.6	88	15.860	< 0.001	4
9. My knowledge about gynecology cases is improved	4.3±0.5	86	21.726	< 0.001	9
10. My knowledge about non-pharmacologic management of labor pain is improved	4.3±0.7	86	14.311	< 0.001	9
11. My knowledge about communicable diseases of mothers and children is improved	4.2±0.8	84	11.795	< 0.001	11
12. My knowledge about ethical dilemmas in maternal health is improved	4.1±0.6	82	13.563	< 0.001	12
13. My knowledge about ministry of health obstetric protocols is improved	4.0±1.0	80	9.729	< 0.001	13
14. My knowledge about research and evidence-based practice is improved	4.0±0.8	80	7.876	< 0.001	13
15. My knowledge about management is improved	4±0.8	80	9.652	< 0.001	13
16. My knowledge about violence as women issue is improved	3.9±0.7	78	10.545	< 0.001	16
<b>Total</b>	<b>4.3±0.4</b>	<b>86</b>	<b>23.674</b>	<b>&lt; 0.001</b>	

\*P≤0.05: Significant, P>0.05: Not significant; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t-test

The mean scores of participants' perception about knowledge pointed out in table 4.3. The items of the highest scores were “my knowledge about the care of normal pregnancy case is improved and my knowledge about steps of normal vaginal delivery is improved (94%) while the items of the lowest scores were “my knowledge about research and evidence-based practice is improved (80%), My knowledge about management is improved (80%) and” My knowledge about violence as women issue is improved (78%)”. There was statistically significance in the all items regarding the perceived knowledge gained from the professional diploma in midwifery educational program  $p\text{-value} \leq 0.001$ . The result was logic since the knowledge in a specialty area is expected to increase after exposure to long and specialized educational program.

#### 4.3 Distribution of the graduates' according to their responses about attitude

**Table 4.4:** Distribution of graduates according to their perception about attitude

Variable and level	n (%)	Mean (SD)	Min	Max	level
<b>Graduates' attitude</b>		86 (11.1)	46	100	High
High (80 –100)	52 (86.7)				
Moderate (60 – 79.9)	6 (10.0)				
Low (less than 60)	2 (3.3)				

**n:** number of the subjects; **SD:** standard deviation; **Min:** minimum and **Max:** maximum

Table 4.4 summarized levels and mean score of graduates attitude regarding to professional diploma. The graduates were asked 10 questions by a five-point Likert related to the attitude gained from the professional diploma of midwifery program. It was found that mean percentage of graduates' attitude 86% and SD = 11.1 (minimum 46% and maximum 100%). Most of graduates' attitude level was high and the rest were at the

moderate levels by (10.0%) and low (3.3%). This study finding is congruent with the findings of Wilson et al., (2016). Participants' level of knowledge increased, attitudes become more positive to work towards caring for clients after completing education program and congruent to another study (Kang et al., 2017) that concluded that educational programs are effective means of improving nurses' attitudes.

**Table 4.5:** Mean scores of the graduates' perceptions about attitude items

<b>Attitude</b>	<b>Mean± SD</b>	<b>%</b>	<b>t</b>	<b>P-value</b>	<b>Rank</b>
1. My respect to family centered care is improved	4.5±0.6	90	20.711	< 0.001	1
2. My respect to patient privacy is improved	4.5±0.6	90	18.222	< 0.001	1
3. My respect to the role of the midwife is improved	4.5±0.9	90	12.098	< 0.001	1
4. My respect to patient needs is improved	4.4±0.8	88	13.442	< 0.001	4
5. My willingness to client advocacy is improved	4.4±0.6	88	17.263	< 0.001	4
6. My willingness to cooperation with other professionals is improved	4.3±0.6	86	15.424	< 0.001	6
7. My respect for the role of the family in supporting client is improved	4.3±0.9	86	11.056	< 0.001	6
8. My willingness to use therapeutic communication is improved	4.2±0.7	84	12.649	< 0.001	8
9. My scope to handle ethical dilemma in maternal health is improved	4.1±0.7	82	11.631	< 0.001	9
10. My valuing to research is improved	4±0.9	80	8.643	< 0.001	10
<b>Total</b>	<b>4.3±0.6</b>	<b>86</b>	<b>18.039</b>	<b>&lt; 0.001</b>	

\*P≤0.05: Significant, P>0.05: Not significant; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t-test

The mean scores of the graduates' responses about the attitude as demonstrated in table 4.5.

It was found that the ranking of the highest responses were for the items "my respect for family-centered care is improved and "My respect for patient privacy is improved and my

respect to the role of the midwife is improved (90%)” while the lowest scores were for the items "my scope to handle ethical dilemma in maternal health is improved (82%) and my valuing to research is improved (80%)".

All items about the perception of the attitude were statistically significant  $p \leq 0.001$  this means the level of attitude increased according to graduates’ perception as Ho (2014) study result about education program can improve the attitudes of nursing staff.

#### 4.4 Distribution of the graduates’ according to their responses about practice

**Table 4.6:** Distribution of graduates according to their perception about practice

Variable and level	n (%)	Mean (SD)	Min	Max	level
<b>Graduates’ practice</b>		88 (10.9)	60	100	High
High (80 –100)	46 (76.7)				
Moderate (60 – 79.9)	14 (23.3)				

**n:** number of the subjects; **SD:** standard deviation; **Min:** minimum and **Max:** maximum

Distribution of the graduates’ according to the mean scores of their perception regarding the practice items as illustrated in table 4.6. It was found that the mean percentage of graduates’ practices = 88% and SD = 10.9 (minimum 60% and maximum 100%), Most of graduates' practices level was high (76.7%), and the rest were at the moderate levels by (23.3%). The practice had high level also that’s similar to Higgins et al. (2016) that suggested evaluation provides evidence that a module on prenatal mental health is effective at improving the self-reported skills of student midwives towards women with health issues. That’s mean that the professional diploma in midwifery educational program succeeded to have high perception of graduates regarding their practice improved skills and performance in midwifery related practice areas.

**Table 4.7:** Mean scores of the graduates' perceptions about practice items

<b>Practice</b>	<b>Mean± SD</b>	<b>%</b>	<b>t</b>	<b>P-value</b>	<b>Rank</b>
1. My practice in giving instructions to mother about postnatal problems is improved	4.6±0.6	92	22.193	< 0.001	1
2. My practice with women in antenatal care is improved	4.5±0.7	90.0	19.050	< 0.001	2
3. My practice in family planning is improved	4.5±0.7	90	16.212	< 0.001	2
4. After finishing the diploma my practice to give instructions to the mother about dangerous neonatal signs is improved	4.5±0.6	90	15.533	< 0.001	2
5. My use to non-pharmacological approach to relive labor pain during delivery is improved	4.4±0.7	88	17.886	< 0.001	5
6. My practice in health education is improved	4.4±0.9	88	12.350	< 0.001	5
7. My use of partograph to detect any abnormality is easier	4.4±0.7	88	14.333	< 0.001	5
8. My practice in assessment of neonates is improved	4.4±0.7	88	16.212	< 0.001	5
9. After finishing the diploma my practice to teach my colleagues is increased	4.4±0.6	88	16.085	< 0.001	5
10. My communication with other professionals is improved	4.4±0.8	88	15.967	< 0.001	5
11. My practice in situations threaten client safety is more effective	4.3±0.7	86	17.176	< 0.001	11
12. My practice in gynecological cases is improved	4.3±0.6	86	13.547	< 0.001	11
13. My practice with complicated delivery cases is improved	4.2±0.9	84	9.327	< 0.001	13
14. I much better utilize the research findings & best evidence in my practice	4.2±1.0	84	10.425	< 0.001	13
15. My managerial abilities in practice are improved	4.1±0.9	82	9.776	< 0.001	15
<b>Total</b>	<b>4.4±0.5</b>	<b>88</b>	<b>19.723</b>	<b>&lt; 0.001</b>	

\*P≤0.05: Significant, P>0.05: Not significant; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t-test



Table 4.7 showed the mean scores of the graduates' perception regarding the practice items. The weighted mean for the domain of the graduates' practice was 88% and statistically significant at less than 0.05 by using one sample t-test. According to the results, the highest score was for the paragraph "my practice in giving instructions to mother about postnatal problems is improved" with weighted mean 92% and statistically significant at less than 0.05, followed by the paragraphs " my practice in family planning is improved and after finishing the diploma my practice to give instructions to the mother about dangerous neonatal signs is improved" with a weighted mean of 90 % for both. While the lowest score was for the paragraph " my managerial abilities in practice are improved" with weighted mean 82% and statistical significance at less than 0.05, followed by the paragraphs " I much better utilize the research findings & best evidence in my practice and my practice with complicated delivery cases is improved" with a weighted mean 84% and statistically significant at 0.05.

These results agreed with crooks, et al. (2005) that stated any post diploma programs should be built on skills and abilities nurses implement thus influence improvement in their practice.

#### 4.5 Distribution of the graduates' according to their responses about satisfaction

**Table 4.8:** Distribution of graduates according to their satisfaction

Variable and level	n (%)	Mean (SD)	Min	Max	level
<b>Graduates' KAP</b>		78(11.0)	52	96	Moderate
High (80 –100)	32(53.3)				
Moderate (60 – 79.9)	24 (40.0)				
Low (less than 60)	4 (6.7)				

**n:** number of the subjects; **SD:** standard deviation; **Min:** minimum and **Max:** maximum

Distribution of the graduates' according to their responses about satisfaction in table 4.8.

Overall, it was found that the mean of graduates' satisfaction was moderate = 78% and SD = 11.0 (minimum = 52% and maximum =96%). In addition, the levels of the graduates' satisfaction were analyzed, it was found that most (53.3%) of the graduates' satisfaction was at the high level (80-100), while those at the moderate level (40.0%) and the rest was low (6.7%). Generally, the result was positive but may be there were some challenges faced the graduates during their study in the program. The result comealong with the Bush and Lowery (2016) study that mentioned postgraduate education has a significant positive effect on satisfaction.

**Table 4.9:** Mean scores of the graduates' responses on satisfaction items

<b>Satisfaction</b>	<b>Mean± SD</b>	<b>%</b>	<b>t</b>	<b>P-value</b>	<b>Rank</b>
Lecturers	4.6±0.8	92	14.605	< 0.001	1
Clinical instructors	4.5±1.0	90	11.884	< 0.001	2
Number of total Program credit hours	4.3±1.1	86	8.898	< 0.001	3
Number of theoretical Program credit hours	4.3±1.1	86	8.898	< 0.001	3
Curriculum	4.1±1.0	82	8.784	< 0.001	5
Evaluation system of the program	3.9±1.1	78	6.167	< 0.001	6
Number of program clinical hours	3.8±1.3	76	4.808	< 0.001	7
Clinical training environment	3.5±1.1	70	3.390	0.001	8
Skill lab.	3±1.4	60	-0.191	0.849	9
Class teaching environment	2.6±1.2	52	-2.688	0.009	10
<b>Total</b>	<b>3.9±0.6</b>	<b>78</b>	12.011	<b>&lt; 0.001</b>	

\*P≤0.05: Significant, P>0.05: Not significant; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t-test

Table 4.9 showed the mean scores of the graduates' satisfaction. the weighted mean for the domain of graduates' satisfaction was 78% and statistically significantly at less than 0.05 by using one sample t-test. According to the results, the highest mean score was for the paragraph "Lecturers" with weighted mean 92% and statistically significant at less than 0.05, followed by the paragraph "Clinical instructors" with weighted mean 90 %. While the lowest mean score was for the paragraph " Class teaching environment"; with weighted mean 52% and statistical significance at less than 0.05, followed by paragraph "Skill lab" with weighted mean 60% and not statistically significant at 0.05. The results supported the quality of faculty members as qualified but the skill lab. and the class teaching

environment take the lower level may be due to less of funds to prepare the class environment and less of time to the application of skills in the skill lab.

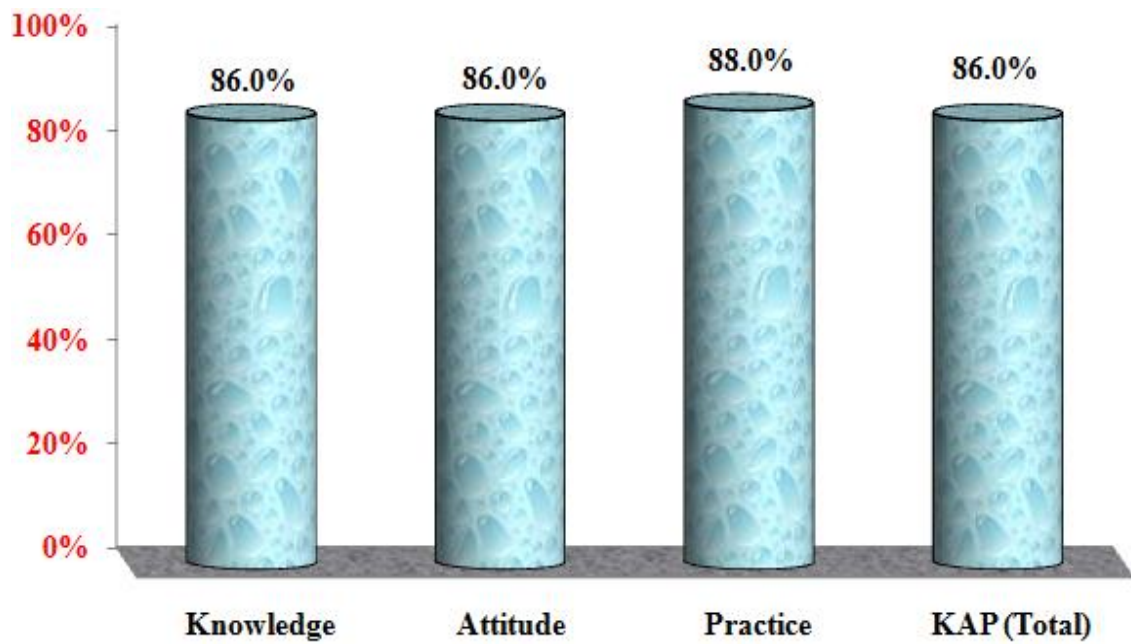
#### 4.6 Distribution of the graduates' according to their responses about KAP

**Table 4.10:** Distribution of graduates according to their overall KAP levels.

Variable and level	n (%)	Mean (SD)	Min	Max	level
<b>Graduates' KAP</b>		84.1(8.0)	60.8	94.8	High
High (80-100)	48 (80.0)				
Moderate (60-79.9)	12 (20.0)				
Low (less than 60)	0 (0.0)				

**n:** number of the subjects; **SD:** standard deviation; **Min:** minimum and **Max:** maximum

Table 4.10 summarized the distribution of the graduates' according to their responses to KAP. Overall, it was found that graduates' KAP mean was = 84.1% and SD = 8.0 (minimum 60.8% and maximum 94.8%), which was at the high level. In addition, the levels of the graduates' KAP was analyzed, it was found that most of the graduates were at the high level (80.0%), while the rest were at the moderate level (20.0%).



**Figure 4.3:** Distribution of the graduates' according to their responses about KAP.

Figure 4.3 summarized the rank of KAP, the practice was highest (88.0%) followed by knowledge and attitude (86.0%). The findings of this study agrees with Suchitra & Devi (2007) study which concluded that education has a positive effect on the maintenance of KAP in all the categories of employees.

#### 4.7 The mean differences in KAP related to age groups among graduates

**Table 4.11:** The mean differences in KAP in relation to age groups among graduates

	Age groups	n	Mean $\pm$ SD	%	t	P-value
<b>Knowledge</b>	Less than 30	18	4.2 $\pm$ 0.4	84	-0.956	0.343
	30 or more	42	4.3 $\pm$ 0.4	86		
<b>Attitude</b>	Less than 30	18	4.0 $\pm$ 0.8	80	-2.417	0.019
	30 or more	42	4.4 $\pm$ 0.4	88		
<b>Practice</b>	Less than 30	18	4.3 $\pm$ 0.7	86	-0.801	0.426
	30 or more	42	4.4 $\pm$ 0.5	88		
<b>Total</b>	Less than 30	18	4.2 $\pm$ 0.6	84	-1.582	0.119
	30 or more	42	4.4 $\pm$ 0.4	88		

\*P $\leq$ 0.05: Significant, P>0.05: Not significant; **SD**: standard deviation; **%**: weighted mean & **t**: two sample t-test

The mean differences in KAP related to age among graduates pointed out in table 4.11. There was a statistical significant difference in the mean of graduates attitude between different age groups (80% vs. 88.0%; P= 0.019). In contrast, there were no statistically significant differences between age less than 30 years and 30 years or more in knowledge and practice (P>0.05). This result is similar to Okobia (2006) study about KAP of Nigerian ladies towards breast cancer that found no significant relationship between knowledge and age group of ladies. The findings of this study may be explained also by the young age of the graduates as of them under 46 years so the ability to learn is still mostly similar in both age groups.

#### 4.8 The mean differences in KAP in relation to marital status among graduates

**Table 4.12:** The mean differences in KAP in relation to marital status among graduates

	<b>Marital status</b>	<b>n</b>	<b>Mean± SD</b>	<b>%</b>	<b>t</b>	<b>p</b>
Knowledge	Married	44	4.4±0.4	88	3.104	0.003
	Unmarried	16	4.0±0.5	80		
Attitude	Married	44	4.4±0.6	88	1.932	0.058
	Unmarried	16	4.1±0.5	82		
Practice	Married	44	4.4±0.5	88	1.042	0.302
	Unmarried	16	4.3±0.7	86		
Total	Married	44	4.4±0.4	88	2.147	0.036
	Unmarried	16	4.1±0.5	82		

\*P≤0.05: Significant, P>0.05: Not significant; SD: standard deviation; %: weighted mean & t: independent t-test

Table 4.12 showed the relation between KAP and marital status among graduates. There was a statistically significant difference in the mean of graduates total KAP (88% vs. 82%, P= 0.036) and knowledge (88% vs. 80%; P= 0.003) between different age groups. In contrast, there were no statistically significant differences between married and unmarried for attitude and practice (P>0.05). In the knowledge the significant relationship between marital status and knowledge may be explained by that the married women may have more commitment and motivated to show success for their husbands and children compared to the unmarried women, while in practice and attitude they have the same environment as unmarried in the clinical environment so the result showed no significant differences in the attitude and practice in relation to marital status.

#### 4.9 The mean differences in KAP related to children number among graduates

**Table 4.13:** The mean differences in KAP related to children number among graduates

Variable	Child number	n	Mean± SD	%	t	p
Knowledge	≤ 4	22	4.3±0.3	86	-0.623	0.537
	>4	24	4.4±0.4	88		
Attitude	≤ 4	22	4.2±0.7	84	-1.539	0.131
	>4	24	4.4±0.4	88		
Practice	≤ 4	22	4.3±0.5	86	-1.277	0.208
	>4	24	4.5±0.5	90		
Total	≤ 4	21	4.3±0.5	86	-1.283	0.207
	>4	23	4.5±0.4	90		

\*P≤0.05:..Significant, P>0.05:..Not.significant;..SD:..standard.deviation;..%:..weighted.mean.&.t.: Independent t-test

Table 4.13 illustrated the mean difference in KAP related to children number among graduates. The student t-test showed there were no statistically significant differences in the mean of graduates' KAP with regard to children number of graduates (P>0.05). The finding could be explained by the mother who have one child need care as well as who have more child so there is no significant difference between KAP and number of children.



#### 4.10 The mean difference in KAP related to workplace among graduates

**Table 4.14:** The mean difference in KAP related to workplace among graduates

	Work Place	n	Mean± SD	%	t	P
Knowledge	Obstetrics & gynecology	49	4.2±0.4	84	-5.567	< 0.001
	Others	11	4.8±0.2	96		
Attitude	Obstetrics & gynecology	49	4.2±0.6	84	-3.065	0.003
	Others	11	4.7±0.2	94		
Practice	Obstetrics & gynecology	49	4.3±0.5	86	-4.273	< 0.001
	Others	11	4.9±0.1	98		
Total	Obstetrics & gynecology	49	4.2±0.4	84	-4.752	< 0.001
	Others	11	4.8±0.1	96		

\*\*P≤0.05: Significant, P>0.05: Not significant; **SD**: standard deviation; **%**: weighted mean & **t**: Independent t-test

Table 4.14 showed the mean differences in KAP in relation to workplace among graduates. There was a statistically significant difference in the mean of graduates KAP between different workplaces (84% vs. 96%;  $P < 0.001$ ), Knowledge (84% vs. 96%;  $P < 0.001$ ), attitude (84% vs. 96%;  $P = 0.003$ ) and practice (86% vs. 98%;  $P < 0.001$ ). The result showed the significant statistical difference between KAP and workplace area, the result may be explained by the graduates who are working in other areas rather than obstetrics & gynecology departments have more KAP benefit about midwifery from the program than those who already work in these departments and familiar to the specialty which may decrease their interest.

#### 4.11 The mean differences in KAP related to experience among graduates

**Table 4.15:** The mean differences in KAP related to experience among graduates

Variable	Experience	n	Mean±SD	%	t	P
Knowledge	≤ 10	30	4.3±0.5	86	-0.320	0.750
	>10	30	4.3±0.3	86		
Attitude	≤ 10	30	4.3±0.7	86	-0.508	0.613
	>10	30	4.3±0.4	86		
Practice	≤ 10	30	4.4±0.6	88	0.111	0.912
	>10	30	4.4±0.4	88		
Total	≤ 10	30	4.3±0.6	86	-0.262	0.794
	>10	30	4.3±0.3	86		

\*\*P≤0.05: Significant, P>0.05: Not significant; **SD**: standard deviation; **%**: weighted mean & **t**: independent t-test

Table 4.15 illustrated the mean differences in KAP related to experience among graduates. There was no statistically significant difference in the mean of graduates KAP between different years of experience groups (P>0.05).

The findings were inconsistent with the study of Al-Zahrani et al. (2015) that showed a strong relationship between years of experience and KAP about communication.

#### 4.12 The mean differences in KAP related to graduates' experience in maternity

**Table 4.16:** The mean differences in KAP related to experience in maternity among graduates

Variable	Experience in Maternity	n	Mean± SD	%	t	P
Knowledge	≤ 4	26	4.3±0.5	86	0.557	0.579
	>4	34	4.3±0.4	86		
Attitude	≤ 4	26	4.2±0.7	84	-1.580	0.119
	>4	34	4.4±0.4	88		
Practice	≤ 4	26	4.4±0.6	88	0.190	0.850
	>4	34	4.4±0.5	88		
Total	≤ 4	26	4.3±0.5	86	-0.382	0.704
	>4	34	4.3±0.4	86		

\*P≤0.05: Significant, P>0.05: Not significant; SD: standard deviation; %: weighted mean. & t: independent t-test

Table 4.16 illustrated the mean differences in KAP related to experience in maternity among graduates. The results showed there were no statistically significant differences between who have experience in maternity for 4 years or less and those for more than 4 years for KAP (P>0.05). There was no significant relationship between KAP and experience in maternity among graduates (P> 0.05) which disagree with Al-Zahrani, et al. (2015) study that indicated graduate worked in maternity at least one year able to have more of KAP same who worked more than 4 years.

#### 4.13 The mean differences in KAP related to work position among graduates

**Table 4.17:** The mean differences in KAP related to work position among graduates

	Work position	n	Mean± SD	%	F	P
Knowledge	Head nurse	11	4.3±0.3	86	1.970	0.129
	Senior staff nurse	11	4.1±0.5	82		
	Staff nurse	28	4.3±0.4	86		
	Supervisor	10	4.5±0.4	90		
	Total	60	4.3±0.4	86		
Attitude	Head nurse	11	4.5±0.4	90	1.884	0.143
	Senior staff nurse	11	4.3±0.3	86		
	Staff nurse	28	4.1±0.7	82		
	Supervisor	10	4.5±0.4	90		
	Total	60	4.3±0.6	86		
Practice	Head nurse	11	4.6±0.4	92	2.102	0.110
	Senior staff nurse	11	4.1±0.5	82		
	Staff nurse	28	4.3±0.6	86		
	Supervisor	10	4.6±0.3	92		
	Total	60	4.4±0.5	88		
Total	Head nurse	11	4.5±0.2	90	1.888	0.142
	Senior staff nurse	11	4.1±0.4	82		
	Staff nurse	28	4.3±0.5	86		
	Supervisor	10	4.5±0.3	90		
	Total	60	4.3±0.5	86		

\*P≤0.05: Significant, P>0.05: Not significant; n: number of the subjects; SD: standard deviation; %: weighted mean; &N OVA: Analysis of variance.

Table 4.17 illustrates the mean difference in KAP related to work position among graduates. There was no statistically significant difference in the mean of graduates KAP among work positions (P>0.05). The result showed no statistically significant differences between work position and KAP from the program may be because the all the graduates originally are general nurses and their work position not related to their specialization in midwifery but to their years of experience and satisfactory performance as perceived by their direct managers who assign them to various work positions.

#### 4.14 The relation between satisfaction and socio-demographic data among graduates work position among graduates

**Table 4.18:** The mean difference in satisfaction related to satisfaction and socio-demographic data among graduates

Variable	Socio-demographic	n	Mean	%	Statistical test	P-value
<b>Work place</b>	Governmental Hospitals	49	3.9±0.5	78	F=0.798	0.500
	Governmental PHC clinics	7	3.9±0.7	78		
	NGOs Hospitals	3	3.5±0.8	70		
	NGOs PHC clinics	1	3.4	68		
<b>Experience</b>	≤ 10	30	3.8±0.6	76	t=-0.511	0.611
	>10	30	3.9±0.5	78		
<b>Work place specify</b>	Gynecology	49	3.9±0.5	78	t=1.103	0.275
	Others	11	3.7±0.7	74		
<b>Work position</b>	Head nurse	11	3.8±0.8	76	F=0.736	0.535
	Senior staff nurse	11	3.7±0.5	74		
	Staff nurse	28	4.0±0.5	80		
	Supervisor	10	3.9±0.4	78		
<b>Experience in maternity department (years)</b>	≤5	45	3.9±0.5	78	t = 2.140	0.037
	>5	15	3.6±0.5	72		

P≤0.05: Significant, P>0.05: Not significant; **n**: number of the subjects; **%**: weighted mean; **NGOs**: Non-governmental organizations and **PHC**: Primary health care; **SD**: standard deviation & **t**: independent t test & **NOVA**: Analysis of variance

Table 4.18 showed the mean differences in satisfaction related to socio-demographic data among graduates. There are no statistically significant differences between satisfaction and others studied socio-demographic data among graduates except for years of experience in maternity department for those who have equal to or less than 5 years of experience that could be explained their limited exposure to standardized training courses in their short work experience.

#### 4.15 The correlation between perceived KAP and satisfaction among graduates

**Table 4.19:** The correlation between perceived KAP and satisfaction among graduates

	Satisfaction	
	r	P
<b>Knowledge</b>	<b>0.163</b>	<b>0.213</b>
<b>Attitude</b>	<b>0.281</b>	<b>0.030</b>
<b>Practice</b>	<b>0.267</b>	<b>0.039</b>
<b>Total (KAP)</b>	<b>0.271</b>	<b>0.036</b>

\*P≤0.05: Significant, P>0.05: Notsignificant & r: Pearson Correlation coefficient

The table 4.19 showed the correlation between KAP and satisfaction of graduates. Pearson correlation showed positive statistically significant correlation between attitude of graduates and satisfaction ( $r = 0.281$ ,  $P=0.030$ ). Additionally, practice have positive statistically significant correlation with satisfaction ( $r = 0.267$ ,  $P=0.039$ ). Finally, there was positive statistically significant correlation between KAP as total and satisfaction ( $r = 0.271$ ,  $P=0.036$ ). This indicates there is positive association between KAP and satisfaction that agree with Reis, et al. (2013) which illustrated positive relation between knowledge, attitudes and practices among university students in Portugal regarding to contraceptive and transmitted infection.

#### 4.16 Distribution of the graduates' supervisors according to their socio-demographic information

**Table 4.20:** Distribution of the graduates' supervisors according to their sociodemographic information

socio-demographic information		n	%
Governorate:	North	4	8.0
	Gaza	12	24.0
	Middle zone	3	6.0
	Khan Younis	19	38.0
	Rafah	12	24.0
Levels of education:	Bachelor	15	30.0
	High or Postgraduate diploma	25	50.0
	Master	10	20.0
Workplace	Governmental Hospitals	41	82.0
	Governmental PHC clinics	6	12.0
	NGOS Hospitals	2	4.0
	NGOs PHC clinics	1	2.0
Workplace specify	Al-Shifa	15	30.0
	Nasser	17	34.0
	Emaratiy	8	16.0
	PHC	8	16.0
	Private	2	4.0
Work position	Head nurse	24	48.0
	Supervisor	26	52.0
Age (years)	≤40	26	52.0
	>40	24	48.0
Experience(years)	Less than 20	26	52.0
	≥20	24	48.0

**n:** number of these subjects; **NGOs:** Non-governmental organizations and **PHC:** Primary healthcare

Table 4.20 illustrates the distribution of the graduates' supervisors according to their sociodemographic information. The numbers of graduates' supervisors were 50 supervisors. The distribution of the graduates' supervisors according to governorates from North, Gaza, Middle zone, Khan Younis and Rafah Governorates were 4 (8.0%), 12 (24.0%), 3 (6.0%), 19 (38.0%) and 12 (24.0%) respectively. Regarding educational level among graduates' supervisors, half of the graduates' supervisors were had bachelor degree 25 (50.0%) and the rest were with high or postgraduate diploma 15 (30.0%) and those with master 10 (20.0%). However, classification of the work type of graduates' supervisors from governmental

hospitals, Governmental PHC clinics, NGOs PHC clinics, NGOs Hospitals were 41 (82.0%), 6 (12.0%), 2 (4.0%) and 1 (2.0%), respectively. The distribution of the graduates' supervisors according to their workplace were 15 (30%), 17 (34%), 8 (16%), 8 (16%) and 2 (4%) in Al-Shifa, Nasser, Emaraty, PHC and private respectively. Regarding the work position, the number of head nurses was 24 (48.0%) and senior supervisors were 26 (52%). The frequency of age groups was 26 (52.0%) had 40 years or less while 24 (48.0%) have age more than 40 years. Finally, the percentage of graduates' supervisors among the study population had experienced less than 20 years were 26 (52.0%) while 24 (48.0%) have experienced more than 20 years.



#### 4.17 The perceived mean scores of the graduates' supervisors on graduates' knowledge items

**Table 4.21:** The perceived mean scores of the graduates' supervisors on graduates' knowledge items

	Mean± SD	%	t	P-Value	Rank
1. The graduates' knowledge about the care of normal pregnancy case is improved	4.4±0.5	88	20.307	<0.001	1
2. The graduates' knowledge about steps of normal vaginal delivery is improved	4.4±0.5	88	20.307	<0.001	1
3. The graduates' knowledge about complicated pregnancy cases is improved	4.4±0.6	88	16.199	<0.001	1
4. The graduates' knowledge about postnatal dangerous signs of the mother is improved	4.4±0.6	88	15.236	<0.001	1
5. The graduates' knowledge about use portogram is improved	4.3±0.5	86	19.801	<0.001	5
6. The graduates' knowledge about non-pharmacologic management of labor pain is improved	4.3±0.6	86	15.983	<0.001	5
7. The graduates' knowledge about neonatal assessment is improved	4.3±0.7	86	13.000	<0.001	5
8. The graduates' knowledge about complicated delivery is improved	4.2±0.8	84	10.186	<0.001	8
9. The graduates' knowledge about dangerous neonatal signs is improved	4.2±0.7	84	11.649	<0.001	8
10. The graduates' knowledge about management is improved	4.1±0.6	82	13.293	<0.001	10
11. The graduates' knowledge about the ministry of health obstetric protocols is improved	4±0.5	80	13.229	<0.001	11
12. The graduates' knowledge of ethical dilemmas in maternal health is improved	4.0±0.7	80	9.705	<0.001	11
13. The graduates' knowledge about gynecology cases is improved	3.8±0.5	76	11.658	<0.001	13
14. The graduates' knowledge about violence as women issue is improved	3.8±0.7	76	8.363	<0.001	13
15. The graduates' knowledge about research and evidence-based practice is improved	3.7±0.9	74	5.735	<0.001	15
16. The graduates' knowledge about communicable diseases of mothers and children is improved	3.6±0.8	72	5.422	<0.001	16
<b>Total</b>	<b>4.1±0.4</b>	<b>82</b>	<b>21.292</b>	<b>&lt;0.001</b>	

P≤0.05: Significant P>0.05: Not significant; **n**: number of the subjects; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t test.

The perceived mean scores of the graduates' supervisors on graduates' knowledge items as showed in table 4.21. The weighted mean for the domain of perceived graduates' knowledge was 82% and statistically significant at less than 0.05. According to the results, the highest mean score was for the items "The graduates' knowledge about the care of normal pregnancy case is improved, the graduates' knowledge about steps of normal vaginal delivery is improved and the graduates' knowledge about complicated pregnancy cases is improved with weighted mean 88% and statistically significant. While the lowest mean score was for the item "The graduates' knowledge about communicable diseases of mothers and children is improved" with weighted mean 72% and statistical significance at less than 0.05, followed by the item "The graduates' knowledge about ethical dilemmas in maternal health is improved" with a weighted mean 74% and statistically significant at 0.05. This positive result is congruent with the graduate perception about the knowledge from this program about the care of normal pregnancy case.

#### 4.18 The perceived mean scores of the graduates' supervisors on graduates' attitude items

**Table 4.22:** The perceived mean scores of the graduates' supervisors on graduates' knowledge items

	Mean±SD	%	t	P-Value	Rank
1. The graduates' respect to patient privacy is improved	4.7±0.4	94	27.768	<0.001	1
2. The graduates' respect for the role of the midwife is improved	4.6±0.5	92	22.862	<0.001	2
3. The graduates' respect to patient needs is improved	4.3±0.7	86	15.968	<0.001	3
4. The graduates' willingness to cooperate with other professionals is improved	4.2±0.5	84	14.965	<0.001	4
5. The graduates' willingness to client advocacy is improved	4.2±0.5	84	13.099	<0.001	4
6. The graduates' respect to family centered care is improved	4.1±0.9	82.0	12.625	<0.001	6
7. The graduates' willingness to use therapeutic communication is improved	4.1±0.6	82	8.411	<0.001	6
8. The graduates' respect for the role of the family in supporting client is improved	4.0±0.8	80	8.212	<0.001	8
9. The graduates' valuing to research is improved	3.8±0.9	76	8.057	<0.001	9
10. The graduates' scope to handle an ethical dilemma in maternal health is improved	3.8±0.7	76	6.216	<0.001	9
<b>Total</b>	<b>4.2±0.4</b>	<b>84</b>	<b>18.472</b>	<b>&lt;0.001</b>	

P≤0.05: Significant, P>0.05: Not significant; **n**: number of the subjects; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t test.

Table 4.22 illustrated the perceived mean scores of the graduates' supervisors on graduates' attitude according to their responses about attitude items. The statistical test showed the weighted mean for the domain of attitude was 84% and statistically significant at less than 0.05. According to the results, the highest mean score was for the item "the graduates' respect for patient privacy is improved" with weighted mean 94% and statistically significant at 0.05 followed by the item "the graduates' respect for the role of the midwife is improved" with weighted mean 92% and statistically significant at 0.05 while the lowest mean score was for the item "the graduates' valuing to research is improved" and paragraph "the graduates' scope to handle ethical dilemma in maternal health is improved "with a weighted mean of 76% and statistically significant at less than 0.05.

All items take statistically significant about the attitude of the student after their professional midwifery program gives more power to the student to change their attitude according to student supervisors' response.

#### 4.19 The perceived mean scores of the graduates' supervisors on graduates' practice items

**Table 4.23:** The perceived mean scores of the graduates' supervisors on graduates' practice items

Item	Mean±SD	%	t	P-Value	Rank
1. The graduates' practice in giving instructions to the mother about postnatal problems is improved	4.5±0.5	90	20.108	<0.001	1
2. The graduates' practice in health education is improved	4.4±0.5	88	19.808	<0.001	2
3. The graduates' practice with complicated delivery cases is improved	4.4±0.5	88	19.833	<0.001	2
4. The graduates' use of the non-pharmacological approach to relieving labor pain during delivery is improved	4.3±0.4	86	19.902	<0.001	4
5. The graduates' practice in communication with other professionals is improved	4.3±0.5	86	21.629	<0.001	4
6. The graduates' practice with women in antenatal care is improved	4.2±0.9	84	14.893	<0.001	6
7. The graduates' use of patograph to detect any abnormality is easier	4.2±0.7	84	10.478	<0.001	6
8. The graduates' practice in situations threaten client safety is more effective	4.2±0.7	84	11.499	<0.001	6
9. The graduates' practice in the assessment of neonates is improved	4.2±0.7	84	12.663	<0.001	6
10. The graduates' practice to teach their colleagues is increased	4.2±0.6	84	12.124	<0.001	6
11. The graduates' practice to give instruction to mother about dangerous neonatal signs is improved	4.1±0.9	82	12.124	<0.001	11
12. The graduates' managerial abilities in practice are improved	4.1±0.7	82	6.057	<0.001	11
13. The graduates' practice in gynecological cases is improved	3.9±0.6	78	5.699	<0.001	13
14. The graduates' practice in family planning is improved	3.7±0.8	74	9.635	<0.001	14
15. The graduates much better utilize the research findings & best evidence in their practice	3.7±0.8	74	8.486	<0.001	14
<b>Total</b>	<b>4.2±0.4</b>	<b>82</b>	<b>23.022</b>	<b>&lt;0.001</b>	

P≤0.05: Significant, P>0.05: Not significant; **n**: number of the subjects; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t-test.

The perceived mean scores of the graduates' supervisors on graduates' practice pointed out in table 4.23. The weighted mean for the domain of graduates practice was 82% and statistically significantly less than 0.05. According to the results, the highest mean score was for the item "the graduates' practice of giving instructions to the mother about postnatal problems is improved" with weighted mean 90% and statistically significant at 0.05 followed by the item "the graduates' practice in health education is improved" and the item "the graduates' practice in health education is improved" with a weighted mean 88% and statistically significant at 0.05 while the lowest mean score was for the item "the graduates' practice in family planning is improved" and the item "the graduates much better utilize the research findings & best evidence in their practice" with weighted mean 74% and statistical significance at less than 0.05. This result similar to graduate perception about practice and the first item in both is similar (the graduates' practice in giving instructions to the mother about postnatal problems is improved) that's may be explained due to the emphasis of the program on the educational role of professional midwife to give instruction to women and her family.

#### 4.20 The mean scores of graduates' supervisors perceived KAP of graduates

**Table 4.24:** The mean scores of graduates' supervisors perceived KAP of graduates

KAP	Mean	%	t	P-Value	Rank
Knowledge	4.13±0.38	82.6	21.292	<0.001	3
Attitude	4.17±0.45	83.4	18.472	<0.001	1
Practice	4.15±0.35	83.0	23.022	<0.001	2
Total	4.15±0.37	83.0	<b>21.917</b>	<b>&lt;0.001</b>	

\*P≤0.05: Significant, P>0.05: Not significant; **n**: number of the subjects; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t-test.

Table 4.24 summarized the distribution of the study participants according to their responses about KAP. Overall, it was found that graduates' KAP mean was = 83%. the highest domain in KAP was the attitude (83.4%) followed by practice and knowledge (83.4

& 82.6% respectively). KAP as a total, knowledge, attitude, and practice were statistically significant at less than 0.05. This result showed the supervisors' positive perception to the graduates KAP and the supervisors noted the changes in graduate KAP that congruent with graduates' perception for their KAP from the program that increase the credit of the program from service providers benefit and perspectives.

#### 4.21 The mean scores of graduates' supervisors satisfaction from KAP of graduates

**Table 4.25:** The mean scores of graduates' supervisors satisfaction from KAP of graduates

Satisfaction level	Mean±SD	%	t	P-Value	Rank
Knowledge of graduates	4.3±1.0	86	9.333	<0.001	1
Attitudes of graduates	3.7±1.0	74	5.026	<0.001	3
Practice of graduates	4.2±1.0	84	8.226	<0.001	2
<b>Total</b>	<b>4.1±0.8</b>	<b>82</b>	<b>9.934</b>	<b>&lt;0.001</b>	

P≤0.05: Significant, P>0.05: Not significant; **n**: number of the subjects; **SD**: standard deviation; **%**: weighted mean & **t**: one sample t-test.

The mean scores of graduates' supervisors satisfaction from the KAP of graduates as presented in table 4.25. Overall, it was found that mean satisfaction from graduates' KAP was = 82%. The highest satisfaction was for the knowledge of graduates (86.0%) followed by practice of graduates (84%) and finally attitudes of graduates (74%). KAP as a total, knowledge, attitude, and practice were statistically significant at less than 0.05. This result means the supervisors' satisfaction reflects job satisfaction so this satisfaction noted mainly in the graduates' knowledge and practice.

#### 4.22 Recommendations of study participants to future courses of the program

##### 4.22.1 The graduates' recommendations

Most of graduates recommended the change of the classroom teaching environment because no good ventilation and the chairs not suitable. Also, they recommended the

repetition of similar programs in other specialties of nursing such as pediatric and critical care.

#### **4.22.2 The supervisors' recommendations**

Most of supervisors recommended the increase emphasis on research and application of evidence base practice and repeating similar programs in other nursing specialties.



## **Chapter Five**

### **Conclusion and Recommendations**

#### **5.1 Conclusion:**

This study used descriptive and analytic approach to assess the effect of the professional diploma in midwifery educational program on graduates' knowledge, attitudes, and practices from the perspectives of graduates' & supervisors' perception. The researcher used a purposive sample from 60 graduates as well as 50 of their workplace supervisors from head nurses and clinical managers. The researcher collected the data through self-administered questionnaires. The researcher used two questionnaires one for graduates and another for their supervisors.

#### **The graduates' perception:**

The study found that graduates' KAP mean was = 84.1% and SD = 8.0 (minimum 60.8% and maximum 94.8%), which was at the high level. The practice was highest rank of the KAP (88.0%) followed by knowledge and attitude (86.0%). The study illustrated the level of satisfaction among graduates as moderate level with mean = 77.1%, which is relatively high. While the study showed no statistically significant relationship between age and practice and knowledge while there was statistically significant difference between attitude and age. Finally there was positive significant correlation between KAP as total and satisfaction ( $r = 0.271$ ,  $P < 0.036$ ). The study concluded that the educational program succeeded in improving the KAP of graduates as they perceived.

### **The supervisors' perceptions:**

The study showed positive relation between perception of graduates' supervisors and graduates' knowledge, attitude and practice. Also, the study revealed a significant relation between graduates' supervisors and their satisfaction level from the professional diploma in midwifery educational program. The study concluded that the workplace supervisors' satisfaction from graduates KAP is positive indicator for the success of the program to improve graduates KAP which will in turn contribute in improving the quality of maternal newborn services and contribute in improving their health indicators in the near future.

### **5.2 Recommendations:**

The study recommended the following:

#### **Recommendations for Palestine College of Nursing as program owner:**

- To increase number of credit hours of research course and make application by implementing full research project as well as emphasizing the evidence-based practice as strategy in teaching and practice.
- To enhance the use of skill lab to train students during the program before their training in hospitals and clinics to increase their self-confidence.
- To modify the classroom environment especially by wide place, good chairs, and air conditioning to provide comfortable environment for study.
- To pay more attention in future courses to violence issues among women in our country and how to deal with this problem.
- To increase the number of clinical training hours and decrease number of students in each group by not more than 4 students for each clinical instructor.

**Recommendations for donor and ministry of health:**

- In future professional diploma courses to improve clinical environment by making more co-operation and coordination with the ministry of health to put the priority for training to professional diploma in midwifery students.
- In future professional diploma courses to have clinical instructors from the program's graduates to motivate them.
- Working together to repeat similar programs in other nursing specialties such as pediatric and intensive care.

**Recommendations for further research:**

- Future studies should be conducted to assess the KAP of program graduates by more ways rather than perception.
- Future studies to assess the impact of program's graduates on the quality of practice in workplace settings.
- Future studies to assess the role of program's graduates on developing policies and protocols relevant to midwifery practice issues.

## References

- AbdAllah, A., Hummeida, E., & Elmula, F. (2016). Awareness and attitudes of nursing students towards prevention of cervical cancer. *Cervical Cancer*, 1(1), 106
- Alston, W. (2017). Perceptual knowledge. *The Blackwell guide to epistemology*, 221-242.
- Al-Zahrani, B. S., Al-Misfer, M. F., & Al-Hazmi, A. M. (2015). Knowledge, Attitude, Practice And Barriers Of Effective Communication Skills During Medical Consultation Among General Practitioners National Guard Primary Health Care Center, Riyadh, Saudi Arabia. *MIDDLE EAST JOURNAL OF FAMILY MEDICINE*, 7(10).
- Asiegbu, I. F., Powei, D. M., & Iruka, C. H. (2012). Consumer attitude: Some reflections on its concept, trilogy, relationship with consumer behavior, and marketing implications. *European Journal of Business and Management*, 4(13), 38-50.
- Baldwin, T., Pierce, R., Joines, C., & Farouk, S. (2011). The elusiveness of applied management knowledge: A critical challenge for management educators. *Academy of Management Learning & Education*, 10(4).
- Bearman, S. K., Wadkins, M., Bailin, A., & Doctoroff, G. (2015). Pre-practicum training in professional psychology to close the research–practice gap: Changing attitudes toward evidence-based practice. *Training and education in professional psychology*, 9(1), 13.
- Becker, G. S. (1994). Human capital revisited. In *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (3rd Edition) (pp. 15-28). The university of Chicago press.
- Bibiana, D., & Cherian, J. (2014). A study to assess the effectiveness of planned teaching programme on water birth among adolescent girls in a selected college at Mangalore. *Apollo Medicine*, 11(2), 84-87.
- Breimaier, E., Halfens, J., & Lohrmann, C. (2011). Nurses' wishes, knowledge, attitudes and perceived barriers on implementing research findings into practice among graduate nurses in Austria. *Journal of clinical nursing*, 20(11- 12), 1744-1756.
- Bridenball, B., & Jesilow, P. (2008). What matters: The formation of attitudes toward the police. *Police Quarterly*, 11(2), 151-181.
- Brown, E., Kim, C., Stichler, F., & Fields, W. (2010). Predictors of knowledge, attitudes, use and future use of evidence-based practice among baccalaureate nursing students at two universities. *Nurse Education Today*, 30(6), 521-527.
- Brown, E., Wickline, A., Ecoff, L., & Glaser, D. (2009). Nursing practice, knowledge, attitudes and perceived barriers to evidence- based practice at an academic medical center. *Journal of advanced nursing*, 65(2), 371-381.

- Bush, C. T., & Lowery, B. (2016). Postgraduate nurse practitioner education: Impact on job satisfaction. *The Journal for Nurse Practitioners*, 12(4), 226-234.
- Casey, M., Cooney, A., O'Connell, R., Hegarty, M., Brady, M., O'Reilly, P., ... & O'Connor, L. (2017). Nurses', midwives' and key stakeholders' experiences and perceptions of requirements to demonstrate the maintenance of professional competence. *Journal of advanced nursing*, 73(3), 653-664.
- Chang, Y. Y., Gong, Y., & Peng, M. W. (2012). Expatriate knowledge transfer, subsidiary absorptive capacity, and subsidiary performance. *Academy of Management Journal*, 55(4), 927-948.
- Choe, K., Lee, B., Lee, B., Pratt, W., & Kientz, A. (2014). Understanding quantified-selves' practices in collecting and exploring personal data. In *Proceedings of the 32nd annual ACM conference on Human factors in computing systems* (pp. 1143-1152). ACM.
- Copaci, A., soos, a., & rusu, S. (2017). Romanian translation and linguistic validation of the civic attitudes and skills questionnaire: implications for pre-service teachers' evaluation. *journal of psychological and educational research*, 25(1a), 92.
- Crooks, D., Carpio, B., Brown, B., Black, M., O'Mara, L., & Noesgaard, C. (2005). Development of professional confidence by post diploma baccalaureate nursing students. *Nurse Education in Practice*, 5(6), 360-367.
- Custers, E. J. (2010). Long-term retention of basic science knowledge: a review study. *Advances in Health Sciences Education*, 15(1), 109-128.
- Dalkir, K., & Liebowitz, J. (2011). *Knowledge management in theory and practice*. MIT press.
- Dawson, A., Turkmani, S., Fray, S., Nanayakkara, S., Varol, N., & Homer, C. (2015). Evidence to inform education, training and supportive work environments for midwives involved in the care of women with female genital mutilation: A review of global experience. *Midwifery*, 31(1), 229-238.
- Doran, F., & Hutchinson, M. (2017). Student nurses' knowledge and attitudes towards domestic violence: results of survey highlight need for continued attention to undergraduate curriculum. *Journal of clinical nursing*, 26(15-16), 2286-2296.
- Drucker, P. (2012). *The practice of management*. Routledge.
- Durst, S., & Wilhelm, S. (2012). Knowledge management and succession planning in SMEs. *Journal of Knowledge Management*, 16(4), 637-649.
- Elgalil, A. M. E. (2014). *Impact of a Designed In-Service Training Program on Nurse Midwives Knowledge, Attitude and Practices at Management Toward Postpartum Hemorrhage Khartoum Hospitals, Khartoum state, Sudan (2010)* (Doctoral dissertation, University of Gezira).
- Engel, P. (2017). Replies: on norms of belief and knowledge. *Synthese*, 1-10.

- Furber, C., Hickie, J., Lee, K., McLoughlin, A., Boggis, C., Sutton, A., ... & Wakefield, A. (2004). Interprofessional education in a midwifery curriculum: the learning through the exploration of the professional task project (LEAPT). *Midwifery*, 20(4), 358-366.
- Gaillard, A., Le Strat, Y., Mandelbrot, L., Keïta, H., & Dubertret, C. (2014). Predictors of postpartum depression: Prospective study of 264 women followed during pregnancy and postpartum. *Psychiatry research*, 215(2), 341-346.
- General Directorate of human resource development-MOH, GDHRD, annual report, 2016.
- Giardina-Roche, C., & Black, M. E. (2016). Attitudes of diploma student nurses toward adult clients. *Journal of Nursing Education*, 29(5), 208-214.
- Hennekam, S., & Herrbach, O. (2013). HRM practices and low occupational status older workers. *Employee Relations*, 35(3), 339-355.
- Higgins, A., Carroll, M., & Sharek, D. (2016). Impact of perinatal mental health education on student midwives' knowledge, skills and attitudes: A pre/post evaluation of a module of study. *Nurse education today*, 36, 364-369
- Hill, N., & Brierley, J. (2017). *How to measure customer satisfaction*. Routledge..
- Hines, S., Kynoch, K., Munday, J., & McArdle, A. (2017). Evidence-Based Practice Education for Better Knowledge, Attitudes, and Practices in Nurses and Midwives. *The Journal of Continuing Education in Nursing*, 48(6), 256-262.
- Hislop, D., Bosua, R., & Helms, R. (2018). *Knowledge management in organizations: A critical introduction*. Oxford University Press.
- Hunt, D. P. (2003). The concept of knowledge and how to measure it. *Journal of intellectual capital*, 4(1), 100-113.
- Jacobs, F. H. (2017). *Evaluating Family Programs: Current Issues in Theory and Policy*. Routledge.
- Kang, Y., Moyle, W., Cooke, M., & O'dwyer, T. (2017). An educational programme to improve acute care nurses' knowledge, attitudes and family caregiver involvement in care of people with cognitive impairment. *Scandinavian journal of caring sciences*, 31(3), 631-640.
- Knoblauch, A. A. (2012). Bodies of Knowledge: Definitions, Delineations, and Implications of Embodied Writing in the Academy. *Composition Studies*, 40(2).
- Landauer, C. (2017, July). Mitigating the Inevitable Failure of Knowledge Representation. In *Autonomic Computing (ICAC), 2017 IEEE International Conference on* (pp. 239-246). IEEE.
- Leach, M. J., Hofmeyer, A., & Bobridge, A. (2016). The impact of research education on student nurse attitude, skill and uptake of evidence- based practice: a descriptive longitudinal survey. *Journal of clinical nursing*, 25(1-2), 194-203.

- Lewenson, S. B. (Ed.). (2017). *Public Health Nursing: Practicing Population-Based Care*. Jones & Bartlett Learning.
- Lou, S. J., Chen, N. C., Tsai, H. Y., Tseng, K. H., & Shih, R. C. (2012). Using blended creative teaching: Improving a teacher education course on designing materials for young children. *Australasian Journal of Educational Technology*, 28(5).
- Lowe, G. S., Schellenberg, G., & Shannon, H. S. (2003). Correlates of employees' perceptions of a healthy work environment. *American Journal of Health Promotion*, 17(6), 390-399.
- Mason, P., & Butler, C. C. (2010). *Health Behavior Change E-Book*. Elsevier Health Sciences.
- Mathur, V., Dwivedi, S., Hassan, M. A., & Misra, R. P. (2011). Knowledge, attitude, and practices about biomedical waste management among healthcare personnel: A cross-sectional study. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 36(2), 143.
- Mbindyo, P., Gilson, L., Blaauw, D., & English, M. (2009). Contextual influences on health worker motivation in district hospitals in Kenya. *Implementation Science*, 4(1), 43.
- Mei, S. (2012). Predicting plant protein subcellular multi-localization by Chou's PseAAC formulation based multi-label homolog knowledge transfer learning. *Journal of theoretical biology*, 310, 80-87.
- Ministry of health, MOH (2011) annual report.
- Ministry of health, MOH (2016) annual report.
- Ministry of health, MOH (2017) annual report.
- Morrel-Samuels, P. (2002). Getting the truth into workplace surveys. *Harvard business review*, 80(2), 111-118.
- Mpemba, F., Kampo, S., & Zhang, X. (2014). Towards 2015: post-partum hemorrhage in sub-Saharan Africa still on the rise. *Journal of clinical nursing*, 23(5-6), 774-783.
- Mumtaz, Z., Cutherell, A., & Bhatti, A. (2014). Saving mothers and newborns in communities: strengthening community midwives to provide high quality essential newborn and maternal care in Baluchistan, Pakistan in a financially sustainable manner. *BMC pregnancy and childbirth*, 14(1), 131.
- Noe, R., Hollenbeck, J., Gerhart, B., & Wright, P. (2006). *Human Resources Management: Gaining a Competitive Advantage*, Tenth Global Edition. McGraw-Hill Education.
- O'Dell, C., & Hubert, C. (2011). *The new edge in knowledge: How knowledge management is changing the way we do business*. John Wiley & Sons.
- Okobia, M. N., Bunker, C. H., Okonofua, F. E., & Osime, U. (2006). Knowledge, attitude and practice of Nigerian women towards breast cancer: a cross-sectional

study. *World journal of surgical oncology*, 4(1), 11.

Palestine College of Nursing, PCN (2015). Internal PCN documents.

Palestine College of Nursing, PCN (2018). Internal PCN documents.

Palestinian Central Bureau of Statistics, Population, Housing units, Building and Establishment, Ramallah (2016). Palestine.

Philbeck, J. W., & Witt, J. K. (2015). Action-specific influences on perception and postperceptual processes: Present controversies and future directions. *Psychological Bulletin*, 141(6), 1120.

Pickens, J. (2005). Attitudes and perceptions. *Organizational behavior in health care*, 43-76.

Pineau Stam, L. M., Spence Laschinger, H. K., Regan, S., & Wong, C. A. (2015). The influence of personal and workplace resources on new graduate nurses' job satisfaction. *Journal of nursing management*, 23(2), 190-199.

Pitcher, G. (2015). *Theory of perception*. Princeton University Press.

Reis, M., Ramiro, L., Gaspar Matos, M., & Alves Diniz, J. (2013). Nationwide survey of contraceptive and sexually transmitted infection knowledge, attitudes and skills of university students in Portugal. *International Journal of Clinical and Health Psychology*, 13(2).

Renfrew, J., McFadden, A., Bastos, H., Campbell, J., Channon, A., Cheung, F., & McCormick, F. (2014). Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. *The Lancet*, 384(9948), 1129-1145.

Röder, A. (2015). Immigrants' Attitudes toward Homosexuality: Socialization, Religion, and Acculturation in European Host Societies. *International Migration Review*, 49(4), 1042-1070.

Rosen, L., Goodson, P., Thompson, B., & Wilson, L. (2015). School nurses' knowledge, attitudes, perceptions of role as opinion leader, and professional practice regarding human papillomavirus vaccine for youth. *J. of School Health*, 85(2), 73-81.

Ryan, E. J. (2016). Undergraduate nursing students' attitudes and use of research and evidence-based practice—an integrative literature review. *Journal of clinical nursing*, 25(11-12), 1548-1556.

Seighali, F., Farahani, Z., & Shariat, M. (2015). The effects of two different breastfeeding workshops on improving knowledge, attitude, and practice of participants: A comparative study. *Acta Medica Iranica*, 53(7), 412-418.

Streiner, D. L., Norman, G. R., & Cairney, J. (2015). *Health measurement scales: a practical guide to their development and use*. Oxford University Press, USA.



- Stürmer, K., Könings, K. D., & Seidel, T. (2013). Declarative knowledge and professional vision in teacher education: Effect of courses in teaching and learning. *British Journal of Educational Psychology*, 83(3), 467-483.
- Suchitra, J. B., & Devi, N. L. (2007). Impact of education on knowledge, attitudes and practices among various categories of health care workers on nosocomial infections. *Indian journal of medical microbiology*, 25(3), 181.
- Tse, Y., & Ho, S. (2014). Enhancing knowledge and attitudes in pain management: A pain management education program for nursing home staff. *Pain Management Nursing*, 15(1), 2-11.
- Van den Berg, M., Madi, H., Khader, A., Hababeh, M., Zeidan, A., Wesley, H., ... & Seita, A. (2015). Increasing neonatal mortality among Palestine refugees in the Gaza Strip. *PloS one*, 10(8), e0135092.
- Visweswara, U., & Chandra, S. (2011, December). Community formation in social networks based on Knowledge Quotient. In *Internet Multimedia Systems Architecture and Application (IMSAA)*, 2011 IEEE 5th International Conference on (pp. 1-5). IEEE.
- Vithana, P. V., Ariyaratne, M. A., & Jayawardana, P. L. (2015). Effectiveness of an educational intervention among public health midwives on breast cancer early detection in the district of Gampaha, Sri Lanka.
- Vogel, T., & Wanke, M. (2016). *Attitudes and attitude change*. Psychology Press.
- Wake, G. (2014). Making sense of and with mathematics: The interface between academic mathematics and mathematics in practice. *Educational Studies in Mathematics*, 86(2), 271-290.
- Wilson, O., Avalos, G., & Dowling, M. (2016). Knowledge of palliative care and attitudes towards nursing the dying patient. *British Journal of Nursing*, 25(11).
- Wolbers, T., & Hegarty, M. (2010). What determines our navigational abilities?. *Trends in cognitive sciences*, 14(3), 138-146.

## Annex (1): The master plan of professional diploma in midwifery.

First semester		
Course No.	Course Name	Hours
MIDT 1401	Normal midwifery I (theory)	4
MIDT 1102	Women's Health Issues	1
MIDT 1203	Neonatology (theory)	2
MIDT 1104	Ethics for Midwifery	1
MIDT 1205	Research	2
<b>Total hour</b>		<b>10</b>

Second semester		
Course No.	Course Name	Hours
MIDT 2206	Normal midwifery II (theory)	2
MIDC 3211	Normal midwifery II (practice)	2
MIDT 3309	Complicated child I (theory)	3
MIDC 2207	Normal midwifery I (practice)	2
MIDC 2108	Neonatology (practice)	1
<b>Total hours</b>		<b>10</b>

Third semester		
Course No.	Course Name	Hours
MIDC 3210	Complicated child I (practice)	2
MIDT 3212	Gynecology (theory)	2
MIDT 4213	Complicated child II (theory)	2
MIDC 4214	Complicated child II (practice)	2
MIDT 4215	Community for Midwifery (theory)	2
MIDC 4118	Gynecology (practice)	1
<b>Total hours</b>		<b>11</b>

Fourth semester		
Course No.	Course Name	Hours
MIDC 4216	Community for Midwifery (practice)	2
MIDT 4217	Management and clinical teaching (theory)	2
<b>Total hours</b>		<b>4</b>

Fifth semester		
Course No.	Course Name	Hours
MIDC 5319	Internship (practice)	3
<b>Total hours</b>		<b>3</b>

## Annex (2): Helsinki committee approval

**المجلس الفلسطيني للبحث الصحي**  
**Palestinian Health Research Council**

تعزيز النظام الصحي الفلسطيني من خلال مؤسسة استخدام المعلومات البحثية في صنع القرار  
Developing the Palestinian health system through institutionalizing the use of information in decision making

**Helsinki Committee**  
**For Ethical Approval**

**Date:** 05/02/2018 **Number:** PHRC/HC/311/18

**Name:** TAGHREED M. ABOHADAF **الاسم:**

We would like to inform you that the committee had discussed the proposal of your study about: **نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:**

**The effect of midwifery educational program on graduates' knowledge, attitudes, and practices in Gaza strip: perception of graduates & supervisors.**

The committee has decided to approve the above mentioned research, Approval number PHRC/HC/311/18 in its meeting on 05/02/2018 **و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه**

**Signature**

**Member**  **Member** 

**Chairman**  **5/2/2018**

**Genral Conditions:-**

1. Valid for 2 years from the date of approval.
2. It is necessary to notify the committee of any change in the approved study protocol.
3. The committee appreciates receiving a copy of your final research when completed.

**Specific Conditions:-**

**E-Mail:** pal.phrc@gmail.com

**Gaza - Palestine** **غزة - فلسطين**  
**شارع النصر - مفترق العيون**

## Annex (3): Ministry of health approval

State of Palestine  
Ministry of health



دولة فلسطين  
وزارة الصحة

التاريخ: 13/03/2018

السيد : عمر ابراهيم عليان عيد المحترم

امين مخزن/الإدارة العامة لتنمية القوى البشرية - /وزارة الصحة

السلام عليكم...

### الموضوع/ تسهيل مهمة الباحثة// تغريد أبو هذاف

// التفاصيل

بخصوص الموضوع أعلاه، يرجى تسهيل مهمة الباحثة/ تغريد محمد أبو هذاف الملتحقة ببرنامج ماجستير التمريض - جامعة القدس أبوديس في إجراء بحث بعنوان: - "مدى تأثير دبلوم القبالة المهني على المعرفة والاتجاهات والاداء من وجهة نظر خريجات دبلوم القبالة المهني ومشرفيهم" حيث الباحثة بحاجة لتعبئة استبانة من خريجات الدبلوم المهني في القبالة ومشرفيهم في المستشفيات ومراكز الرعاية الأولية، بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، ودون تحمل الوزارة أي أعباء أو مسئولية. وتفضلوا بقبول التحية والتقدير،،،،  
ملاحظة/ البحث حصل على موافقة لجنة أخلاقيات البحث الصحي  
ملاحظة / تسهيل المهمة الخاص بالدراسة أعلاه صالح لمدة 5 شهر من تاريخه.

محمد ابراهيم محمد السرساوي

مدير دائرة/الإدارة العامة لتنمية القوى البشرية -



### التحويلات

■ محمد ابراهيم محمد السرساوي (مدير دائرة)	← رامي عيد سليمان العبادلة (مدير عام الوزارة)	إجراءاتكم بالخصوص ( )
■ رامي عيد سليمان العبادلة (مدير عام الوزارة)	← عبد اللطيف محمد محمد الحاج (مدير عام الوزارة)	إجراءاتكم بالخصوص ( )
■ رامي عيد سليمان العبادلة (مدير عام الوزارة)	← ماهر محمود عبد الهادي شامية (مدير عام الوزارة)	إجراءاتكم بالخصوص ( )
■ عبد اللطيف محمد محمد الحاج (مدير عام الوزارة)	← عاطف محمد خليل الحوت (مدير مستشفى)	إجراءاتكم بالخصوص ( )
■ عبد اللطيف محمد محمد الحاج (مدير عام الوزارة)	← وليد مرزق رزق ماضي (مدير مستشفى)	إجراءاتكم بالخصوص ( )
■ عبد اللطيف محمد محمد الحاج (مدير عام الوزارة)	← يوسف فوزي اسماعيل العقاد (مدير مستشفى)	إجراءاتكم بالخصوص ( )
■ عبد اللطيف محمد محمد الحاج (مدير عام الوزارة)	← كمال عواد محمد خطاب (مدير مستشفى)	إجراءاتكم بالخصوص ( )
■ عبد اللطيف محمد محمد الحاج (مدير عام الوزارة)	← مدحت عباس خضر حسن (مدير عام الوزارة)	إجراءاتكم بالخصوص ( )
■ عبد اللطيف محمد محمد الحاج (مدير عام الوزارة)	← مصطفى سليم عبد الكحلوت (مدير مستشفى)	إجراءاتكم بالخصوص ( )

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## Annex (4): Graduates' questionnaire

### الاستبيان

الأخت الفاضلة/..... حفظكم الله ورعاكم،،،

السلام عليكم ورحمة الله وبركاته

بداية أهديك أطيب التحيات، وبطيب لي أن أضع بين أيديكم الاستبيان المرفقة التي تم تصميمها بهدف جمع المعلومات اللازمة للتعرف على "مدى تأثير دبلوم القبالة المهني على المعرفة والاتجاهات والاداء من وجهة نظر خريجات دبلوم القبالة المهني ومشرفيهم"

**The effect of midwifery educational program on graduates' knowledge, attitudes, and practices in Gaza strip: perception of graduates & supervisors**

وذلك استكمالاً لمتطلب الحصول على درجة الماجستير من جامعة القدس أبو ديس تخصص تمريض صحة أم وطفل. لذا نأمل منكم التكرم بتعبئة الاستبانة للوصول إلى هدف الدراسة وهو معرفة مدى تأثير دبلومات القبالة المهنية على المعرفة والاتجاهات والاداء لخريجات البرنامج من وجهة نظر خريجات كلية فلسطين للتمريض من برنامج دبلوم القبالة المهني ومشرفيهم، علماً أن المعلومات التي ستدلون بها ستكون محل اهتمام وستستخدم لأغراض الدراسة والبحث العلمي فقط، وسيتم التعامل معها بكل سرية وعناية للخلوص بنتائج تحقق أهداف الدراسة.

وشاكراً ومقدرين لكم حسن تعاونكم وحرصكم

مع خالص الاحترام والتقدير

الباحثة/ تغريد محمد عبدربه أبو هدف

جوال/ 0599854151

**Graduates' Questionnaire**

No:....

**PART ONE:** Socio-demographic

**1. Governorate:**

North	Gaza	Middle zone	Khan Younis	Rafah
-------	------	-------------	-------------	-------

**2. Age in Years.....**

**3. Marital status**

- ☐ Married (number of children.....)
- ☐ Unmarried

**4. Levels of education before entry to program**

- ☐ Bachelor
- ☐ Master

**5. Workplace**

- ☐ Governmental  
Hospitals ..... PHC clinics.....
- ☐ NGOs  
Hospitals ..... PHC clinics .....

**6. Work experience in years.....**

**7. Years of experience in maternal health services .....**

**8. Work position**

Supervisor	Head nurse	Senior staff nurse	Staff nurse
------------	------------	--------------------	-------------

**9. Period in years from graduation from last qualification and your entry into the Professional diploma in midwifery program.....**

**10. Your work department/area .....**

Antenatal	Labor	Postnatal	Family planning	Other, specify.....
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**Part Two: Knowledge**

No.	Items	Scoring				
		5	4	3	2	1
		Strongly agree	Agree	Neutral	disagree	Strongly disagree
1	My knowledge about care of normal pregnancy case is improved					
2	My knowledge about steps of normal vaginal delivery is improved					
3	My knowledge about complicated pregnancy cases is improved					
4	My knowledge about gynecology cases is improved					
5	My knowledge about postnatal dangerous signs of mother is improved					
6	My knowledge about use partogram is improved					
7	My knowledge about violence as women issue is improved					
8	My knowledge about non-pharmacologic management of labor pain is improved					
9	My knowledge about neonatal assessment is improved					
10	My knowledge about complicated delivery is improved					
11	My knowledge about dangerous neonatal signs is improved					
12	My knowledge about ministry of health obstetric protocols is improved					
13	My knowledge about communicable diseases of mothers and children is improved					
14	My knowledge about research and evidence-based practice is improved					
15	My knowledge about management is improved					
16	My knowledge about ethical dilemmas in maternal health is improved					

**Part Three: Attitude**

No.	Items	Strongly agree	Agree	Neutral	disagree	Strongly disagree
1	My respect to family centered care is improved					
2	My respect to patient privacy is improved					
3	My willingness to cooperation with other professionals is improved					
4	My willingness to use therapeutic communication is improved					
5	My respect to patient needs is improved					
6	My respect to the role of the midwife is improved					
7	My valuing to research is improved					
8	My scope to handle ethical dilemma in maternal health is improved					
9	My respect to the role of family in supporting client is improved					
10	My willingness to client advocacy is improved					

**Part Four: Practice**

No.	Items	Strongly agree	Agree	Neutral	disagree	Strongly disagree
1	My practice with women in antenatal care is improved					
2	My use to non-pharmacological approach to relive labor pain during delivery is improved					
3	My practice in health education is improved					
4	My use of patrograph to detect any abnormality is easier					
5	My practice in situations threaten client safety is more effective					
6	My practice in assessment of neonates is improved					
7	My practice with complicated delivery cases is improved					
8	My practice in family planning is improved					
9	My practice in giving instructions to mother about postnatal problems is improved					



10	After finishing the diploma my practice to give instructions to mother about dangerous neonatal signs is improved					
11	After finishing the diploma my practice to teach my colleagues is increased					
12	I much better utilize the research findings & best evidence in my practice					
14	My managerial abilities in practice are improved					
15	My communication with other professionals is improved					
16	My practice in gynecological cases is improved					

**Part 5: Describe your satisfaction level from the professional diploma in midwifery program in the following areas (high=5points, moderate= 3 points, low=1 point)**

Item		Satisfaction level		
		High	Moderate	Low
1.	Number of total Program credit hours			
2.	Number of theoretical Program credit hours			
3.	Number of clinical Program hours			
4.	Curriculum			
5.	Skill lab.			
6.	Lecturers			
7.	Class teaching environment			
8.	Clinical instructors			
9.	Clinical training environment			
10.	Evaluation system of the program			

**What do you recommend to improve the current professional diploma in future courses to improve the graduates' knowledge, attitudes, and practices?**

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**Thank you very much for your participation**

## Annex (5): Supervisor's questionnaire

### الاستبيان

الأخت الفاضلة/ ..... حفظكم الله ورعاكم،،،

السلام عليكم ورحمة الله وبركاته

بداية أهديك أطيب التحيات، ويطيب لي أن أضع بين أيديكم الاستبيان المرفقة التي تم تصميمها بهدف جمع المعلومات اللازمة للتعرف على "مدى تأثير دبلوم القبالة المهني على المعرفة والاتجاهات والاداء من وجهة نظر خريجات دبلوم القبالة المهني ومشرفيهم "

The effect of midwifery educational program on graduates' knowledge, attitudes, and practices in Gaza strip: perception of graduates & supervisors

وذلك استكمالاً لمتطلب الحصول على درجة الماجستير من جامعة القدس تخصص تمريض صحة أم وطفل. لذا نأمل منكم التكرم بتعبئة الاستبيان للوصول إلى هدف الدراسة وهو معرفة مدى تأثير دبلوم القبالة المهني على المعرفة والاتجاهات والاداء لخريجات البرنامج من وجهة نظر مشرفات الخريجات، علماً أن المعلومات التي ستدلون بها ستكون محل اهتمام وستستخدم لأغراض الدراسة والبحث العلمي فقط، وسيتم التعامل معها بكل سرية وعناية للخلوص بنتائج تحقق أهداف الدراسة.

وشاكراً ومقدرين لكم حسن تعاونكم وحرصكم

مع خالص الاحترام والتقدير

الباحثة/ تغريد محمد عبدربه أبو هدايف

جوال/ 0599854151

**The effect of midwifery educational program on graduates' knowledge,  
attitudes, and practices in Gaza strip: perception of graduates & supervisors**

**Supervisor's Questionnaire**

No:....

**PART ONE: socio-demographic**

**1. Governorate:**

North	Gaza	Middle zone	Khan Younis	Rafah
-------	------	-------------	-------------	-------

**2. Levels of education:**

Bachelor	High or Postgraduate diploma	Master	Doctorate
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3. Gender:      ☐ Male                      ☐ female

4. Age in years: .....

**5. Workplace**

☐ Governmental: Hospitals (specify) ..... PHC clinics (specify).....

☐ NGOs:              Hospitals (specify) ..... PHC clinics (specify).....

6. Work experience ..... years

7. Work position:   ☐ Supervisor              ☐ Head nurse

**Part Two: Knowledge**

No.	Items	Scoring				
		5	4	3	2	1
		Strongly agree	Agree	Neutral	disagree	Strongly disagree
1	The graduates' knowledge about care of normal pregnancy case is improved					
2	The graduates' knowledge about steps of normal vaginal delivery is improved					
3	The graduates' knowledge about complicated pregnancy cases is improved					
4	The graduates' knowledge about gynecology cases is improved					
5	The graduates' knowledge about postnatal dangerous signs of mother is improved					
6	The graduates' knowledge about use partogram is improved					
7	The graduates' knowledge about violence as women issue is improved					
8	The graduates' knowledge about non-pharmacologic management of labor pain is improved					
9	The graduates' knowledge about neonatal assessment is improved					
10	The graduates' knowledge about complicated delivery is improved					
11	The graduates' knowledge about dangerous neonatal signs is improved					
12	The graduates' knowledge about ministry of health obstetric protocols is improved					
13	The graduates' knowledge about communicable diseases of mothers and children is improved					
14	The graduates' knowledge about research and evidence-based practice is improved					
15	The graduates' knowledge about management is improved					
16	The graduates' knowledge about ethical dilemmas in maternal health is improved					

**Part Three: Attitude**

No.	Items	Strongly agree	Agree	Neutral	disagree	Strongly disagree
1	The graduates' respect to family centered care is improved					
2	The graduates' respect to patient privacy is improved					
3	The graduates' willingness to cooperation with other professionals is improved					
4	The graduates' willingness to use therapeutic communication is improved					
5	The graduates' respect to patient needs is improved					
6	The graduates' respect to the role of the midwife is improved					
7	The graduates' valuing to research is improved					
8	The graduates' scope to handle ethical dilemma in maternal health is improved					
9	The graduates' respect to the role of family in supporting client is improved					
10	The graduates' willingness to client advocacy is improved					

**Part Four: Practice**

No.	Items	Strongly agree	Agree	Neutral	disagree	Strongly disagree
1	The graduates' practice with women in antenatal care is improved					
2	The graduates' use to non-pharmacological approach to relive labor pain during delivery is improved					
3	The graduates' practice in health education is improved					
4	The graduates' use of patrograph to detect any abnormality is easier					
5	The graduates' practice in situations threaten client safety is more effective					
6	The graduates' practice in assessment of neonates is improved					
7	The graduates' practice with complicated delivery cases is improved					
8	The graduates' practice in family planning is improved					
9	The graduates' practice in giving instructions to mother about postnatal problems is improved					

10	The graduates' practice to give instructions to mother about dangerous neonatal signs is improved					
11	The graduates' practice to teach their colleagues is increased					
12	The graduates much better utilize the research findings & best evidence in their practice					
14	The graduates' managerial abilities in practice are improved					
15	The graduates' practice in communication with other professionals is improved					
16	The graduates' practice in gynecological cases is improved					

**Part 5: Describe your overall satisfaction level from the graduates of the professional diploma in midwifery program in the following areas (high=5points, moderate= 3 points, low=1 point)**

Item		Satisfaction level		
		High	Moderate	Low
1.	Knowledge of graduates			
2.	Attitudes of graduates			
3.	Practice of graduates			

**What do you recommend to improve the current professional diploma in future courses to improve the graduates' knowledge, attitudes, and practices?**

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**Thank you very much for your participation**

## **Annex (6): Names of experts**

### **Names of experts**

- ❖ Dr. Khalil Shoaib.
- ❖ Dr. Abdurrahman ElHamas
- ❖ Dr. Akram Abu Salah.
- ❖ Dr. Samer Alnawajha.
- ❖ Dr. Mohamed Elgergawy.
- ❖ Dr. Hatim Al Dabaka.
- ❖ Dr. Moatasim Salah.
- ❖ Dr. Ayman Al Sous.
- ❖ Dr. Ayman Abu Mustafa.

## Annex (7): Arabic Abstract

**العنوان:** تأثير الدبلوم المهني المتخصص للقبالة على المعرفة والاتجاهات والممارسات للخريجات في قطاع غزة: من منظور الخريجات والمشرفين

**اعداد:** الباحثة تغريد محمد عبد ربه أبو هدايف

**اشراف:** د. حمزه محمد عبد الجواد

**ملخص:**

اجريت هذه الدراسة على فئة الممرضات من حملة بكالوريوس التمريض العام اللواتي تخرجن من برنامج الدبلوم المهني المتخصص في القبالة من كلية فلسطين للتمريض بقطاع غزة ضمن الدورات الثلاث للبرنامج وأيضا على مشرفيهن في أماكن عملهن المختلفة، حيث كان مكان الدراسة في المؤسسات الصحية الحكومية والغير حكومية في مستشفيات والمراكز الصحية في قطاع غزة. وأجريت هذه الدراسة من بداية نوفمبر 2017 حتى نهاية أكتوبر 2018.

هدفت هذه الدراسة لقياس مدى تأثير برنامج الدبلوم المهني المتخصص للقبالة على المعرفة والاتجاهات والممارسات للخريجات في قطاع غزة: من منظور الخريجات والمشرفين.

**مبررات الدراسة وأهم اهدافها:**

تعتبر هذه الدراسة مهمة لتقييم برنامج الدبلوم المهني المتخصص في القبالة كأى برنامج يجب تقيمه لاستخلاص التوصيات اللازمة مما يعزز تطوير البرنامج وتعزيز الفائدة المستقبلية منه.

**منهجية الرسالة:**

كانت عينة الدراسة هادفة من 60 خريجة من الخريجات و 50 من المشرفين عليهن في أماكن عملهن، أما بالنسبة للأدوات المستخدمة في هذه الدراسة عبارة عن استبانات أحدها خاصة بالخريجات والأخرى بمشرفيهن بالعمل.

**نتائج الدراسة:**

أوضحت هذه الدراسة الى وجود تأثير ايجابي عالي لهذا البرنامج على المعرفة والاتجاهات والممارسات للخريجات وكانت هذه النتائج تتلخص بتأثير الدبلوم على كلا من المعرفة والاتجاهات بوزن نسبي 86 %، أما بالنسبة للممارسات كانت بوزن نسبي 88% وذلك من منظور الخريجات، وأما بالنسبة لوجهة نظر المشرفين كانت الجوانب المعرفية والممارسات بوزن نسبي 82% و اما الاتجاهات فكانت بنسبة 84%. وكانت نسبة الرضا عن الدبلوم المهني للقبالة من وجهة نظر الخريجات بنسبة 78 %، وكان من أهم عوامل عدم الرضا هو البيئة التدريسية والتي تمثلت في عدم جهورية كافية للقاعات الدراسية. وخلصت هذه الدراسة إلى أن هناك علاقة ذات تأثير ايجابي كبير ما بين الدبلوم المهني في القبالة وبين الجوانب المعرفية والاتجاهات والممارسات للخريجات من منظور الخريجات ومشرفي عملهن.

**التوصيات:**

أوصت الدراسة على تفعيل التدريب في المعمل الجامعي وأعطائه وقت أكبر قبل الذهاب الى العمل الميداني بالمرافق الصحية. وأيضا تحسين البيئة التدريسية من حيث سعة القاعة الدراسية وجودة الأثاث، والحرص على ترشيد عدد المتدربات ضمن المجموعة الواحدة ميدانياً بحيث لا يزيد عن 4 طالبات في كل مجموعة. كما وأوصت الدراسة الباحثين بدراسة أثر البرنامج ليس فقط من وجهة نظر الخريجين وإنما بالملاحظة المكانية والمباشرة على أداء خريجات البرنامج.