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Quality of Midwifery Care in Labour Room at Maternity Governmental Hospitals in Gaza Strip

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Dedication

This Thesis is dedicated to my parents and my family who did everything easy for me, they are a model of great strength and love and praying for me every time. They granted me support, encouragement, and love made this endeavor possible.

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 its parts has not been submitted for a higher degree to any other university or institution.

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First of all, praise be to Allah who has done good deeds, and guided the outcome of this work in spite of all difficulties and challenges during the period conducting the study.

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Abstract

Globally, midwives play a very crucial role in maintaining and maximizing quality of care during childbirth which have significant effect on the delivery. This study aimed to assess the quality of midwifery care in labour room at the governmental hospitals in the Gaza Strip. The study adopted descriptive, analytical design on a convenience sample of 295 mother who underwent normal vaginal delivery, in which 246 responded to participate in the study questionnaire with a response rate 83.3%. The researcher used a validated questionnaire as a tool for data collection. Different statistical procedures were used for data analysis including percentages, mean, independent sample t test, and Pearson correlation. The study results revealed that the presence of companion, the use of partogram, lack of augmentation, delivery in none-supine position, and skin to skin contact have been applied in 38.6%, 94.7%, 53.7%, 20.7%, 82.9% of the total deliveries in the current study respectively. The total mean score of the Bologna score is 2.90 out of 5.0 (58.0%). The results also revealed that the mean score of the level of quality standards of midwifery care in Nasser medical complex is significantly higher than of Shifa medical complex. Also, there is a significant inverse correlation between the quality standards of midwifery care and the number of gravida ($p<0.05$), while there is no statically significant differences between the quality standards of midwifery care and the para, variables number of children, number of stillbirth, gestational age, and abortion times ($p>0.05$). The study concluded that Birth in Gaza Strip in some items to evidence base by 50%. Bologna score should be adopted as a policy to monitor the quality of care in the governmental hospitals in the Gaza Strip. Also, incorporating the Bologna score into midwifery education is strongly recommend to prepare the midwives for implementing each item in this score during.

Table of Contents

List of Figures

List of Tables

List of Annex

List of Abbreviations

AMDD	Averting Maternal Death and Disability
AMTSL	Active Management of the Third Stage of Labour
ARM	Artificial Rupture of Membrane
CS	Cesarean Section
ECV	External Cephalic Version
FIGO	The International Federation of Gynecology and Obstetrics
GPs	General Practitioners
GS	Gaza Strip
GSDP	Gaza Strip Demographics Profile
ICM	International Confederation of Midwives
IOM	The Institute of Medicine
MCH	Mother and Child Health
MDG	Millennium Development Goal
MNH	Maternal and New-Born Health
MoH	Ministry of Health
NGOs	Non-Governmental Organizations
NVD	Normal Vaginal Delivery
R&D	Research and Development
SBA	Skilled Birth Attendants
SCBU	Special Care Baby Unit
SDGs	The Sustainable Development Goals
SSC	Skin to Skin Care
UK	United Kingdom
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
USA	United States of America
WB	West Bank
WHO	World health organization

Chapter One

Introduction

1.1 Background

Childbirth is a significant event in a woman's life with deep physical, psychological and emotional effects on them. This phenomenon is associated with pain, psychological strain, vulnerability, probable physical effects and death in some rare cases. Taking care of mother in childbirth with no side effects is the responsibility of a midwife. The midwife is the only person who is skillful in this regard and has the responsibility of looking after mothers and babies. The quality of midwifery care is one of the issues, which has major effects on the results of childbirth (Naghizadeh et al., 2013).

The performance and activities of the midwife in this critical (birth) situation might not only have different results ranging from life to death and health to physical damage but also they might considerably affect the psychological and emotional health of the mother and the baby, that's why the world health organization (WHO, 2015) calls attention to the fact that the number of midwives, midwifery care outcomes, and quality are essential in reducing maternal and infant mortality rates and in reaching related global goals (WHO, 2015).

Despite the focus on promotion of institutional deliveries, the quality of routine care for normal labour and childbirth has not received enough research and programmatic attention (Sharma et al., 2015). The time around childbirth has always been the riskiest for women in many parts of the world, recent estimates suggest that closure of the quality gap through the provision of effective and woman-centred care for all women and newborn babies delivered in facilities could prevent an estimated 113,000 maternal deaths, 531,000 stillbirths, and 1·32million neonatal deaths annually by 2020 (Bhutta et al., 2014).

More importantly, global research has concluded that midwifery care has a pivotal role in the reduction of preventable maternal and newborn mortality and morbidity (Renfrew et al., 2014). The increased access to skilled attendance at birth in the low and middle income countries that contribute to 99.0% of the global maternal mortality rate, however, it has not resulted in expected reductions in mortality by United Nation Population Fund ("UNFPA", 2011).

1.2 Research Problem

Maternal and newborn health is considered an important issue for sustainable development. Graham and colleagues (2016) outlined that with an estimated annual 210 million pregnancies and 140 million live births globally, ensuring that every woman and every newborn across the globe has the right to high quality care is a formidable challenge. The era of the Millennium Development Goals (MDGs) led to good progress and maternal deaths declined by nearly half (44%). The progress which achieved by MDGs; was inconsistent across many parts of the world, and many countries including Palestine could not achieve these goals which aimed for decreasing the maternal mortality ratio by 75% (Graham et al., 2016).

In the Gaza Strip, the recent statistics by Bottcher (2018) showed that a total of 18 maternal mortalities occurred between 1st July 2014 and June 30th 2015 between the ages of 18 to 44 years, with 44.4% occurring before the age of 35 years. The study outlined that the most common causes of death among women were sepsis, postpartum hemorrhage, and pulmonary embolism (Bottcher et al., 2018). These deaths could be prevented through professional skills were based on high quality standards. More interestingly, the study of Bottcher et al. (2018) revealed that the maternity care in the Gaza strip is still impaired, explained by poor implementation of clinical guidelines and lack of professional skills in

communication and teamwork. The absence of the clinical guidelines might lead to increase the morbidity and mortality among women during and after birth process. Also it might lead to increase the costs of treatment of the complications resulted from poor implementation of the guidelines; the issues which might have a huge bad impact on the Palestinian health care system in the Gaza Strip.

1.3 Significance of the Study

The Sustainable Development Goals (SDGs) have set ambitious health-related targets for mothers, newborns, and children under the umbrella of Universal Health Coverage by 2030. Addressing quality of care will be fundamental in reducing maternal mortality and achieving the health-related SDGs targets. For mothers, the period around childbirth is the most critical for saving the maximum number of lives and preventing stillbirths (WHO, 2015).

The report of the State of the World's Midwifery by UNFPA outlined the urgent need to improve the availability, accessibility, acceptability and quality of midwifery services (UNFPA, 2014). In the government hospitals in the Gaza Strip, the midwife is considered the first skilled-birth attendant and is responsible for ensuring and providing care for the woman during labour. The midwife has to be aware of the midwifery quality indicators and standards, these standards were studied in this study for the first time in the Gaza Strip, the issue which might have good impact on enhancement the midwifery care during labour process, decreasing the costs from maternal complications, and lowering the risks of morbidity and mortality in the Gaza Strip in future.

Bottcher et al, (2018) recommended that the local policymakers at the ministry of health in the Gaza Strip should focus on systematic application of quality improvement strategies in labour room in order to achieve greater patient safety and further reductions in the maternal

mortality rate. This study came to assess these quality standards among midwives using the Bologna dimension of midwifery care during labour process which has not been applied elsewhere in the Gaza Strip; to make sure the greatest application of these standards.

1.4 Main aim of the Study

The aim of this study is to assess the quality of midwifery care in labour room at the governmental hospitals in the Gaza Strip according Bologna standard.

1.5 Objectives of the study

1.5.1 To assess the quality standards of midwifery care in labour room at the governmental hospitals in the Gaza Strip.

1.5.2 To explore the differences in the application of quality standards of midwifery care between Shifa and Nasser medical complex.

1.5.3 To investigate the association between midwifery quality standards and maternal variables (obstetric history, current pregnancy and intrapartum factors).

1.5.4 To suggest recommendations for policy makers and for the midwives in to maximize the utilization of midwifery quality standards in the governmental hospitals in the Gaza Strip.

1.6 Research Questions

1.6.1 To what extent the quality standards of midwifery care in labour room at the governmental hospitals in the Gaza Strip are applied?

1.6.2 Is there a significant difference in the application of quality standards of midwifery care between Shifa and Nasser medical complex?

1.6.3 Is there a significant association between midwifery quality standards and maternal obstetric history?

1.6.4 Is there a significant association between midwifery quality standards and maternal current pregnancy?

1.6.5 Is there a significant association between midwifery quality standards and maternal intrapartum factors?

1.6.6 Are the key recommendations to midwives, health policy makers and researchers to improve the quality of midwifery care?

1.7 Context of the study

1.7.1 Socio-demographic context

Palestine lies within an area of 27,000 km^2, expanding from Ras Al-Nakoura in the north to Rafah in the south. Due to Israeli occupation, Palestinian territory is divided into three areas separated geographically; the WB 5,655 km^2, GS 365 km^2 and east Jerusalem. At the end of December 2017 total population of Palestinians was 4,952,168 in WB and GS (3,008,770 in WB and 1,943,398 in GS). The population density (capita/ km^2) is 811 in Palestine (526 in WB and 5,239 in GS). The Crude Birth Rate (CBR) in the Palestinian territory estimated to be about 30.9/1000 population in 2016 (28.5/1000 in WB and 35.8/1000 in GS), and more than 56,000 live births every year in GS (PCBS, 2017).

1.7.2 Economic context

Economic status in the Palestine is very low especially in GS due to siege against the strip. According to the Palestinian Expenditure and Consumption Survey 2017, the average monthly expenditure of household on various goods and services amounted to 934.9 Jordanian Dinars (JDs) (for household size of 5.5 of individuals), and it was 1143.6 JDs in the WB (for household size of 5.2 individuals) compared to 556.0 JDs in GS (for

household size of 6.1 individuals). The percentage of poverty was 13.9% in the WB, while it reached more than half of population in GS as it was 53.0%, which means four times higher than poverty percentage in the WB. As for the deep poverty line, 5.8% of individuals were below the deep poverty line in the WB and 33.8% of individuals in GS, so the deep poverty percentage in GS was six times higher than the WB. The data showed an increase in poverty percentages in 2017 compared to 2011. The poverty percentages were 25.8% in 2011 while it increased by 13.2% in 2017 to reach 29.2% of individuals were below poverty line. Deep poverty percentages also increased in 2017, as it was 12.9% in 2011 and it increased to 16.8% in 2017. This increase in poverty percentages was mainly because of the sharp increase in poverty in GS. It is worth mentioning that the situation of level of living in GS became worse than it was in 2011. Poverty among individuals in GS was 38.8% in 2011 while it jumped to 53.0% in 2017 with 37% increase. In WB, the situation was different, as the poverty percentages decreased from 17.8% in 2011 to 13.9% in 2017 with about 22.0% decrease. Deep poverty percentages also increased significantly in GS, as the deep poverty percentage was 21.1% in 2011 and became 33.8% in 2017 with an increase by around 60%. In WB, there was a decrease in deep means poverty percentages, as it was 7.8% in 2011 and became 5.8% in 2017 with a decrease by 25.6%. The significant increase in poverty indicators in GS was the cause of the increase in poverty indicators on the national level (PCBS, 2018).

1.7.3 Palestinian health care system

The Palestinian health system is a complex mix of different sectors. The five major groups of health providers are the Ministry of Health (MoH), Palestinian nongovernmental organization, United Nations Relief and Works Agency for Palestinian Refugees in the Near East (UNRWA), Palestinian military medical service and the private sector. MoH bears the heaviest burden, as it has the responsibility. UNRWA provides primary care

services, only for refugee and purchase secondary care services for the hardship cases. Non-governmental organizations provide primary, secondary and some tertiary services. Private for-profit sector provides the three level of care through a variety of specialized hospitals and investigation centers (MoH, 2017).

1.7.3.1 Primary health care

The number of registered Primary Health Care (PHC) centers in Palestine reached to 743 in 2017, of which 583 are in WB and 160 in GS. There are 466 PHC centers belong to the Palestinian MoH, which constitutes 62.7% of total number of PHC centers. The number of PHC centers managed by non-governmental organizations reached to 192, constituting 25.8% of all PHC facilities, while the number of UNRWA centers reached to 65, and military medical centers reached to 20 centers (MoH, 2017).

1.7.3.2 Hospitals

The total number of hospitals in Palestine is 81 hospitals, 30 of them in GS. The total number of hospital beds is 6146 beds with rate of 784 populations per bed (784 in GS and 783 in WB). The number of hospitals owned by MoH is 27 hospitals with a capacity of 3325 beds which accounts for 54.1% of total beds in Palestine, of these hospital, there are 13 governmental hospitals in GS with a capacity of 1664 beds. The number of beds allocated for children is 19.3% of the total number of beds in MoH hospitals (260 beds in WB and 381 beds in GS). The number of physicians working in different health facilities of MoH is 2529 physicians, with 5.3 physicians per 10,000 population (4.1 physician per 10,000 populations in WB and 7.0 physician per 10,000 populations in GS), and the number of nurses and midwives working in MoH is 4142 nurses and midwives, of which, 2715 (65.5%) in WB and 1427 (34.5%) in GS (MOH, 2017).

1.7.4 Health and maternity services in Gaza Strip

Public hospitals in the GS provide life-saving healthcare for 1715 patients every day, including 113 newborns, 100 patients in intensive care units, 702 patients requiring hemodialysis, 200 patients in need of surgery, 100 women in need of obstetric surgeries, and 500 patients in need of emergency care. Hospitals in GS are already over-stretched, with a bed occupancy rate of over 90%. With the closure of some hospitals due to shortage of fuel, the extra burden placed on the remaining hospitals in operation will further strain the delivery of services, including surgery, emergency departments, intensive care units and maternity services. Under-resourced public hospitals also face severe shortages in medicines and medical supplies. In January 2018, 40% of the essential drugs were completely depleted. This includes drugs used in emergency departments and other critical units (WHO, 2018).

The Israeli-Palestinian conflict has been ongoing for long years, resulting in a never-ending state of conflict and instability. There is clear evidence regarding the impact of protracted conflict and war on women, infants, health system and the health workforce and assessment of various health sectors placed human resource problems among the major deficiencies of the current Palestinian health-care system (Mataria et al, 2009).

There is severe shortage of nurses and midwives in MoH hospitals as more than half of the Palestinian births (55%) occur in public hospitals free of charge, midwives attend almost all vaginal births, except for instrumental deliveries, and nurses are the main staff in the post-partum wards (Maghari, 2015). According to latent reports, there are only 114 midwives (5 have diploma certificate, and 109 have bachelor or higher degree) working in 9 governmental hospitals in WB and 208 midwives are working in governmental hospitals in GS (93 holds bachelor degree and 115 have 2-years diploma) (MoH, 2014).

1.7.4.1 Nasser Medical complex (NMC)

NMC is the second largest governmental medical institution in the GS, it was established on 1958 and started working on 1960, on an area of 50000 sq. m. contains 260 beds, and provides secondary services (medical, surgical, pediatric and maternity care).

Al-Tahreer hospital is a small hospital inside of NMC, started on 1999 and offer maternity and pediatric services, it became the main maternity hospital in the southern of GS, and serves more than 300,000 inhabitants. It consists of maternity outpatient clinic (4 beds), reception department (5 beds), three obstetric departments (51beds), operation department (2 tables) and one delivery department (13 beds). The delivery department consist of two big room, one for the first stage and the other room for the second stage. Total number of nurses and midwives is 56, and the number of obstetricians and physicians is 49 (NMC, 2018).

1.7.4.2 Al Shifa Medical Complex (SMC)

It was established in 1946 in the western middle area of Gaza city, on a land 42000 m2, serving more than 500,000 citizens in Gaza City. The complex includes three hospitals, surgery, medical and maternity hospital. The overall beds in the hospital are 704. The maternity hospital was established in 1986 and it have been renovated and expanded on 1994 after the Palestinian National Authority took over the responsibility about GS. In the maternity hospital, around 11,000 deliveries and 500 CS are performed every year. The maternity hospital consisted of one reception department, Normal Vaginal Department (NVD), natural birth department, high risk department, three departments for admission and post-delivery, Out Patient Clinic, and operating theatre. Total number of nurses and midwives working in the maternity hospital is 166, and the number of physicians and obstetricians is 81 (SMC, 2016).

1.8 Definitions of Terms

1.8.1 Midwifery

Health services and health workforce needed to support and care for women and newborns including sexual and reproductive health and especially pregnancy, labour, and postnatal care (UNFPA, 2014).

In this study, the researcher defined midwifery as the health workforce in the governmental hospitals in the Gaza Strip intended to provide the care during labour process for women and newborns.

1.8.2 Quality of midwifery care

The WHO has defined quality of care as: "skilled, knowledgeable and compassionate care for childbearing women, newborn infants and families across the continuum throughout pre-pregnancy, pregnancy, birth, postpartum and the early weeks of life. Quality midwifery care, provided by midwives educated to international standards. The evidence shows us the midwifery plays a vital role, and when provided by educated, trained, regulated, licensed midwives, is associated with improved quality of care and rapid and sustained reductions in maternal and newborn mortality (WHO, 2014a).

In this study, the researcher defined the quality of midwifery care as the extent to which maternal health care services provided to the woman during labour improve her desired health outcomes. Also, the researcher defined Bologna standard as the tool which measure the safe delivery and the quality of care provided by the midwife at the governmental hospitals in the Gaza Strip, more details about Bologna are outlined in the chapter two.

1.9 Layout of the study

This study composed from five chapter: introduction, conceptual framework and literature review, methodology, result and discussion, conclusion and recommendation.

The first chapter presented general introduction to the study, with a brief background about the subject of the study. The researcher illustrated the research problem, justification for conducting the study, the goal and objectives of the study, questions of the study, context of the study, and definition of terms.

The second chapter consisted mainly of two parts: the first part is conceptual framework where the researcher provided a schematic diagram of the conceptual framework of the study (designed by the researcher). The second part presented review of literature related to the study topic and variables. In-depth detailed inquiry including previous studies were presented.

The third chapter described methodology including study design, population, sample size & sampling method, setting, period of the study, instruments, data collection and statistical analysis, ethical considerations, and limitation of the study.

The fourth chapter presented the study results and discussion. The researcher presented the results in form of tables and figures that make it easy for the reader to understand and make comments. The results were discussed in respect to available previous studies that directly related to the topic of this study and its objectives.

Finally, in the fifth chapter the researcher presented conclusion, recommendations, and suggestions for further studies in the light of the study results.

Chapter Two

Literature review

2.1 Conceptual Framework

The conceptual framework is the map that guides the design and the implication of the study. It was designed by the researcher based on review of the exist literatures and previous studies.

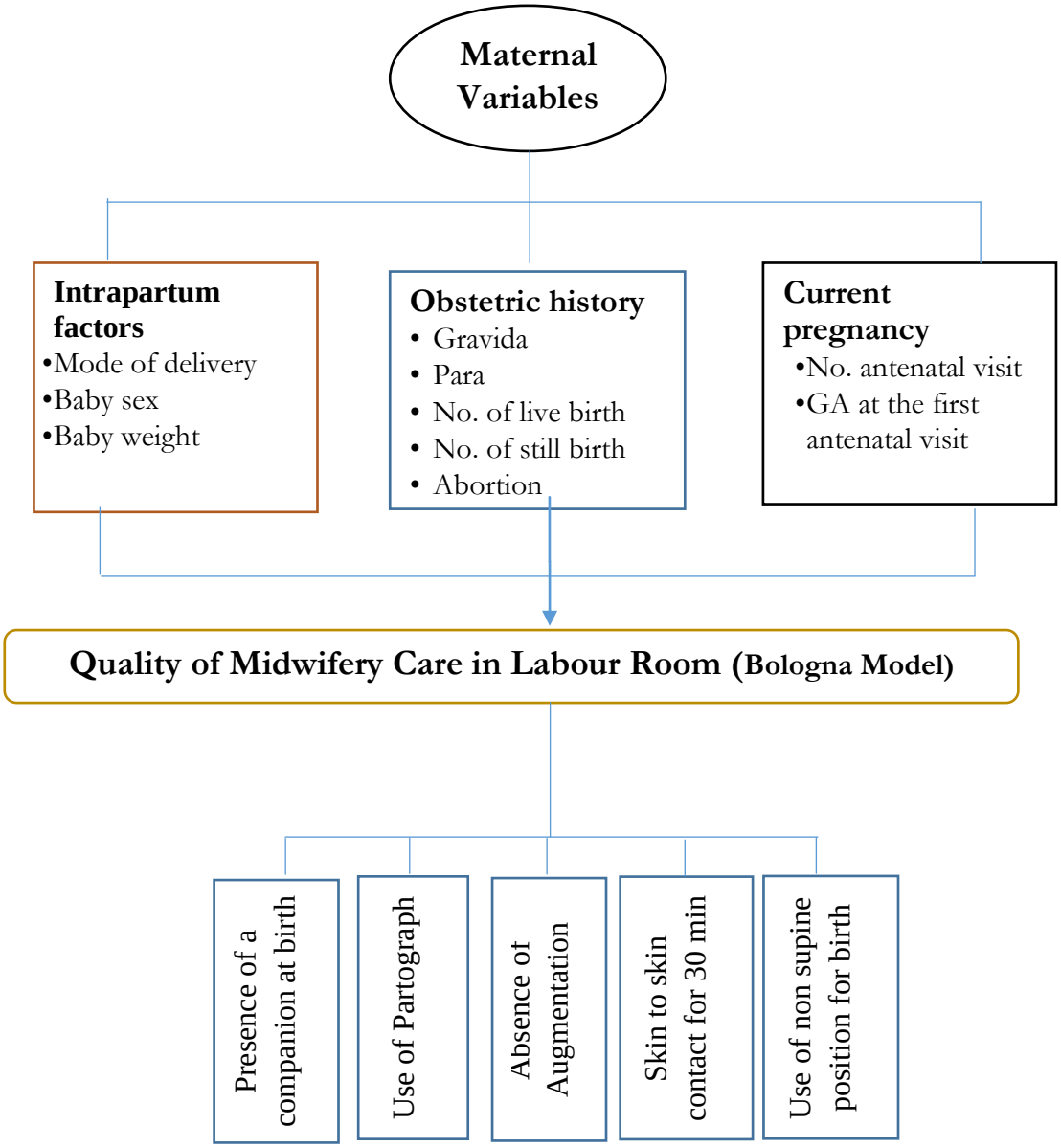

Figure 2.1: Conceptual Framework

Figure 2.1 shows the conceptual framework for this study which is self-developed. The figure shows that there study adopted the model of Bologna to assess the quality of midwifery care during labour. As shown in the figure, Bologna model consists of several dimensions which are considered the dimensions of the quality of midwifery care, they are: Skin-to-skin care, Birth position, Support during labour, lack of augmentation, and the use of Partograph. Other domain include maternal variables such as: **Obstetric factors**: Information about number of previous pregnancies and deliveries and abortion will increase the insight about the women's previous obstetric history and the risk level that will determine and these women need close observation and special care. **Current pregnancy**: Data regarding current pregnancy and conditions surrounding the pregnancy period are valuable predictors of labor and childbirth. Frequency of antenatal visits will give information about how much the pregnant women follow recommendation of health care providers. **Intrapartum factors**: This factor include sex of baby and mode of delivery (spontaneous or assisted), used to enhance labour process. In addition, this factor include variable as birth weight. Low birth weight is indicator for the need to admission to SCBU for further observation and management. In this study, the researcher will tackle this factors and analyze how these factors are interrelated in the course of childbirth, and will make a comparison between midwifery quality standards and other maternal factors.

2.2 Literature Review

2.2.1 Background

Research studies proved that the quality of midwifery care is insufficient due to poor facility capacity to provide timely emergency obstetric care and limited health provider knowledge to prevent, identify and manage complications. Additionally, the push for increased numbers of facility births in countries with weak health systems also threatens the quality of routine care for uncomplicated births (Campbell et al., 2016).

High quality of childbirth care includes provision of both routine care and emergency care. The majority of women giving birth in the health facility only require routine care. One reason for coming to a facility is to be near interventions provided by competent personnel if a complication occurs. Lack of good quality of midwifery care may lead to more complications or late detection of these. However limited systematic research is available on the quality of midwifery care in low-middle income countries (Campbell et al., 2016). The assessments for management of complications are guided by the timely emergency obstetric care signal functions but similar signal functions for routine care are not well defined (Brenner et al., 2015).

The WHO quality standard for childbirth care (WHO, 2015) suggested that a selected number of process measures for quality assessment of routine monitoring during childbirth covering two essential interventions. The first, initiation and use of the partograph for monitoring and management of first and second stage of labour. The second intervention was an Active Management of the Third Stage of Labour (AMTSL). Both interventions are intended to allow for controlled monitoring of the natural processes of birth, early identification of complications and preparedness of potential interventions when things deviate (WHO, 2016).

2.2.2 Quality of essential care at the time of birth

Although expanding coverage rather than quality has been the focus of maternal health programmes historically in labour settings in low and middle income countries, experts have argued that efforts to improve at institutions have lagged behind efforts to increase demand for institutional maternity services (WHO, 2015). Many facilities in high-burden low and middle income countries settings are ill-equipped to provide emergency obstetric care particularly lower levels facilities (Campbell et al., 2016)

The knowledge, skills and competence of midwife who is providing maternity services in institutions was also found to be deficient in some of countries (Chaturvedi et al., 2014). In addition, researchers have also highlighted systemic problems such as bed shortages, inadequate supplies, shortages of skilled staff, which is not conducive to the provision of high quality and respectful care at the time of birth (Chaturvedi et al., 2015). Moreover, many facilities in low and middle income countries often lack basic requirements such as regular electricity and clean water supply (Adair-Rohani et al., 2013).

Although, skilled birth attendants working within an enabling environment has been promoted as an essential strategy to provide high-quality intrapartum care, many women delivering at facilities in low and middle income countries report doing so without skilled birth attendants. In India, studies in Rajasthan have found that unqualified providers are frequently involved in maternity care provision in institutions, including in up to half of all observed cases with significant deficiencies in e at the time of birth (Iyengar et al., 2014).

Other studies have also found that the midwife often do not have the required skills and that numbers of midwives deployed are frequently not enough which further exacerbates poor facility emergency obstetric care capability (Ten Hoope-Bender et al., 2011). In a study at nine sub-Saharan African countries, researchers found that skilled birth attendants lacked adequate knowledge and skills since their training curricula did not include trainings on manual removal of the placenta (Adegoke et al., 2012). Some governments also designate cadres as skilled birth attendants, despite them lacking requisite midwifery competencies (Footman et al., 2015).

Available research evidence from facilities in low and middle income countries highlights many deficiencies in essential care at the time of birth, such as non-adherence to recommended protocols for care mistreatment of women and early discharge from facilities without adequate postpartum monitoring (Campbell et al., 2016).The 2016 Lancet

maternal health series articulated these deficiencies in care as “Too Little Too Late” which refers to absent, delayed or inadequate care and as “Too Much Too Soon”, referring to over-medicalization that results in over treatment (Miller et al., 2016).

The reasons behind poor quality of care at facilities are multi-faceted and could arise due to many different reasons such as: lack of material resources, limited knowledge and skills, inappropriate applications of technology, inability of organizations to change, failure to align health worker’s incentives and quality improvement efforts to improved health outcomes. Given the multi-faceted nature of quality as highlighted above, ensuring e at the time of birth has proved to be challenging (Sharma, 2017).

The bulk of the available research evidence on quality of essential care at the time of birth- mostly from public sector low and middle income countries facilities - highlights the need to carefully examine existing deficiencies in the quality of care at the time of birth and work towards improving the quality of care in the hospitals. Research evidence shows that it is possible to improve e but in order to do so it is essential to define measure and then develop appropriate strategies for quality improvement (Barker et al., 2016).

2.2.3 Conceptualizing and defining high quality maternity care pathways

There is consensus that in order to reduce avoidable maternal and neonatal mortality, every pregnant woman and newborn baby will need skilled care at the time of birth with evidence-based clinical and non-clinical interventions delivered in a compassionate and enabling environment which ensures that respect, dignity and equity of care are maintained (Tuncalp et al., 2015). A pregnant woman may directly come to the hospital once labour begins or may be transferred to the examination or labour rooms from another place within the hospital such as the outpatient clinic or the emergency room. Upon arrival, the first step will be determined by whether the labour has actually started. An obstetric examination to

assess the changes in the uterine contractions and uterine cervix (effacement and dilation) will help to establish the stage of labour. Depending upon the stage of labour, she may be transferred to different areas of the hospital (Tuncalp et al., 2015).

To implement this maternity care pathway, it is essential that other fundamental requirements for provision of high-quality services are available. For example, teams of skilled and auxiliary health workers should be available at the hospital round-the clock. Staff should adhere to relevant clinical protocols for obstetric and newborn care. Infection prevention and control measures should be implemented rigorously. Equipment must be accessible and functional, and subject to checks during every duty shift. Drugs and consumables should be available round-the-clock. Daily rounds should be conducted by managers to identify gaps and bottlenecks, and these must be corrected on an urgent basis. The time taken from arrival of woman at the hospital to the actual receipt of services should be minimized to tackle the third delay. Specialist back-up within the hospital or referral to another higher level facility, if needed, should also be a part of the maternity care pathway (Campbell et al., 2016).

It is theoretically possible that provision of such a maternity care pathway along with other essential requirements (staff, equipment, drugs, electricity, water and others) and efficient transfer of women in case of complications, could lead to provision of high-quality maternity care at hospitals (Campbell et al., 2016).

2.2.4 Improving the quality during childbirth

The WHO has defined quality as: “the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care needs to be safe, effective, timely, efficient, equitable, and people-centred (Tuncalp et al., 2015).WHO has adopted a framework of e for pregnant women and

newborns building upon the Donabedian (Donabedian, 1988) and Hulton et al. (2000) models. The WHO framework illustrates how the health system provides the structure in which care is provided; the provision and experience of care are both important components of the process of care, and the outcome comprises both individual/people-centred and facility-level outcomes (Tuncalp et al., 2015).

Both the WHO framework and Hulton's e models highlight that while care provision is a fundamental aspect of quality, how women experience care is also significant (Hulton et al., 2000). Assessments of e should, therefore, include woman-centred outcomes to better understand how women experience their care (WHO, 2016). Research conducted across Sub-Saharan Africa has also concluded that many women crave supportive care during facility-based childbirth, including continuous support throughout labour, and women's future healthcare decisions may depend on the type of care they received previously (Moyer et al., 2014).

For example, women in Malawi who had positive interpersonal relationships with their providers, such as greeting by name, encouragement to ask questions, and offering labour companionship, were more likely to give a high-quality rating to their care experience (Kambala et al., 2015). Similarly, a discrete choice experiment in Tanzania concluded that the quality of interpersonal and technical care was more important to women than other clinical inputs to achieve patient-centred care (Larson et al., 2015). Experiencing mistreatment during childbirth may lower a woman's satisfaction and confidence in a health facility, and may impact her decision to give birth outside of a facility (Bohren et al., 2015).

The WHO framework categorizes a woman's experience of care into five key domains: (1) effective communication that is responsive to her needs and preferences; (2) care provided

with respect and dignity for privacy, confidentiality, and informed choice; (3) emotional support to strengthen her own capabilities; (4) consistent availability of competent and motivated human resources; and (5) availability of physical resources for essential care and management of complications (Tuncalp et al., 2015). The incorporation of women's perspectives, as well as their families' and communities' perspectives, is crucial for identifying the needs and preferences of the end users, generating demand for good quality care, and promoting positive childbirth experiences. However, although women are the primary clients for maternal health services, their voices are often not prioritized in the development of interventions to improve quality care (Tuncalp et al., 2015).

2.2.5 Interventions recommended for care at the time of birth

In their vision for quality, the WHO and other international development partners envision a future where "Every mother and newborn receives quality care throughout pregnancy, labour, childbirth and postnatal period". Recent increases in institutional births across the world, offer a unique opportunity to realize this vision. However, to achieve this vision, health workers must apply evidence-based interventions consistently while providing care. Adherence to best-practice guidelines for essential care at the time of birth,together with effective implementation strategies, have the potential to support healthworkers in making correct decisions at the right time and use effective interventions while providing care. Recent systematic review published as a part of the Lancet 2016 maternal health series reviewed all available clinical practice guidelines for the provision of routine intrapartum care and postnatal care and provided up-to date guidance on recommended interventions identified using a rigorous review methodology (Miller et al., 2016).

2.2.6 Interventions not recommended for use during the time of birth

Having identified interventions recommended for the provision of routine intrapartum and postpartum care. There is still continue to be used frequently during provision of intrapartum and postpartum care, particularly in low and middle income countries settings. Lack of up-to-date knowledge, attrition of skills, low levels of motivation, restrictive institutional policies and health system bottlenecks can perpetuate the use of these interventions that are not recommended for providing care during labour and childbirth (Dickson et al., 2014).

Many of these interventions such as routine use of enemas, prophylactic insertion of intravenous fluids, administration of oxytocin before delivery, routine episiotomy and others, do not have evidence of effectiveness. Adoption of these ineffective practices into routine care is harmful especially in low and middle income countries settings with weak health systems, where service quality is not routinely monitored and where women may not regularly come to facilities (Dickson et al., 2014).

2.2.7 Measuring the quality of care in labour room

Measurement of structure alone, such as readiness, either of facilities (through measurement of signal functions) or of the provider (through measurement of knowledge and skills) does not provide a comprehensive picture. Similarly, a focus on clinical outcomes alone is not enough, as most pregnancies are uneventful, complications may occur, and negative outcomes may also occur in the presence of good clinical care. Therefore, measurement of quality of care in obstetrics needs to focus on the processes of care and should include both technical quality as well as experiences of care that women receive while seeking institutional maternity care. Theoretically, processes of care can be measured during every health care encounter (Barker et al., 2016).

However, in some cases, the private nature of health worker-client interaction, absence of appropriate measurement scales or instruments limits measurement efforts. Over the past decade, there have been many methodological advances in measurement of processes of care for MNH. There is also robust research evidence, which suggests that measuring processes of care, as a part of quality improvement efforts can lead to improved health outcomes. This makes process measurement a preferred approach to assess quality of care for maternal and newborn health (Barker et al., 2016).

Nine approaches to measure processes of care for maternal and newborn health were discussed below, such as standardized patients, clinical vignettes, review of medical records, audits, simulations or clinical skills and drills, direct clinical observations, video filming and satisfaction surveys. All methods have their own advantages and disadvantages (Aung et al., 2012).

Standardized patients are a popular method to assess processes of care and have been employed by a number of studies in Asia and Africa to measure quality of care for childhood illnesses such as diarrhoea, acute respiratory infections, and sexually transmitted infections (Mohanan et al., 2015). Standardized patients are trained actors, often from local communities, who make unannounced visits to a hospital and present symptoms of a simulated condition. These patients complete an assessment checklist on providers clinical actions after the visit. Since this methodology employs cases that are standardized and predetermined, it allows for quality comparisons across different types of providers and contexts (Das et al., 2012).

Some proponents of standardized patients argue that since health workers do not know the true identity of standardized patients, their behaviors approximates that of “real patients” and hence, health workers are less prone to Hawthorne effect. Hawthorne effect is a phenomenon whereby health workers become aware that they are being observed, and

thereafter, exert additional effort which is a change in their actual behavior (Daniels et al., 2017).

However, predicting health worker's behaviors in real life is complex. For example, health workers may provide better care to someone they know personally or provide discriminatory care to other patients. Moreover, these simulated patients are not suitable for assessing quality of care for invasive procedures or conditions like childbirth that cannot be simulated by actors (Daniels et al., 2017).

Clinical vignettes were developed for measuring quality within a group of providers and they have been used to study quality of care for a range of conditions, including for measuring. Obstetric care capability and intrapartum decision-making of midwives. Vignettes can be administered either on paper, by computer, or over the Internet. When clinical vignettes are used to assess many providers, each provider is given the same case or the same set of cases. Health workers follow that particular written clinical-case, respond to questions that replicate certain components of a patient's visit, for example-history-taking, examination, ordering of investigations or prescribing a treatment plan. The questions are open-ended and include interactive responses that simulate a patient's visit and evaluate the health workers knowledge. Health workers' performance is assessed against a criteria for managing the particular condition (Styles et al., 2011).

Vignettes have several advantages, such as allowing comparison between health workers, and comparison before and after implementation of a new policy. They are also cheap, easy to administer and easy to analyze which makes them useful. However, researchers have argued that health worker's behaviors during an actual consultation is not accurately captured by vignettes, and that knowledge does not always translate into actual clinical practice. Therefore, although vignettes are a useful quality assessment tool, they are often

incomplete when used in isolation, and should be used with other methods such as direct observations of clinical practice (Styles et al., 2011).

Record reviews are one of the most frequently used methods to evaluate clinical quality such as for emergency caesarean sections. Their main advantages are that medical records are available after every health care encounter and they are easily obtained. However, often when medical records are handwritten, they may not be legible or may have been written for other purposes like obtaining payments, or medico-legal reasons rather than to document details of procedures. Their utility is perhaps greater in high-income settings where electronic medical records are routinely used. In contrast, such systems do not exist in most low-resource settings and there is often inconsistency and poor clinical documentation for indicators of interest such as partograph use, timing of oxytocin, or blood transfusion and others (Landry et al., 2014).

Audits such as near-miss audits, maternal and perinatal death reviews have also been used extensively to identify and address deficiencies in processes of MNH care. Audits have been defined as: 'the systematic and critical analysis of the quality of medical care, including the procedures used for diagnosis and treatment, the use of resources and the resulting outcome and quality of life for the patient. Audits often combine information from different sources, which makes them superior to other methods such as record reviews (Borchert et al., 2012).

However, it is important to ensure that the purpose of conducting the audit as a learning exercise aimed to improve clinical practices is communicated effectively for them to be accepted at hospitals. A variety of studies have used audits to measure and improve quality in MNH and evidence indicates that under certain contextual conditions audits can be feasible, effective and acceptable (Borchert et al., 2012). However, like record reviews, audits are retrospective and require a trained health worker to undertake detailed

abstraction of records from different sources which make it a time consuming endeavour (Aung et al., 2012).

Clinical skills and drills approaches like the obstetric emergency skills and drills methods have been used extensively to maintain health workers' competence in managing obstetric emergencies that health workers may not always encounter such as eclampsia or post-partum haemorrhage. In these skills and drills approaches, participants are given clinical scenarios, and are instructed to demonstrate clinical skills on mannequins or other simulators (Birch et al., 2007).

Simulation-based-training is considered to be a proactive approach to reduce errors and risk in obstetrics and aims to provide participants a range of transferrable skills to improve their actual clinical performance. However, these methods have mostly been used for educational purposes rather than for measuring quality, and simulators can also be a costly investment, particularly for use in low and middle income countries settings(Birch et al., 2007).

Clinical practice observations are direct observations of care processes as they happen and are an established method for evaluation of quality of care. They generally utilize external observers and are separate to ongoing supervision and mentorship during regular clinical practice which may involve observations. From an ethics standpoint, it is essential that both health workers and patients are informed prior to the start of clinical observations. This may often introduce a bias referred to as Hawthorne effect. Clinical practice observations and standardized patients are thought to be gold-standard methods to assess quality of care but they are not suitable for outcomes that are infrequent or conditions that cannot be simulated by actors, for example: neonatal resuscitation or maternal complications of pregnancy (Akachi and Kruk, 2017).

They are also resource-intensive and therefore may not be suitable for frequent or routine monitoring of quality. Clinical practice observations have been utilized by various studies to examine quality of obstetric and neonatal care in many low and middle income countries settings (Iyengar et al., 2014). Helping Babies Breathe programme for neonatal resuscitation and assessment tools from the Gaala study have specific sections on measuring processes of care during routine labour and childbirth. They also have specific sections on intrapartum and immediate postpartum care including aspects of woman-centred respectful maternity care. These instruments been used in multiple countries and are based on globally recognized best practices such as the WHO's care in normal birth and Integrated Management of Pregnancy and Childbirth manuals (Sholkamy et al., 2003).

Some exciting recent advances in measuring quality of care have included the use of video-filming which is suitable for rarer outcomes, events that unfold over a shorter period of time or involve a series of steps such as neonatal resuscitation or observation of oxytocin use. However, the costs of closed-circuit cameras, ethical and sensitive issues around the use of video filming, consent procedures, data anonymization and data management needs careful considered prior to using such video filming methods in low and middle income countries settings (Lindback et al., 2014).

Clients' experiences including satisfaction with care is generally assessed using cross-sectional surveys. As highlighted by these definitions, the concept of satisfaction is multidimensional and any evaluation of satisfaction is likely to be influenced by individual women's personal preferences, their expectations, the cultural and social context and actual care received by them (Sawyer et al., 2013).

Although satisfaction is considered to be important for future utilization and choice of health facility, further research is needed to fully understand the mechanism through which women perceive satisfaction with maternity services. Surveys to measure satisfaction have

been criticized for limitations such as measurement errors and inability to assess changes over time. For example, surveys may often use a single item to assess satisfaction with care ignoring the multi-dimensional nature of satisfaction. Research indicates multiple determinants that influence women's satisfaction such as staff-woman interaction, information exchange, involvement in decision making, control during the birthing process, pain relief, and birth environment. Detailed information on these determinants is not always collected in satisfaction surveys (Sawyer et al., 2013).

Some researchers have also argued that surveys on satisfaction with maternity care are not grounded in concepts and theory (Wilde-Larsson et al., 2010). Others have also noted that high levels of satisfaction are frequently reported in surveys which questions the reliability and validity of existing measurement tools. Often data from satisfaction surveys shows a lack of variability which questions the ability of surveys to discriminate. Lastly, measures of satisfaction reported in research studies often do not always differentiate between the actual experience of labour and childbirth (such as pain or mistreatment) and the overall experience of care during the hospital stay (Sawyer et al., 2013).

2.2.8 The Bologna Score

The Bologna score tool is constructed to measure both attitudes and practices in care in labour and is based on the WHO's guidelines for how care in normal birth should be managed. The tool aims to assess how many births that starts as normal and how vaginal birth is managed according to a number of evidence-based factors. The Bologna score was created with the intention to be used in both developing and developed countries with the overall aim to identify and support areas of good practice in normal birth wherever in the world it occurs.

The Bologna Score consists of three indicators. Indicator A investigates the requirements for a safe delivery and is defined as the percentage of women attended by a skilled attendant in labour. Indicator B is used to estimate the number of women falling outside the scope by measuring the percentage of women with induced labour or undergoing elective caesarean section. By using indicator A and B together it is possible to calculate the percentage of the overall pregnant women that will start a normal labour and then do further analysis (Bahri et al., 2014).

Indicator C strives to measure the management of normal labour and consists of five key measures; presence of a companion at birth, use of a partograph, absence of augmentation as for example external pressure on the fundus or emergency caesarean section, use of non-supine position for birth and skin-to-skin contact of mother and baby for at least 30 minutes within the first hour after birth. When using the Bologna Score each delivery is assessed and one point is given for every affirmative answer to the five questions in indicator C. The maximum score is five, which is supposed to indicate that birth is managed according to the best available evidence for care in normal birth (Sandin-Bojo et al., 2008).

The Bologna Score has so far been tested in many settings. In 2008, Sandin-Bojo and Kvist used the Bologna Score in a prospective cross-sectional study in Sweden including 35 maternity units. The findings indicated that according to the Bologna Score, care in labour was managed in accordance to scientific evidence to a limited degree and that there were large differences in the management of labour among the maternity units. The mean Bologna Score was 3.73 for the whole sample and 3,81 for those deliveries that was judged as low-risk at start of labour. Presence of a companion, use of partograph and skin-to-skin contact were the items that to a great extent were given an affirmative answer and consequently also high points on the Bologna Score (Sandin-Bojo et al., 2008).

2.2.8.1 Skilled birth attendants

As noted earlier, an important strategy employed to prevent maternal and neonatal mortality, has been to ensure that skilled birth attendants (SBA), working in enabling environments, are able to attend every childbirth. SBAs are defined as "an accredited health professional such as a midwife, doctor or nurse who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in identification, management and referral of complications in women and newborns" (World Health Organization, 2004).

Availability of adequate numbers of SBAs at the national and sub national levels is also important. The 2014 update of the Global Health Workforce statistics indicates that amongst countries for which data was available, countries did not meet the minimum critical threshold of 23 midwives, nurses, and doctors per 10,000 population needed to implement primary health programmes including maternity care services. In addition, shortages of specialists such as obstetricians, anaesthetists and neonatal nurses is also frequent in settings of low and middle income countries (Sharma et al., 2016).

Even when midwives are available, they may be poorly distributed within urban and rural areas or within the public and private sectors. This is particularly challenging in remote and rural areas where reasons such as poor infrastructure, limited career opportunities, family reasons like schooling for children and others, becomes a challenge for midwives recruitment and deployment (Campbell et al., 2016). As a result of these factors, women may not be able to receive timely care and end up either delivering alone or without appropriately qualified or skilled attendants, despite going to institutions for maternity care services (Campbell et al., 2016).

2.2.8.2.1 The partograph

The partograph is a tool used for observing the woman and monitoring the baby during labour and it is also a method for recognizing and predicting abnormality through comparison with an ideal progress (Algovik, 2008). It is a graphical record of cervical dilatation in centimeters measured against duration of labour in hours (Hodnett et al., 2013). The partograph can be used to assess the progress of labour and to identify when interventions are necessary. Research has shown that using the partograph can be highly effective in reducing maternal complications caused by prolonged labour such as postpartum haemorrhage, sepsis, uterine rupture and infant complications such as anoxia, infections, and death. The use of a partograph has also shown to reduce the need for operative interventions (Hodnett et al., 2013).

A review from 2008 including five studies assessed the effect on perinatal and maternal morbidity and mortality when using a partograph. Labour management when using a partograph was compared with labour management where no partograph was used. There was no significant difference in rate of caesarean section, instrumental vaginal delivery or Apgar score less than seven at five minutes between the group that implemented the partograph and the group without partograph. An exception was the one study carried out in a low-resource setting (Mexico) that showed a lower caesarean section rate when using the partograph. In this study early intervention had a positive effect on the caesarean section rate. Based on this review the authors regard that it is not possible to recommend the introduction of partograph as a routine use. However, the partograph is frequently used in both high- and low-income settings as it gives a good overview of labour progress and is easy to use (Bramer and Tordsson, 2010).

The partograph is also used for monitoring the descent of foetal head, uterine contractions, foetal heart rate, membranes and liquor. Additionally, the partograph can be used to monitor maternal conditions such as pulse, blood pressure, temperature and the use of drugs. The partograph is an inexpensive effective tool that can be used in a variety of different settings, both in developed and developing countries (Bramer and Tordsson, 2010).

2.2.8.2.2 Presence of a companion (Support during labour)

Throughout labour and delivery the woman's physical and emotional well-being should be regularly assessed. The assessment of the woman's well-being also includes attention to her privacy during labour, respecting her choice of companions and avoiding the presence of unnecessary persons in the labour room. Several factors affect the mother's experience of childbirth, but one of the most prominent factors is the support given during labour. Support can be given by the partner, family members, friends, doulas or hospital staff. Continuous support means the woman is having a supportive person by her side throughout the major part of the delivery (Bramer and Tordsson, 2010).

In a review where 16 trails were included the authors assessed the effect of continuous one-to-one intrapartum support compared with the usual care given to the mothers and their babies in those settings. Women who had continuous support during labour were more likely to have a slightly shorter labour and to have a spontaneous vaginal birth. Furthermore they were less likely to use analgesia or to report dissatisfaction with their childbirth experience. Continuous support had greater benefits when the provider did not belong to the hospital staff, when the support began early in labour and in settings where epidural analgesia was not routinely available (Bramer and Tordsson, 2010).

2.2.8.2.3 Birth position

WHO states that women in both first and second stage of labour can adopt any position they like, while preferably avoiding long periods lying supine. None-supine position includes kneeling, standing, sitting and squatting. Women should be encouraged to experiment with what feels most comfortable and should be supported in their choice. In most cases a non-supine position was perceived to be more empowering and less painful, and to facilitate an easier birth, although the supine position (on a bed) was still viewed as the more traditional approach to giving birth (low confidence in the evidence). Findings on health care professionals' experiences from the same review showed that staff tried to be responsive to women's needs but tended to favour the supine position as it made monitoring, medical intervention and the birth process easier for them to manage (Downe et al., 2018).

A review with the objective to assess the benefits and risks of the use of different positions during second stage of labour showed that supine position is unfavourable for both mother and baby. When the mother was placed in a supine position there was a risk of vena-cava syndrome, which is a result of obstruction of the inferior vena-cava that can lead to fall in blood pressure of the mother and foetal hypoxia and distress. The benefits of non-supine position were shortening of second stage of labour, small reduction in assisted deliveries, less episiotomies, fewer women reporting severe pain during second stage of labour and fewer abnormal foetal heart rate patterns. On the other hand the incidence of perineal tearing was increased when giving birth in a none-supine position. Haemorrhage more than 500 ml was also more likely to occur in non-supine position compared to laying down (Downe et al., 2018).

2.2.8.2.4 Lack of augmentation

Labour augmentation has traditionally been performed with the use of intravenous oxytocin infusion and/or artificial rupture of amniotic membranes (amniotomy). The procedure aims to shorten labour in order to prevent complications relating to undue prolongation, and to avert caesarean section. There is evidence that a significant proportion of women with uncomplicated pregnancies are subjected to routine augmentation of labour with oxytocin (Bernitz et al., 2014).

While augmentation of labour may be beneficial in preventing prolonged labour, it is inappropriate use may cause harm. Augmentation with synthetic oxytocin may result in uterine hyper stimulation, with adverse effects such as foetal asphyxia and uterine rupture, and thus increase the risk of a cascade of interventions during labour and delivery. Absence of augmentation such as use of oxytocin, fundal pressure and caesarean section and non-supine position at birth were the items that were not affirmed to the same extent. The variable that was least often affirmed was non-supine position for birth. The authors found the Bologna Score to be user friendly and a good quality indicator for intrapartum care (WHO, 2014b).

2.2.8.2.5 Skin-to-skin care (SSC)

Moreover, current evidence indicates that skin-to-skin contact between mother and infant shortly after birth helps to initiate early breastfeeding and increases the likelihood of exclusive breastfeeding for one to four months of life as well as the overall duration of breastfeeding. Infants placed in early skin-to-skin contact with their mother also appear to interact more with their mothers and cry less (WHO, 2018).

Evidence from 34 randomized trials involving 2177 women and their babies found that babies in the SSC group cried less, interacted more with their mothers, had improved

cardiorespiratory stability and glucose levels, and were more likely to be breast-fed. No adverse effects were observed. On the basis of this evidence, SSC should be routine practice. Implementing SSC may require considerable commitment and energy to sustain the practice. Routine tasks such as measuring and observing the baby could be done with the baby on the mother's chest. Weighing the baby could be delayed or done at the bedside with a minimal period of separation. A study was made in a resource-poor community of rural Uttar Pradesh, India with poor access to quality health care. The study assessed the acceptability of skin-to-skin care (SSC) within the community. A culturally appropriate communication program designed to encourage evidence-based newborn care including adoption of SSC was presented to pregnant women through community-based workers. The study showed that high rates of hypothermia in the babies (<36,5C) were found in the Indian rural homes, especially during the winter months. The incidence of hypothermia in this study was 38 percent in home-delivered babies (Moore et al., 2012).

2.2.9 Conditions related to labour

2.2.9.1 Episiotomy

An episiotomy is an incision made in the perineum to enlarge the vaginal outlet. Although still a common obstetric procedure, the use of episiotomy has decrease over the past 25 years, and can add to post-partum discomfort and perinea trauma and can lead to fecal incontinence. There is feeling of some pain around the episiotomy for two or three weeks after baby is born (Ricci et al., 2013).

2.2.9.2 Neonatal Apgar score

Apgar score is a tool used to evaluate newborns at one minute and five minute after birth. It is provide data about newborns initial adaptation to extra uterine life. The baby must be examine by a midwife after delivery, and Apger score less than 7 after 5 minutes the baby

will need admission to SCBU for further care and close observation. Baby score between 7 and 10, usually mean that baby is in good condition. Careful examination of the newborn at birth can detect anomalies, birth injuries, and disorder that can compromise adaptation to extra uterine life. Five parameters are assessed with Apgar scoring. Scoring is as follows: 1- A = appearance (color) 2- P = pulse (heart rate) 3- G = grimace (reflex irritability) 4- A= activity (muscle tone) 5- R = respiratory (respiratory effort), Each parameter is assigned a score ranging from 0 to 2 points. A score of 0 points indicates an absent or poor response; a score of 2 points indicates a normal response (Ricci et al., 2013).

2.2.10 Complication during labour

2.2.10.1 Post-partum hemorrhage

Postpartum hemorrhage is defined as a blood loss of more than 500 mL after the third stage of labor or 1,000 mL after a cesarean birth. The hemorrhage is identified as either early, within the first 24 hours, or late, generally occurring 1 to 2 weeks after the birth, but may occur up to 6 weeks after the birth. A postpartum hemorrhage can occur rapidly and may notbe recognized until the client is in moderate to severe shock (Ricci et al., 2013).

2.2.10.2 Retained placenta

Placenta adheres is the most common type of retained placenta. It occurs when the uterus, or womb, fails to contract enough to expel the placenta. Instead, the placenta remains loosely attached to the uterine wall. Signs and symptoms include a fevera foul-smelling discharge from the vagina that contains large pieces of tissue, heavy bleeding that persists, and severe pain that persists (Ricci et al., 2013).

2.2.10.3 Perineal laceration

A perineal tear is a laceration of the skin and other soft tissue structures which, in women, separate the vagina from the anus. Perineal tears mainly occur in women as a result of vaginal childbirth, which strains the perineum. Tears vary widely in severity. The majority are superficial and require no treatment, but severe tears can cause significant bleeding, long-term pain or dysfunction. A perineal tear is distinct from an episiotomy, in which the perineum is intentionally incised to facilitate delivery (Ricci et al., 2013).

2.2.11 Studies related to the quality of midwifery care in labour room

2.2.11.1 International studies

Simbar et al. (2009) conducted a descriptive study to assess the quality of provided care in labour and delivery units in two selected Kordestan Medical Science University hospitals using self-administered questionnaire. The results revealed that the midwifery care was provided in different stages of labour, with the following mean percentages of compatibility with desirable situation: first stage of labour (71.4%), second stage of labour (63.0%), third stage of labour (80.63%) and first 2 hours after labour (70.50%). The lowest scores were related to the domains of “emotional support”, “hand wash” and “assessment of vital signs”.

Melese et al. (2014) conducted a cross sectional study to assess the client`s satisfaction in a maternal health care setting on 423 participants. The results revealed that the proportion of mothers who are completely satisfied with health care ranges between 2.4 to 21%. Pain control was the poorest source of satisfaction with 82% reporting dissatisfaction. Provider's communication with clients yielded complete satisfaction rates ranging between 0.7 to 26%. Inadequate information about the drug prescribed and explanation of procedures to be done to the client were found to be major causes of dissatisfaction. The complete

satisfaction rate with environmental factor of the hospital was between 3.3 to 40.2%. Age of the client, educational status, income of the client and client's address away from Addis Ababa were found to be the predictors of client satisfaction. Provider's attitude and communication, as well as longer duration of stay in the ward were independent predictors of client satisfaction.

Moreover, a non-experimental study was done by Bramer and Tordsson (2010) to assess how care in normal labour is managed in a delivery ward in Gulbarga, collected through a questionnaire that was completed by the birth attendants after each delivery in India. According to the Bologna Score, the maximum score of five indicates that labour has been managed in an evidence-based way. The study results revealed that the mean Bologna Score in this study was 0.72 points.

The low scores were a result of that no women gave birth in a non-supine position in this setting and that the use of a partograph and early skin-to-skin contact was rarely practiced. More than half of the women in this study had a high-risk pregnancy and in 73 percent of the deliveries one or more augmentations were used. The prevalence of caesarean section and artificial stimulation of labour was significantly higher in the obstetrical primiparous women than in the multiparous women.

Additionally, a cross-sectional study was conducted by Bahri et al. (2014) to assess the mothers' view regarding the labour support quality on 100 women who were hospitalized in the postpartum ward of Gonabad Bahman Hospital, and had normal vaginal delivery using questionnaire. The results showed that 74% of women evaluated the emotional support as good, 93% of the women had reported that they are satisfied with physical support, and 92% of the participants had expressed that they were content with the instructions/information provided by the personnel.

2.2.11.2 Regional studies

Alafi et al. (2014) conducted a descriptive cross-sectional study to investigate the prevalence and associated factors of dissatisfaction with intrapartum care by Jordanian women. Participants (n = 320) who were seven weeks postpartum were recruited from five maternal and child health centres in Irbid city in northern Jordan. Participants provided personal and obstetric information, and completed the Satisfaction with Childbirth Care Scale.

The study results revealed that the majority of women (75.6%) were dissatisfied with their intrapartum care. Dissatisfaction was associated with being attended by staff that a woman did not want present, experiencing labour as more painful than expected, and perceptions of inadequate help from health care providers to manage pain during labour.

The study concluded that the high percentage of women reporting dissatisfaction with intrapartum care in this study is of concern. Women's perception of pain and expectations of staff during labour and birth need to be addressed through education and improved communication by staff. Development of national evidence based policies and quality assurance systems would help reduce the rate of obstetric interventions, and give greater emphasis to respect for women's preferences during labour and birth.

Mohammad et al. (2014) conducted a descriptive cross-sectional design to investigate the prevalence and factors associated with satisfaction during labour and birth among Jordanian women using. Women (n=298) were recruited from four maternal and child health centers in Al-Mafraq city. Jordan. Participants completed an intrapartum care scale which measured satisfaction with three areas of care: interpersonal, information and involvement in decision making and physical environment. The study results revealed that overall only 17.8% of women were satisfied with intrapartum care. Around 13% of women

were satisfied with interpersonal care, 20.5% with information and involvement in decision making, and 18.8% with physical birth environment. Regression analyses revealed that low satisfaction was associated with experiencing an episiotomy, poor pain relief during labour, and vaginal birth, health care professionals and policy-makers as well as hospital administrators need to consider the factors that contribute to low satisfaction with childbirth in any effort to improve care.

2.2.11.3 Local studies

Abu Ward (2013) conducted a study to solicit the views of staff and women who had been through childbirth with respect to the introduction of the midwifery-led model of care. Six focus groups were organized and each group consisted of eight to 12 health professionals (midwives, nurses, or doctors). Two focus groups had midwives, two had male and female obstetricians, one had nurse managers, and one had primary health-care midwives and doctors. Three other focus groups were formed with women who had given birth at any time in their lives. Thematic analysis was used to identify themes and subthemes to form the basis for the analysis. The study results revealed that the midwives stated that they lacked training in evidence-based practice. The consensus opinion of the doctors was that normal childbirth is the responsibility of midwives, and they mentioned that the midwives needed training. Managers stated that midwives with a postgraduate education could cope with the increased responsibility, but new graduates needed additional training. Professionals working in primary health care recommended better documentation in the mother–child handbook. Most women said that they preferred women to care for them during childbirth; however, they could not differentiate between midwives and female doctors, and claimed they were not kept well informed about progress and did not have sufficient support during childbirth.

Bottcher et al. (2018) conducted a retrospective study to assess the causes and contributing factors to maternal mortality that occurred in the Gaza-Strip between July 2014 and June 2015.The data were collected from available medical records, investigation reports, death certificates, and field interviews with healthcare professionals as well as families.

The study results revealed that a total of 18 maternal mortalities occurred in Gaza between 1st July 2014 and June 30th 2015. Age at time of death ranged from 18 to 44 years, with 44.4% occurring before the age of 35 years. About 22.2% were primiparous, while 55.6% were grand multiparous women. The most common causes of death were sepsis, postpartum hemorrhage, and pulmonary embolism. The most striking deficiency was very poor medical documentation which was observed in 17 cases (94%). In addition, poor communication between doctors and women and their families or among healthcare teams was noticed in nine cases (50%). These were repeatedly described by families during interviews. Further aspects surfacing in many interviews were distrust by families towards clinicians and poor understanding of health conditions by women. Other factors included socioeconomic conditions, poor antenatal attendance and the impact of the 2014 war. Low morale among medical staff was expressed by most interviewed clinicians, as well as the fear of being blamed by families and management in case of adverse events. Substandard care and lack of appropriate supervision were also found in some cases.

This study concluded that there were deficiencies in maternity care, some of which were linked to the socioeconomic situation and the 2014 war. Others show poor implementation of clinical guidelines and lack of professional skills in communication and teamwork. Specialized training should be offered for clinicians in order to improve these aspects. However, the most striking deficiency was the extremely poor documentation, reflecting a lack of awareness among clinicians regarding its importance. Local policymakers should

focus on systematic application of quality improvement strategies in order to achieve greater patient safety and further reductions in the maternal mortality rate.

Wick et al. (2005) conducted a study to describe the staffing, caseloads and reported routine practices for normal childbirth in Palestinian West Bank (WB) governmental maternity facilities and compares these practices with evidence-based care. Data on routine childbirth practices in all eight governmental hospitals were obtained through interviews with head obstetricians and midwives. Data on staffing and monthly number of births were collected by phone or personal interview from all 37 WB hospitals.

The study results revealed that forty-eight percent of WB deliveries took place in crowded and understaffed governmental hospitals. Reported practices were not consistently in line with evidence-based care. Lack of knowledge and structural barriers were reasons for this gap. The implications of limiting unnecessary interventions in the normal birth process are particularly important in a context of limited access and scarce resources. More skilled birth attendants and a universal commitment to effective care are needed (Wicket al., 2005).

Chapter Three

Methodology

3.1 Introduction

This chapter addresses issues related to methodologies used to answer the research questions, the chapter commences with study design, study population, study setting, period of the study, sample size, sampling and statistical procedures.

3.2 Study design

The researcher used descriptive, observational and analytic study. This design is useful for measuring objectives in short period. Also, it is suitable for the study construct, as well as it examine the relationship between study variables (Polit and Beck, 2016).

3.3 Study population

The target population of this study consisted of the mothers who have spontaneous labour pain and gave normal vaginal delivery in the labour room at Nasser Medical complex and Shifa Medical Complex in the Gaza Strip.

3.4 Study Setting

This study was carried out in the labour room at Nasser Medical complex and Shifa Medical Complex in the Gaza Strip.

3.5 Period of the study

The study was conducted during the period from September 2018 until February2019.

3.6 Sample size and sampling method

The sample of the study is non-probability, convenience sampling method was applied on the pregnant women who are admitted to the hospitals in the labour room at Nasser Medical complex and Shifa Medical Complex during data collection period.

The sample size was calculated using Stephen Thompson formula for sample size calculation, and with consultation of statistician [CI = 95.0%, confidence limit = 0.05]. The study population were considered as the mean cases of those who underwent normal vaginal delivery at Nasser Medical complex and Shifa Medical Complex in the Gaza Strip in August 2018, they were 1260 normal vaginal deliveries (746 in Shifa medical complex and in 514 Nasser medical complex). The calculated sample size was 295. Stratification was done based on the total number of population in each hospital (proportional sample).So that we assure the maximum representativeness. After calculation, the total sample size for Shifa was 174, and for Nasser is121.

3.7 Response rate

In this study, 246 (125 from SMC and 121 from NMC) out of295women have responded to fill up the study questionnaire, with a response rate 83.3%.

3.8 Eligibility criteria

3.8.1 Inclusion criteria

Women who have had full-term, single pregnancy, low risk, who have not any recognized medical or surgical history and those who have labour which started spontaneously by normal vaginal delivery were included in the current study.

3.8.2 Exclusion criteria

In addition to the excluded cases which were mentioned in the above section, mothers with hemorrhage during pregnancy and who have previous caesarean section were also excluded.

3.9 Study instrument

An interview questionnaire was adopted from Sandin-Bojo et. al, (2012) which assess the quality of midwifery care using Bologna score. The questionnaire consist of six different parts. Part one represented maternal personal factors, part two represented the obstetric history, part three represented current pregnancy, part four represented intra partum care, part five childbirth outcomeand the part six represented outcome of expected normal birth using Bologna score.

3.10 Measurements and scales

For the first five parts, categorical variables on closed ended answers have been used. Bologna score in the last part in the questionnaire has five questions :1) whether a companion to the woman was present at birth (this item reflects the adoption of evidence-based care, attitudes of caregiver, and the women's involvement in maternity care services); 2) whether a partogram was used (this item reflects effective monitoring of labour and demonstrates that caregivers recognize the importance of objectively assessing labour progress); 3) absence of augmentation, including external physical pressure on the fundus (this item indicates persisting normal labour progress as judged by the professionals); 4) whether the woman gave birth in a non-supine position, which excludes most instrumental births (this item reflects the presence of evidence-based practice and the attitudes of caregivers); and 5) whether skin-to-skin contact between mother and baby was maintained for at least 30minutes during the first hour after birth, there by excluding

infants requiring intensive care (this item reflects the presence of evidence-based practice and indicates the attitudes of caregivers).

Each delivery was assessed and one point given for each of the five Bologna Score questions for which an affirmative answer is given. Thus, the maximum score for each delivery is five (1 score for each item) and the minimum score is zero. A score of five infers that the birth has been managed according to the best available evidence for care in normal birth.

3.11 Ethical and administrative considerations

The researcher was committed to all ethical considerations to conduct this study, administrative approval was obtained from Al-Quds University and ministry of health in the Gaza strip, ethical approval was obtained from Helsinki committee (Annex 6). A formal letter was submitted to the ministry of health in the Gaza Strip to obtain approval to visit the hospitals(Annex 7).Informed consent was obtained from all subjects as well to fill up the questionnaire.

3.12 Data collection

Data have been collected by the researcher and four assistant midwives (2 for each hospital) after being trained by the researcher on how to use the questionnaires in data collection.

Women who were admitted to the labour room and were expected to have normal vaginal delivery were invited to participate the study. The women were well-informed about the study procedures, then verbal and written consent have been obtained to them. Later, the researcher completed the questionnaires based on the results obtained from face-to-face interviews held with the mothers. Other parts of the research data have been obtained from patient files and through observations for three items of Bologna score (presence of

companion, delivery in non-supine position and skin-to-skin contact). All of the questions in the data collection instrument contained concrete data and therefore no differences stemming from observations existed.

Data collection took place during morning, evening, and night shift for eligible women who were in active labour before delivery.

3.13 Validity of the instrument

The questionnaire was submitted to expert's panel with experience and knowledge in the field as arbitrates who make suggestions and judgment about the adequacy of the questionnaire. The experts expressed their opinions and suggestions about the clarity, ease, simplicity, comprehensiveness of items, domains and statements of the questionnaire; therefore the researcher have had some changes in the questionnaire, such as delete or merge or reformulation of some items.

3.14 Data analysis

To achieve the goal of the study, the researcher used the Statistical Package for the Social Sciences (SPSS, Version 22) for analyzing the data. The researcher used descriptive statistics (frequencies, mean, standard deviation and percentages) to describe the main features of the participants. Independent sample *t* test, One-Way ANOVA and Pearson correlation have been used to examine the significant relationship between independent and dependent variables at confidence intervals 95% and error 5%.

3.15 Limitation of the study

- Frequent cut-off electricity which made it difficult to write and type the research text.
- Difficult in collection of data from women especially painful or exhausted ones.
- Lack of previous studies, especially quality of midwifery care in Palestine

Chapter Four

Result & Discussion of the study

4.1 Result of the study

4.1.1 Introduction

This chapter illustrates the results of statistical analysis of the data, including descriptive analysis that presents the socio-demographic characteristics of the study sample and answers to the study questions. The researcher used simple statistics including frequencies, means and percentages, also independent sample *t* test and Pearson correlation were used.

4.1.2 Sample distribution according to the participants' socio-economic and demographic characteristics

Table 4.1: Sample distribution according to the participants' socio-economic and demographic characteristics (n= 246)

Variables		Number	Percentage (%)
Age group	Below 25 years	91	37.0
	26 – 30 years	109	44.3
	More than 30 years	46	18.7
Education	Below secondary	18	7.3
	Secondary	100	40.7
	University	128	52.0
Working status	Working	34	13.8
	Housewife	212	86.2
Level of income	<1000 Shekel	169	68.7
	1000-1500 Shekel	53	21.5
	More than 1500 Shekel	24	9.8
Place of delivery	Shifa medical complex	125	50.8
	Nasser medical complex	121	49.2
	Total	246	100.0

Table 4.1 shows the distribution of study participants' according to the maternal socio-demographic factors. The table shows that 44.3% of the women in the current study are between 26 – 30 years old, 37.0% of them are below 25 years, while 18.7% are more than

30 years old. The table also shows that 52.0% of the women have university degree, 40.7% of them have only secondary school and only 7.3% did not reach secondary school.

Moreover, the majority 86.2% of the women are not working, 68.7% of them have an income level below 1000 Shekel, and the income of 21.5% of them is 1000-1500 Shekel. Regarding the place of delivery, 50.8% of the deliveries in the current study were in Shifa medical complex, and 49.2% were in Nasser medical complex.

4.1.3 Obstetric history of the mothers

Table 4.2: Obstetric history of the mothers (n= 246)

Variables		**Number**	**Percentage (%)**
Gravida	Below 3	75	30.5
	3 – 5	124	50.4
	More than 5	47	19.1
Para	Below 3	141	57.3
	3 – 5 years	80	32.5
	More than 5	25	10.2
Children	Below 3	144	58.5
	3 – 5 years	77	31.3
	More than 5	25	10.2
Stillbirth	Never	226	91.9
	Once	16	6.5
	Twice	4	1.6

The table 4.2 shows that 50.4% of women in the current study have had 3 – 5 pregnancies, and 30.5% of them have hadless than 3 pregnancies. Also, 57.3% of the women have less than 3 deliveries and 32.5% of them have had 3 – 5 deliveries. Moreover, 58.5% of the women have less than 3 children, and the majority (91.1%) have never experienced stillbirth.

4.1.4 History of previous abortion

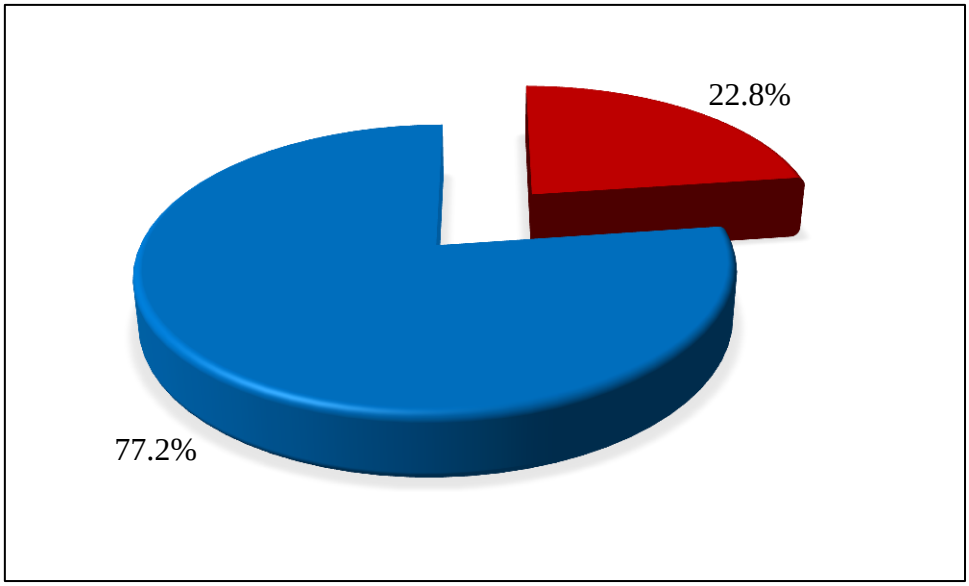

Figure 4.1: History of previous abortion

Figure 4.1 shows that 77.2% of the women in the current study have never experienced abortion, and 22.8% of them did.

4.1.5 Characteristics of the current Pregnancy

Table 4.3: Gestational age at the first ANC visit, number of ANC visits. (n= 246)

Variables		**Number**	**Percentage (%)**
GA at 1st ANC visit	≤ 17 weeks	227	92.3
	>17 weeks	19	7.7
Number of ANC visits	< 4 visits (not adequate)	19	7.7
	≥ 4 visits (adequate)	227	92.3

GA: Gestational Age

ANC: Antenatal Care

The table 4.3 shows that the majority (92.3%) of the women have adequate time of antenatal care visits booking (≤ 17 weeks), while 7.7% of did not. Also, 92.3% of the women have adequate number of visits.

4.1.6 Characteristics of delivery outcome in women with expected normal childbirth

Table 4.4: Characteristics of delivery outcome in women with expected normal childbirth

Variables		Number	Percentage (%)
Rupture of anal sphincter	Yes	8	3.3
	No	238	96.7
PPH	500-1000 ml	230	93.5
	>1000 ml	16	6.5
APGAR ≥7 at 5 minutes	Yes	170	69.1
	No	76	30.9

The table 4.4 shows that the majority (96.7%) of the women did not experienced rupture of anal sphincter, and 93.5% did not experienced PPH. Also, Apgar score at five minutes was 7 and more among 69.1 of the babies.

4.1.7 Characteristics of intrapartum factors

Table 4.5: Characteristics of intrapartum factors (n= 246)

Variables		Number	Percentage (%)
Augmentation	ARM	66	26.8
	Oxytocin	44	17.9
	ARM+ Oxytocin	65	26.4
	None	71	28.9
Mode of delivery	NVD	240	97.6
	Assisted	6	2.4
Episiotomy	Done	25	10.2
	Not done	221	89.8
Baby sex	Female	113	45.9
	Male	133	54.1
Baby weight	<2500 gm	10	4.1
	≥2500 gm	236	95.9
Admission to SCBU	Yes	40	16.3
	No	206	83.7
Breast feeding started at delivery room	Yes	205	83.3
	No	41	16.7
Complications during labour	Yes	54	22.0
	Perineal laceration	49	19.9
	Retained placental	5	2.1
	No	192	78.0

The table 4.5 shows that 26.8% of the women have had artificial rupture of membrane as a method of augmentation, while 26.4% of them have had artificial rupture of membrane and oxytocin as a method of augmentation. Also, 97.6% of the women have normal vaginal delivery, 89.8% did not experienced episiotomy during their birth. Moreover, 54.1% of the women gave male babies during their birth. Moreover, 95.9% of the deliveries in the current studies have normal birth weight, 16.3% of the babies have been admitted to the SCBU, and 83.3% of the women have started breast feeding at delivery room. The complications of labor consisted of 19.9% (Perineal laceration), 2.0% (Retained placental), while 78.0 of them did not experience any complications.

4.1.8 Quality standards of midwifery care (Bologna Score)

Table 4.6: Quality standards of midwifery care (Bologna Score)

Variables		**Number**	**Percentage (%)**	**Maximum score**	**Mean score**
Presence of companion	Yes	95	38.6	1	0.39
	No	151	61.4		
Use of partogram	Yes	233	94.7	1	0.95
	No	13	5.3		
Lack of augmentation	Yes	132	53.7	1	0.54
	No	114	46.3		
Delivery in none-supine position	Yes	51	20.7	1	0.21
	No	195	79.3		
Skin to skin contact	Yes	204	82.9	1	0.83
	No	42	17.1		
Total score				5	2.90

The table 4.6 shows the five items of Bologna score for measuring the quality standards of midwifery care. The maximum score for each item is 1 and the minimum is zero. The maximum score of the total Bologna score is 5, and the minimum is zero. The table shows that the presence of companion, the use of partogram, lack of augmentation, delivery in none-supine position, and skin to skin contact have been applied in 38.6%, 94.7%, 53.7%,

20.7%, 82.9% respectively of the total deliveries in the current study. The total mean score of the Bologna score is 2.90 out of 5.0 (58.0%).

4.1.9 Differences in the level of quality standards of midwifery care between Shifa and Nasser medical complex

Table 4.7: Differences in the level of quality standards of midwifery care between Shifa and Nasser medical complex

Variable		N	Mean	SD	*t* statistics (df)	*p* value*
Bologna score	Shifa	125	2.56	1.02	-5.703(239.22)	<0.001
	Nasser	121	3.25	0.86		

*Independent sample *t* test

The table 4.7 shows that there is a significant difference in the level of quality standards of midwifery care between Shifa and Nasser medical complex ($p<0.001$). The mean score of the level of quality standards of midwifery care in Nasser medical complex is significantly higher than of Shifa medical complex.

4.1.10 Correlation between the mean score of quality standards of midwifery care and obstetric history of the mothers

Table 4.8: Correlation between the mean score of quality standards of midwifery care and obstetric history of the mothers

Variable	Bologna score	
	R	***P* value***
Gravida	-0.144	0.024
Para	-0.081	0.207
Number of children	-0.122	0.055
Number of stillbirth	0.061	0.340
GA (weeks)	0.025	0.693
Abortion times	-0.039	0.542

*Pearson correlation

The table 4.8 shows that there is a significant inverse correlation between the quality standards of midwifery care and the number of gravida ($p<0.05$), an increase in the number of gravida; result in a decrease in the level of quality standards of midwifery care. On the other hand, there is no significant correlation between the quality standards of midwifery care and the para, variables number of children, number of stillbirth, gestational age, and abortion times ($p>0.05$).

4.1.11 Differences in the level of quality standards of midwifery care with regard to different characteristics of current pregnancy

Table 4.9: Differences in the level of quality standards of midwifery care with regard to different characteristics of current pregnancy

Variable		**N**	**Mean**	**SD**	***t* statistics (df)**	***p* value***
GA at 1st ANC visit	≤ 17 weeks	227	2.81	0.96	-4.902 (244)	<0.001
	>17 weeks	19	3.94	0.97		
Number of ANC visits	< 4 visits	19	3.47	0.90	2.583 (244)	0.010
	≥ 4 visits	227	2.85	1.00		

*Independent sample *t* test

The table 4.9 shows that there is a significant difference in the level of quality standards of midwifery care between different weeks of gestational age at the first ANC visit ($p<0.001$), the mean score of the level of quality standards of midwifery care among women who have their first ANC visit beyond 17 weeks is significantly higher than of those who have their first ANC visit at 17 weeks or before. Also, there is a significant difference in the level of quality standards of midwifery care between different number ANC visits ($p<0.01$), the mean score of the level of quality standards of midwifery care among women who have less than 4 ANC visits is significantly higher than of those who have 4 ANC visits and more.

4.1.12 Differences in the level of quality standards of midwifery care with regard to different characteristics of intrapartum factors

Table 4.10: Differences in the level of quality standards of midwifery care with regard to different characteristics of intrapartum factors

Variable		N	Mean	SD	*t* statistics (df)	*p* value*
Mode of delivery	NVD	240	2.90	1.01	0.180 (244)	0.858
	Assisted	6	2.83	0.40		
Baby sex	Female	113	2.94	0.98	0.579 (244)	0.563
	Male	133	2.87	1.02		
Baby weight	<2500 gm	10	3.10	1.28	0.619 (244)	0.536
	≥2500 gm	236	2.89	0.99		

*Independent sample *t* test

The table 4.10 shows that there is no statically significant difference in the level of quality standards of midwifery care between different mode of delivery, baby sex, and baby weight ($p>0.05$).

4.2 Discussion of the study results

4.2.1 Introduction

The following paragraphs illustrate the discussion of the study results in the context of previous studies and within the researcher's point of view and the current health care issues.

4.2.2 Quality standards of midwifery care (Bologna Score)

The study results showed the presence of companion, the use of partogram, lack of augmentation, delivery in none-supine position, and skin to skin contact have been applied in 38.6%, 94.7%, 53.7%, 20.7%, 82.9% of the total deliveries in the current study. The

total mean score of the Bologna score is 2.90 out of 5.0 (58.0%). The results of the current study are not consistent with the results of Sandin-Bojo (2008) in Sweden which revealed that the total mean score of Bologna was achieved 74.4% for the planned vaginal births. Regarding each item in Bologna, the presence of a companion in the current study was 38.6 use of partogram 94.7%, lack of augmentation 53.7%, delivery in none-supine position 20.7%, and skin to skin contact 82.9%; compared to 98.7%, 92.6, 55.2, 34.7%, and 92.3% respectively in the study of Sandin-Bojo (2008).

The differences in the current study and the study of Sandin-Bojo (2008) could be attributed to the fact that in Sweden they have more staff and more midwives to achieve the items included in Bologna score more efficient than in what has been achieved in the government hospitals in the Gaza Strip. The huge number of delivery cases which usually have some of complications; create some of tension for the midwives at labour room in the Gaza Strip, the issue which can impede the application of the quality standards based on Bologna standard.

On the other hand, the results of De Oliveiraa et al. (2015) in southern Brazil revealed that the presence of a companion was achieved in 83.3% of the cases, the use of partogram (98.5%), lack of augmentation (31.0%), delivery in none-supine position (3.2%), and skin to skin contact (71.5%), and the total mean score was 57.5% which is consistent with what has been revealed in the current study.

Moreover, the results of Bramer and Tordsson (2010) in India revealed that the mean Bologna Score was 14.6%, in which there were no women gave birth in a non-supine position, the presence of a companion was used in 22.1% of the delivery cases, the use of partogram (9.5%), absence of augmentation (27.0), and skin-to-skin contact was rarely practiced (14.7%).

By looking to the current study results, the presence of a companion in the current study was applied in 38.6% of the delivery cases, as far as the presence of a companion is concerned, studies reveal that women who receive support during the labour and the childbirth are more prone to spontaneous and shorter vaginal childbirths, and were less susceptible to analgesia; besides an increasing number of reports that portray dissatisfaction with the birth experience (Hodnett et al., 2013).

As far as the partogram is concerned, which was used only in 94.7% of the delivery cases; its use following the labour, may be useful to assess the quality of the support to normal childbirth (Bhutta et al., 2010). Contributing to provide a labour overview, the use of the partogram provides the obstetric support professional the means to identify deviations from both the maternal and fetal wellbeing, and from the childbirth evolution.

Lack of augmentation of labour, it was applied in 53.7% in the current study; in the labour stimulus, the use of oxytocin during the labour and be undergone an episiotomy were more frequent. The study of Bernitz et al. (2014) revealed that the administration of such uterotonic was related to the increase of childbirths using instrumentals, use of episiotomy. It is herein recommended that an accurate evaluation is carried out about the labour progression, thus granting the cautions and monitored use of oxytocin, aiming to minimize both the maternal and neonatal morbidity.

With regard to the delivery in non-supine position, only 20.7% of the women in the current study gave birth in non-supine position. This could be attributed to the absence of mentorship and lack of midwifery supervision on the midwives to accomplish this procedure. Also, it could be attributed to the old fashion of some of midwives in the last years; the issue which persists to the newly employed midwives. Recent studies have shown that the incident of perineal tearing and hemorrhage (more than 500 ml) are more

likely to occur when giving birth in one of the none-supine positions (Gupta and Hofemeyr, 2004).

The painful sensation women feel during the labour is related to both physiological and psychological factors, and its strength may vary due to individual characteristics. The use of non-supine positions during the labour is related to pain control and reduction. Therefore, vertical positions may favor the pelvis relaxation and reduce the painful sensation during the childbirth. They ease the movement freedom and the hip flexibility (back and forward or circular movement), which aid in the rotation of the fetal presentation, thus easing the labour evolution(Silva et al., 2014).

Other studies revealed that the use of the dorsal decubitus position during birth process was a frequent intervention in most of the support to the childbirth, and accountable for reducing scores related to perinatal support standards (Giglio et al., 2011). Regarding skin to skin contact which has been recommended by the world health organization soon after the childbirth, in order to prevent the newborn hypothermia and to favor the bond between the child and the mother (National Institute for Health and Care Excellence, 2014). Also, previous studies revealed that skin to skin contact between the mother and the baby favors the newborn, the maintenance of the acid-base balance, and the adjustment to the respiratory movement and cry. Such practice also favors the stimulus to the maternal attention, influencing the effective breastfeeding, fundamental to the newborn development (Moreira et al., 2014).

The low to medium frequencies and percentages related to the five quality standards suggest that the governmental hospitals in the Gaza Strip failed in following the recommended and based on scientific evidences practices about the care during the labour and the childbirth, related to the Bologna Score on the period of data gathering.

In the current study, the results showed that there is a significant difference in the level of quality standards of midwifery care between Shifa and Nasser medical complex, in which the mean score of the level of quality standards of midwifery care in Nasser medical complex is significantly higher than of Shifa medical complex. This could be attributed to the presence of more delivery cases in Shifa medical complex than Nasser medical complex, this can lead to make stress and pressure on the midwives in Shifa medical complex since it can include more cases than Nasser medical complex. Also, the difference could be attributed to the present of more effective mentorship and supervision in Nasser medical complex, which in turn can lead to improve the success of application of Bologna quality standards. The results of the current study are consistent with the study of Bitar and Narrainen (2011) conducted a descriptive study to to explore the challenges and barriers faced by Palestinian maternal health care providers. The results revealed that the quality of care provided for women and infants is substandard, the maternal healthcare providers work within a difficult and resource-constrained environment, in addition to high workload, poor compensation, humiliation in the workplace, suboptimal supervision and the absence of professional support and guidance. Work overload besides shortage of nurses and qualified midwives affect quality of care in maternity departments.

Chapter Five

Conclusion and Recommendations

This chapter provide the main conclusion and recommendations for the decision makers to focus on improving and increasing the quality of midwifery care for women in labour room.

5.1 Conclusion

The main aim of this study is to assess the quality of midwifery care in labour room at the governmental hospitals in the Gaza Strip. An observational design was applied in the current study on a convenience sample which consisted of 246 women (125 from Shifa medical complex and 121 from Nasser medical complex) who gave birth by normal vaginal delivery method. Bologna score was used to assess the quality of midwifery care as the study questionnaire.

The study results revealed that the total mean score of the Bologna score is 2.90 out of 5.0 (58.0%). The results suggest that in the Gaza Strip, birth is somewhat managed according to scientific evidence in some of items. The presence of companion, the use of partogram, lack of augmentation, delivery in none-supine position, and skin to skin contact have been applied in 38.6%, 94.7%, 53.7%, 20.7%, 82.9% of the total deliveries in the current study. The study results also revealed that there is a significant difference in the level of quality standards of midwifery care between Shifa and Nasser medical complex ($p<0.001$).The mean score of the level of quality standards of midwifery care in Nasser medical complex is significantly higher than of Shifa medical complex.

The result shows that an increase in the number of gravida; result in a decrease in the level of quality standards of midwifery care. On the other hand, there is no significant correlation between the quality standards of midwifery care and the variables number of children, number of stillbirth, gestational age, and abortion times ($p>0.05$).

5.2 Recommendations

- Encouraging the presence of companion during childbirth is essential.
- Educating the midwives to conduct normal delivery in a none-supine position as evidence-based practice.
- Encouraging skin-to-skin contact between mother and baby for at least 30 minutes during the first hour after birth is maintenance.
- Encouraging safety delivery through Lack of augmentation therefore helps to reduce maternal mortality and morbidity rate.
- Since the instrument is useful as a quality indicator for intrapartum care, adopting it as a policy to monitor the quality of care. The Bologna Score tool was gave a good picture of how care was given at the participating labor departments in the Gaza Strip units.
- Incorporate the Bologna score into midwifery education is strongly recommend to prepare the midwives for implementing each item in this score during.
- The ministry of health should adopt the five items in Bologna and conduct monitoring for all of it.
- Recommendation further studies should be conducted on other hospitals in the Gaza Strip to show the extent of the applicability of Bologna score.

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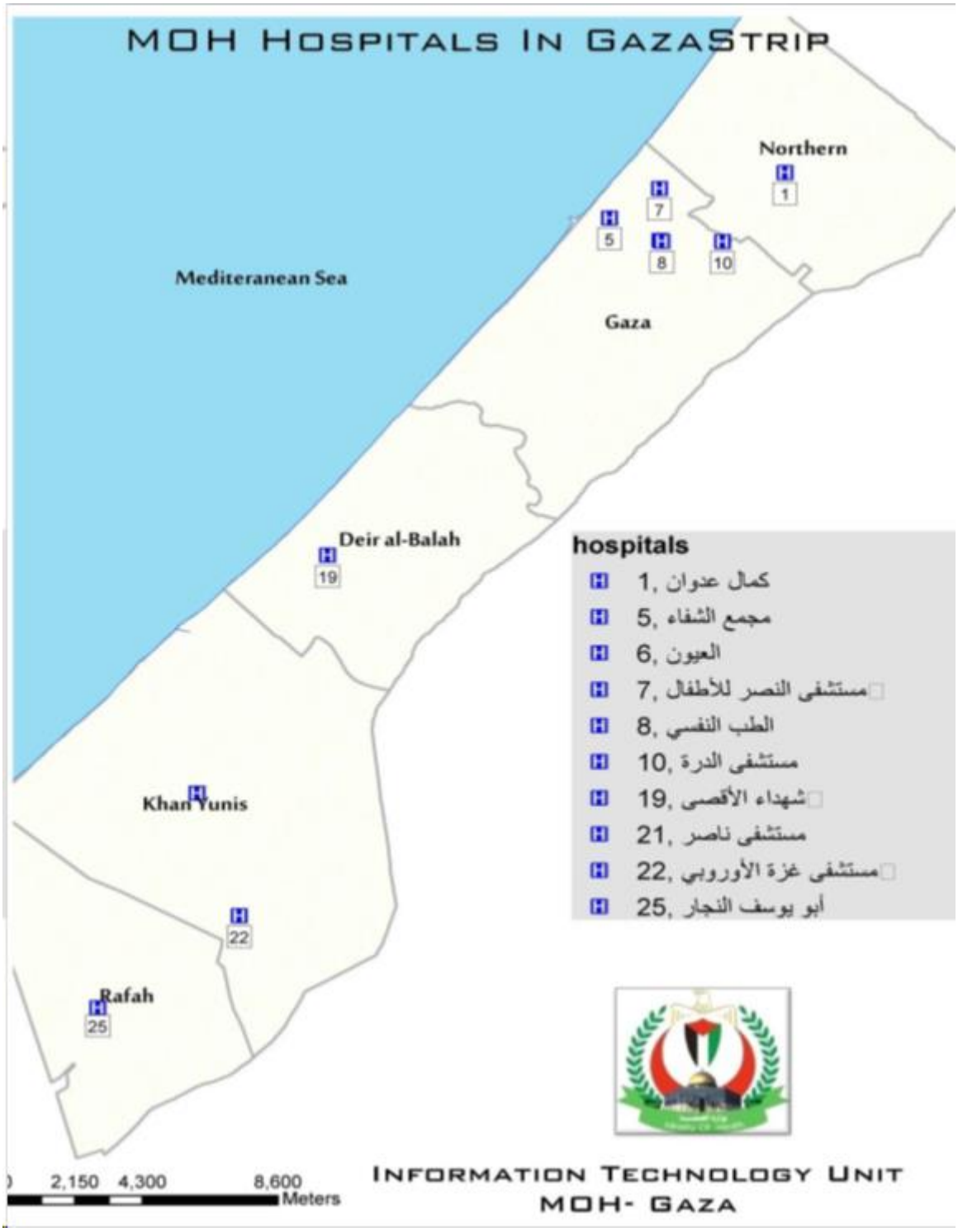
Annexes

Annex (1) Map of Palestine

Annex (2) MOH Hospitals in Gaza Strip, 2018



ANNEX (3): Consent form

Consent form for each participant

نموذج موافقة

الأخت الفاضلة .. السلام عليكم ورحمة الله وبركاته

تحية طيبة وبعد،،،،

نأمل من سيادتكم التكرم والمشاركة في تعبئة هذا الاستبيان والذي يهدف إلي تقييم جودة الرعاية الصحية التي تقدم من قبل القابلات في غرفة الولادة في المستشفيات الحكومية في قطاع غزة.

ستتم هذه الدراسة من خلال جمع البيانات من المقابلة الشخصية وتعبئة الاستبانة والملاحظة، ومن المقدر أن تستغرق جمع البيانات 20 دقائق وستكون لمرة واحدة مع كل سيدة.

يجب أن يكون واضحا لديكم بأن المقابلة لن تتم إلا بموافقتك وسيكون لك الحق في قبول أو رفض الإجابة عن الأسئلة، كما ستحترم بالكامل سرية المعلومات التي ستدلى بها ولن تنشر هذه الدراسة أي أسماء أو عناوين أو أن يلمح بشي من ذلك.

ستفيد نتائج الدراسة في تحديد وتقييم المشاكل والثغرات المتعلقة بجودة الرعاية الصحية التي تقدم من قبل القابلات في غرفة الولادة في المستشفيات الحكومية في قطاع غزة، مما يساعد على تحسين جودة الرعاية الصحية المقدمة للأمهات قبل و أثناء و بعد الولادة.

ليست هذه الدراسة ممولة من أي جهة كانت، ولا تستهدف تحقيق مكاسب مادية، ولن يترتب عليك أي التزامات مادية معينة.

شاكرين لكم حسن تعاونكم،،،

/الباحثة

وفاء محمد حمدان النجار

Annex (4): Names of expertise for validation of study instrument

Name	**Place of work**
Dr. Motasem Salah	University College of Applied Sciences
Dr. Samer al Nawajha	University College of Applied Sciences
Dr. Mazen Gamer	Al-Azhar University – Gaza

Annex (5): Questionnaire

Personal Information:

1.	Serial number:
2.	File number:
3.	Date of Delivery:
4.	Place of delivery: ( ) Al Shifa hospital ( ) Nasser hospital.
5.	Age group of mother: …… years.
6.	Level of education: ( ) prep school and less ( ) secondary school ( ) university.
7.	Mother occupation: ( ) working ( ) house wife.
8.	Monthly income:( ) NIS.

Obstetric History:

1.	( ) Gravida ( ) Para ( ) Number of live children ( ) Number of still birth ( ) Gestational age weeks.
2.	History of previous abortion: ( ) Yes ( ) No , if yes, how many times ( )

Current Pregnancy:

1.	Gestational age at the first antenatal visit ( ) weeks.
2.	Total number of antenatal visits ( ) visits.

Intrapartum factors:

1.	Augmentation: ( ) ARM ( ) oxytocin ( ) ARM + oxytocin ( ) none.
2.	Mode of delivery: ( ) NVD ( ) assisted.
3.	Episiotomy: ( ) Done ( ) not done.
4.	Sex of baby: ( ) Female ( ) Male.
5.	Weight of baby: ( ) gm.
6.	Admission to SCBU: ( ) Yes ( ) No.
7.	Breast feeding start at delivery room: ( ) Yes ( ) No.
8.	Complications during labour:( ) perineal laceration ( ) retained placenta ( ) none

Delivery out come in women with expected normal childbirth:

1.	Rupture of anal sphincter: ( ) Yes ( ) No.
2.	Post-Partum Hemorrhage: ( ) 500-1000ml ( ) > 1000 ml
3.	Apger score ≥ 7 at 5 min: ( ) Yes ( ) No.

Outcome of expected normal birth:
Items of the Bologna Score:

1.	Presence of a companion: ( ) Yes ( ) No
2.	Use of a partogram: ( ) Yes ( ) No
3.	Lack of augmentation: ( ) Yes ( ) No
4.	Delivery in non-supine position:( ) Yes ( ) No
5.	Skin to skin contact: ( ) Yes ( ) No

Annex (6) Helsinki committee approval letter

المجلس الفلسطيني للبحث الصحي
Palestinian Health Research Council

تعزيز النظام الصحي الفلسطيني من خلال مأسسة 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/315/18

Name: WAFAA M. ALNAJJAR 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:

Quality of Midwifery Care in Labour Room at Maternity Governmental Hospitals in Gaza Strip

The committee has decided to approve the above mentioned research. *Approval* number PHRC/HC/315/18 in its *meeting* on 05/02/2018

و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

Signature

Member Member

Chairman

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

Annex (7) Permission letter of ministry of health

وزارة الصحة

السيد / رامي عبد سليمان العبادله المحترم

التاريخ 27/03/2018
رقم المرسلة 2018/36

مدير عام بالوزارة/الإدارة العامة لتنمية القوى البشرية - وزارة الصحة

السلام عليكم ...

الموضوع/ تسهيل مهمة باحثة/ وفاء النجار

الدامسل ،،
بخصوص الموضوع أعلاه، يرجى تسهيل مهمة الباحثة/ **وفاء محمد النجار**
المنتظمة ببرنامج ماجستير - كلية العلوم الصحية - الجامعة الإسلامية بغزة في إجراء بحث بعنوان :-
"Quality of Midwifery Care in Labour Room at Maternity Governmental Hospitals in Gaza Strip"
حيث الباحثة بحاجة لتعبئة استبانة من عدد من النساء بعد الولادة في مجمعي الشفاء وناصر الطبيين
نأمل توجيهاتكم لذوي الاختصاص بضرورة الحصول على الموافقة المستنيرة من النساء اللاتي لديهن استعداد للمشاركة في البحث
ومن ثم تمكين الباحثة من التواصل معهن، بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، ودون تحمل الوزارة
أي أعباء أو مسئوليات
وتفضلوا بقبول التحية والتقدير،،

ملاحظة/ تسهيل المهمة الخاص بالدراسة أعلاه صالح لمدة 3 اشهر من تاريخة

محمد ابراهيم محمد السراوي
مدير دائرة/الإدارة العامة لتنمية القوى البشرية -

التحويلات

- محمد ابراهيم محمد السراوي (مدير دائرة) ← رامي عبد سليمان العبادله(مدير عام بالوزارة) إجرائكم بالخصوص(27/03/2018)
- رامي عبد سليمان العبادله(مدير عام بالوزارة) ← عبد اللطيف محمد محمد الحاج(مدير عام بالوزارة) إجرائكم بالخصوص(27/03/2018)
- عبد اللطيف محمد محمد الحاج(مدير عام بالوزارة) ← عبلات عباس عطير حسن (مدير عام بالوزارة) إجرائكم بالخصوص(27/03/2018)
- عبد اللطيف محمد محمد الحاج(مدير عام بالوزارة) ← محمد خليل محمد (قرنا حنين) إجرائكم بالخصوص(27/03/2018)

عنوان الدراسة: جودة الرعاية في غرفة الولادة المقدمة من قبل القابلات في مستشفيات قطاع غزة الحكومية

إعداد: وفاء محمد النجار

إشراف: د.معتصم سعيد صلاح

ملخص:

تلعب القابلات دوراً حاسماً على مستوى العالم في الحفاظ على جودة الرعاية المقدمة والتي لها تأثير كبير على الولادة. لقد هدفت هذه الدراسة إلى تقييم جودة الرعاية المقدمة من قبل القابلات في غرفة الولادة في المستشفيات الحكومية في قطاع غزة باستخدام درجة بولونيا، حيث استخدمت الباحثة المنهج البحثي بطريقة الملاحظة لتحقيق أهداف الدراسة من عينة ملائمة تكونت من 295 سيدة من اللواتي خضعن للولادة الطبيعية، وقد استجاب منهم 246 سيدة للمشاركة في هذه الدراسة، وقد استخدمت الباحثة الاستبانة كأداة لجمع البيانات، وقد تم استخدام مقياس بولونيا والذي يعكس درجة جودة الرعاية المقدمة من قبل القابلات والمكون من خمس درجات، وقد تم استخدام الأساليب الإحصائية مثل النسب المئوية والمتوسط الحسابي، واختبار ت لعينتين مستقلتين، واختبار التباين الأحادي، واختبار بيرسون.

لقد أظهرت نتائج الدراسة أن تطبيق الخصائص التالية: وجود مرافقة أثناء الولادة، واستخدام جهاز رسم تخطيط الولادة، وعدم استخدام محفزات الولادة، والولادة في وضعية نوم ليست على الظهر، وملامسة المولود للأم عند الولادة مباشرة كانت بالنسب التالية 38.6 %، 94.7 %، 53.7 %، 20.7 %، 82.9% من مجموع الولادات في الدراسة الحالية على التوالي، وأن متوسط درجة بولونيا والتي تعكس جودة الرعاية المقدمة من قبل القابلات هي 2.90 من أصل 5.0 (58.0%).

وقد كشفت النتائج أيضاً أن متوسط درجة بولونيا في مجمع ناصر الطبي أعلى بكثير من مجمع الشفاء الطبي. أيضا كانت هناك علاقة عكسية قوية ذات دلالة إحصائية بين درجة بولونيا وعدد مرات الحمل، في حين أنه لا توجد فروق ذات دلالة إحصائية بين درجة بولونيا تعزي لمتغيرات: عدد الأطفال، عدد المواليد الموتى، عمر الحمل، وعدد مرات الإجهاض.

وقد أوصت نتائج الدراسة باعتماد استخدام مقياس بولونيا كسياسة متبعة لمتابعة جودة الرعاية المقدمة من قبل القابلات في المستشفيات الحكومية في قطاع غزة، علاوة على ذلك فقد أوصت الباحثة بضرورة إدراج درجة بولونيا في تعليم القبالة في الجامعات ليتم تنفيذ البنود المذكورة أعلاه.