Deanship of Graduate Studies

Al – Quds University

Factors Affecting Utilization of Postnatal Care Services at Governmental Primary Health Care Clinics in Gaza Strip

Fedaa Saleh Abd Al-Razeq Al-Masri

M. Sc. Thesis

Jerusalem- Palestine

1440 / 2019

Factors Affecting Utilization of Postnatal Care Services at Governmental Primary Health Care Clinics in Gaza Strip

Prepared by:

Fedaa Saleh Abd Al-Razeq Al-Masri

BSc. in Science of Nursing–Palestine College of Nursing

Supervisor: Dr. Areefa SM Alkasseh
PhD, Mother and Child Health.

A thesis submitted in Partial Fulfillment of the Requirement for the degree of Master of Mother and Child Health (MCH) Nursing -Faculty of Health Professions - Al-Quds University.

1440/2019

Al-Quds University

Deanship of Graduate Studies

MCH Program /Nursing Department

Thesis Approval

Factors Affecting Utilization of Postnatal Care Services at Governmental Primary Health Care Clinics in Gaza Strip

Prepared By : Fedaa Saleh Abd Al-Razeq Al-Masri
Registration No.: 21611752

Supervisor: Dr. Areefa SM Alkasseh

Master thesis submitted and accepted. Date: / /
The names and signatures of the examining committee members are as follows:

1. Dr. Areefa SM Alkasseh	Head of committee	Signature .....
2. Dr. Yahia Abed	Internal examiner	Signature .....
3. Dr. Ahmed Najim	External examiner	Signature .....

Jerusalem – Palestine

1440 / 2019

Dedication

I dedicate this work to:

my parents,

my husband,

my husband's family,

my brothers and sisters,

my sons and daughters,

and my friends,

who has shown love and support from the beginning to end and

encourages me to accomplish my work.

Declaration

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

Signed:

Fedaa Al-Masri

Date: / /

Acknowledgements

Firstly, to Allah, the only God, thank you for spiritual guidance and blessings bestowed upon me.

I must thank my husband, my Dad, my Mum, and my family for their unconditional love and support. They were my source of strength. I would not have done this without their constant encouragement at critical times.

I would like to express my special & deep thanks to my supervisor, Dr. Areefa Alkasseh, Head of midwifery department of Nursing College in Islamic University of Gaza, for her companionship and encouragements, being a great mentor to me, and supported me throughout the study. In addition, I wish to thank Al-Quds University team for their great role in developing students and developing their research knowledge, especially Dr. Hamza Abd Aljawad for coordination and support.

Also, I wish to thank the Palestinian‘s MoH in Gaza strip, as well as the nursing directors of the participating hospitals, for granting permission for the present study to be conducted. I would like to thank every respondent who completed a questionnaire for her contribution, without which this research study could not be succeeded or completed.

Last but not least, I am very grateful to all those persons who helped me to realize this study, whether big or small.

Abstract

Postnatal care (PNC) is an important link in the continuum of care for maternal and newborn health. The postnatal period is critical as most maternal deaths occur during this time. PNC services are essential in the first six weeks extending to six months after delivery. The aim of this study was to assess the factors affecting utilization of PNC services at governmental primary health care clinics in Gaza Strip. The study design is descriptive cross sectional. This study was conducted at ten health care centers in five Gaza governorates. Convenience sampling consist of postnatal 285 of women and census sampling consist of 36 health care providers who work in primary health care clinics. the response rate was 99%. A pilot study on 30 mothers was done to explore the appropriateness of the study instruments .Data were collected by structure interviewing questionnaire for women & Self-administered questionnaire was used for health care provider. Data were analyzed using SPSS version 22 for data entry and analysis. Frequency, Cross tabulation "Chi-square", Independent Sample t test,. An ethical approval was asked for from School of Public Health at Al-Quds University and Helsinki Committee. The study results showed that The highest age of women who participants (38.4%) was between 21-25 years, more than half (54.2%) finished secondary school, (91.7%) of HCP reported that the routine PNC visits only one visit. (34.3%) of ANC visit during pregnancy seven times. Also, results showed that half (51.60%) of mothers utilized PNC service while (63.2%) of women were knowledgeable about PNC service. (81.6%) stayed in place after normal vaginal delivery less than six hours, The women delivered by cesarean section stayed in the place 41(80.4%) less than 24 hours, (84.8%) reported that the barrier to received PNC services that they are not aware about services. the result showed that the overall prevalence of PNC visits is only one visit in the first week after delivery. In addition, it was found that there is statistically significant relationship between utilization of PNC services various factors including awareness on PNC service utilization, knowledge during antenatal care and after delivery in hospital. Conclusion: the present study concluded that, the proportion of women utilizing PNC service was low in comparison to World health organization recommendation. The main factor is women awareness on PNC service. Therefore, it is recommended increase the mother awareness regarding the required number of routine PNC visits to match with WHO recommended visits schedule.

Table of Contents

Dedication i

Declaration i

Acknowledgements ii

Abstract iii

Table of Contents iv

List of Tables ix

List of Figures xi

List of Annexes xii

List of Abbreviations xiii

Chapter one Introduction 1

1.1 Background 1

1.2 Problem Statement 3

1.3 Justification/Rationale Of The Study 4

1.4 General Objective: 5

1.5 Specific Objectives 5

1.6 Research Questions 5

1.7 The political context 6

1.8 The demographic context 6

1.8.1 Geography 6

1.8.2 Primary health care centers by health providers sectors 7

1.8.3 Primary Health Care Centers Level 7

1.8.4 Proportion distribution of PNC in registered PHC centers 7

1.9 The selected PHCs in the current study 7

1.9.1 Beit Lahia martyrs Center 8

1.9.2 Jabalia Martyrs Center 8

1.9.3 AL Remal Clinic 8
1.9.4 Al-Zaytoun Martyrs Center 9
1.9.5 Al-Zawaida Clinic 9
1.9.6 Deir al-Balah Martyrs Center 9
1.9.7 Khan Yunis Martyrs Center 10
1.9.8 Bani Suhaila martyrs Center 10
1.9.9 Rafah Martyrs Center 10
1.9.10 Tal Al Sultan Clinic 11
1.10 Scientific definition of variables 11
Chapter Two Conceptual Framework and Literature review: 13
2.1 Conceptual Framework 13
2.2 Literature Review: 14
2.2.1 Introduction: 14
2.2.2 Maternal health 14
2.2.3 Postnatal care services 14
2.2.4 Postnatal period 14
2.2.5 Utilization of Postnatal Care services 16
2.2.6 Health Systems Factors 19
2.2.7 Socioeconomic- demographics factors influencing utilization of PNC services 21
2.2.8 Mothers Knowledge and Attitude to word PNC 25
2.2.9 Summary 28
Chapter Three Materials and Methods 29
3.1 Introduction 29
3.2 Study design 29

3.3 Study Setting 30
3.4 Study population 30
3.5 Study period 31
3.6 Sampling 31
3.7 Eligibility criteria 31
3.7.1 Inclusion Criteria 31
3.8 Construction of questionnaires design 32
3.9 Research Instruments 32
3.10 Study tools and instruments 33
3.11 Pilot study 34
3.12 Data collection 34
3.13 Data entry and analysis 35
3.14 Scientific rigor 35
3.14.1 Validity of the questionnaire 35
3.14.2 Reliability of the questionnaire 36
3.15 Ethical and Administrative consideration 36
3.16 Response rate 37
3.17 Limitations of the study 37
Chapter Four Results and Discussion 38
4.1 Introduction 38
4.2 Part One questionnaire (Women part) 38
4.2.1 Distribution of the study participants according to their Utilization of PNC services 39
4.2.2 Distribution of the study participants (women) according to Socioeconomic and demographic factors 41
4.2.3 Distribution of the study participants according to Obstetric characteristics 42
4.2.4 Distribution of the study participants according to knowledge about PNC 45

4.2.5 Distribution of the study participants according to knowledge about PNC Services 46

4.2.6 Distribution of the study participants according to mean score of knowledge about PNC 48

4.2.7 Distribution of the study participants according to their Attitude about PNC.... 49

4.3 Part two questionnaire (HCP) 50

4.3.1 Distribution of the study participants according to their Demographic data 50

4.3.2 Distribution of the study participants according to their services delivered to the women and newborn after delivery 51

4.3.3 Distribution of the study HCPs according to their Health care working environment 52

4.4 Inferential Statistics: 53

4.4.1 Relationship between Utilization of Receiving PNC and Governorates 53

4.4.2 Relationship between Utilization of Receiving PNC and Mother education..... 54

4.4.3 Relationship between Utilization of Receiving PNC and Mother Work 54

4.4.4 Relationship between Utilization of Receiving PNC and Mother Family Type. 55

4.4.5 Relationship between Utilization of Receiving PNC and Mother Age 55

4.4.6 Relationship between Utilization of Receiving PNC and Family Income..... 56

4.4.7 Differences between Utilization of Receiving PNC and obstetric history..... 57

4.4.8 Relationship between Utilization of Receiving PNC and previous pregnancy complications 57

4.4.9 Relationship between Utilization of Receiving PNC and Mode of last delivery58

4.4.10 Relationship between Utilization of Receiving PNC and Place of delivery..... 59

4.4.11 Relationship between Utilization of Receiving PNC and Birth attendant 59

4.4.12 Relationship between Utilization of Receiving PNC and Complications during or after delivery 60

4.4.13 Differences between Knowledge, Attitude and Receiving PNC 60

4.5 Discussion of the Study Results 61

4.5.1 Introduction 61

4.5.2 Services delivered to the women and newborn after delivery 61

4.5.3 Socioeconomic and demographic factors 62

4.5.4 Previous obstetric history 63

4.5.5 Participants according to knowledge about PNC 65

4.5.6 Participants according to Utilization of PNC services 67

4.5.7 Relationship between Utilization of Receiving PNC &maternal characteristics 69

4.5.8 Differences between Utilization PNC and obstetric history 69

4.5.9 Differences between Knowledge, Attitude and Receiving PNC 70

Chapter five Conclusion and Recommendation 72

5.1 Conclusion 72

5.2 Recommendations 73

5.2.1 Ministry of health 73

5.2.2 Suggestions for further research 73

References 74

Annexes 84

List of Tables

Table (4.1) Distribution of the study participants according to their Utilization of PNC services(n=285)..... 39

Table (4.2) Distribution of the study participants (women) according to Socioeconomic and demographic factors (n=285)..... 41

Table (4.3a) Distribution of the study participants according to Obstetric characteristics (n=285) 42

Table (4.3b) Distribution of the study participants according to Obstetric characteristics (n=285) 43

Table (4.4) Distribution of the study participants according to knowledge about PNC (n=285) 45

Table (4.5a) Distribution of the study participants according to knowledge about PNC Services (n=285)..... 46

Table (4.5b) Distribution of the study participants according to knowledge about PNC Services (n=285)..... 47

Table (4.6) Distribution of the study participants according to mean score of knowledge about PNC?..... 48

Table (4.7) Distribution of the study participants according to their Attitude about PNC (n=285) 49

Table (4.8) Distribution of the study HCP according to their Demographic data(n=36).... 50

Table (4.9) Distribution of the study HCP according to their services delivered to the women and newborn after delivery (n=36) 51

Table (4.10) Distribution of the study HCPs according to their Health care working environment (n=36) 52

Table (4.11) Relationship between Utilization of Receiving PNC and Governorates (n=285) 53

Table (4.12) Relationship between Utilization of Receiving PNC and Mother education (n=285) 54

Table (4.13) Relationship between Utilization of Receiving PNC y and Mother Work (n=285) 54

Table (4.14) Relationship between Utilization of Receiving PNC and Family Type (n=285) 55

Table (4.15) Relationship between Utilization of Receiving PNC and Mother Age (n=285) 55

Table (4.16) Relationship between Utilization of Receiving PNC and Family Income (n 285) 56

Table (4.17) Differences between Utilization of Receiving PNC and obstetric history (n 285) 57

Table (4.18) Relationship between Utilization of Receiving PNC and previous pregnancy complications (n=285) 57

Table (4.19) Relationship between Utilization of Receiving PNC and Mode of last delivery (n=285) 58

Table (4.20) Relationship between Utilization of Receiving PNC and Place of delivery (n=285) 59

Table (4.21) Relationship between Utilization of Receiving PNC and Birth attendant (n=285) 59

Table (4.22) Relationship between Utilization of Receiving PNC and Complications during or after delivery (n=285) 60

Table (4.23) Differences between Knowledge, Attitude and Receiving PNC 60

List of Figures

Figure (2.1) : Diagram of conceptual framework (self-developed)..... 13

Figure (4.1) Distribution of participants according utilization of PNC services. 38

Figure (4.2): Distribution of the study participants according to residency 40

Figure (4.3) Distribution of the study participants according to their information about PNC..... 45

List of Annexes

Annex (1): Map of Palestine, Gaza Strip 84

Annex (2): Health care provider Questionnaire 85

Annex (3): Women Questionnaire 88

Annex (4): Sample size calculation 94

Annex (5): Table of Experts. 105

Annex (6): Helsinki Committee 106

Annex (7): Approval from MOH 107

Annex (8): Postnatal care crevice at MoH 98

Annex (9): Multiple Comparisons 99

List of Abbreviations

ANC	Antenatal Care
DM	Diabetes mellitus
GS	Gaza Strip
HCP	Health Care Provider
ICM	International Confederation of Midwives
MCH	Mother Child Health
MMR	Maternal Mortality Rate
MoH	Ministry of Health
NGOs	Non-Governmental Organizations
PCBS	Central Bureau of Statistics System
PCBS	Palestinian Central Bureau of Statistics
PHC	Primary Health Care
PHCS	The Palestinian Health Care System
PIH	Pregnancy induce hypertension
PNC	Postnatal Care
PPC	Postpartum Care
PPP	Postpartum Period
SPSS	Statistical Packages for Social Science
UNICEF	United Nations International Children's Emergency Fund
UNRWA	United Nation Relief and Work Agency
WB	West Bank
WHO	World Health Organization

Chapter one

Introduction

1.1 Background

The postpartum period (PPP) biologically refers to the time immediately after birth to six weeks thereafter when the mother's body, including her hormone levels and uterus size return to pre-pregnancy conditions, This period is called PPP when referring to the mother alone and postnatal when referring to both mother and baby. PNC services is defined as the spans from the period immediately after the baby is born up to six weeks after that (WHO, 2014).

The services that provided during this period are referred to as postnatal care (PNC) services, that there are some moments when contact with the formal health system during the postnatal period by skilled attendants could be crucial in identifying the needs and complications after childbirth that could happen (WHO, 2014). Increasing the quality and skilled PNC has recently been highlighted as a method of reducing the preventable maternal mortality.

It is well known that, the health of mothers is considered as an indicator of the entire health of the society. Women who remain healthy during pregnancy and after birth are more likely to stay healthy later in their life and have better birth outcomes, influencing infancy, childhood and adulthood. Global attention has been paid to reduce of the burden of maternal and neonatal mortality rate. It was reported that, the risk of death is higher during the first week PPP (WHO, 2017).

The highest risk of maternal mortality is happened in the first 24 hours after delivery (WHO, 2010). Therefore, the World Health Organization (WHO) recommended the optimal timing of PNC should start as early as possible within 24 hours after birth, even if birth occurs at home. The recommended numbers of postnatal visits are at least three

additional post natal contacts, in addition to the first visit within 24 hours of birth, second visit could be on day three between days 7 and 14, and third one by 6 weeks postpartum(WHO, 2013).

Maternal mortality is defined by the WHO as the death of women during pregnancy or within 42 days after termination of pregnancy irrespective of the site and duration. According WHO report it was every day about 830 women die from pregnancy- or childbirth-related complications around the world, roughly 303, 000 women died during and following pregnancy and after childbirth (WHO, 2018). In addition almost all of these deaths occurred in low-resource settings. Most maternal deaths are preventable as the necessary medical interventions are well known. It is therefore crucially important to increase women's access to quality care before, during and after childbirth, millions of births globally were not assisted by a trained midwife, doctor or nurse. In the same report it was approximately, about 99% occur in developing countries, more than half of these deaths occur in sub-Saharan Africa and almost one third occur in South Asia (WHO, 2018). According to Palestinian Ministry of Health (MOH) in 2017, the maternal mortality rate (MMR) was 8.6 per 100,000 live births in Gaza Strip (GS). This indicator remains high despite the efforts of the MoH and other organizations to improve maternal and childcare.

In addition postnatal period, is a critical phase in both the lives of the mother and the newborn. However, the quality of care during this time could be at times be neglected, resulting in illness, or even infant mortality, With a lack of continuity in care, neonatal readmissions are more frequent and recommendations for breastfeeding are often not complied with, The inadequacy in PNC can be contributed to both a lack of research on the issues associated with PNC, and differing perceptions of maternal needs among health care staff members, new mothers, and regional cultural practices (Langlois, 2015).

Further, up on the researcher knowledge there is a limited research's on factors that determine utilization or non-utilization of PNC in GS. Therefore, this study was be conducted to assess the factors affecting utilization of PPC services by women.

1.2 Problem Statement

The post-natal period covers a critical transitional time for a woman, her newborn and her family on a physiological, emotional and social level (WHO, 2013). It provides an opportunity for institution of preventive as well as curative measures. Given the exceptional extent to which the deaths of mothers and babies occur in the first days after birth, the early identification of post-natal complications for both mother and baby can reduce maternal and newborn morbidity and mortality. Thus, PNC services are important for both the mother and the child to treat complications arising from the delivery, as well as to provide the mother with important information on how to care for herself and her child after delivery (WHO, 2013).

Millions of women lack access to reproductive health care services in developing countries. Globally, more than half a million women die each year from complications of pregnancy and childbirth, majority of this during the PPP especially the first 24 hours after delivery. It was estimated that three quarters of women do not receive postpartum care (PPC) and this leads to about 60–80 % of maternal deaths during this period (WHO, 2013). In Africa, most mothers and newborns do not visit the health institution following birth, indicating that PPC programs are among the weakest of all reproductive health programs. In Sub Saharan Africa, maternal mortality still remains PNC is 53%. Locally, in Palestine lack of studies was founded about utilization PNC, one study was conducted in West Bank (WB) PNC utilization at 2008 which reported that only 36.6% of women obtained PNC (Dhaher, 2008). According to Annual Report of MoH, (2017)) PNC utilization was 27.3 % in GS.

The study could identify the gaps in the utilization of PNC services, could help in identifying specific strategies that increase the utilization of care. Increased utilization of PNC services might result in reducing the risk of maternal and neonatal mortality and morbidity. The outcome might improve maternal child health and thus contribute towards achievement of reducing maternal and child mortality.

1.3 Justification/Rationale Of The Study

Many Studies have been showed that the coverage of postnatal and other factors are not well identified. Despites the fact that, it has very significant impact on maternal and new born morbidity and mortality; postnatal care is yet marginalized/ neglected and little attention and efforts has been paid by health care practitioners and policy makers to optimize attendance of PNC (Gabrysch et al, 2011) In addition, the few studies to conclude the study that conducted in GS about PNC concentrating only the use and quality of services rather than factors affecting utilization of PNC.

The purpose of this study is that it has the potential to identify the factors or determinants of PNC non-utilization. Identification of these factors will give clues on how the issues can be tackles. The knowledge of this is important for implementing strategies that reduce maternal and infant mortality in the immediate post-delivery period.

1.4 General Objective:

The main objective of this study is to identify the factors influencing utilization of PNC at primary health care services in G S.

1.5 Specific Objectives

- To determine prevalence of utilization of PNC services in G S.
- To assess knowledge of mothers regarding utilization of PNC services in G S.
- To assess attitude of mothers regarding utilization of PNC services in G S.
- To determine socioeconomic- demographics factors influencing utilization of PNC services in G S.
- To identify health care providers factors influencing uptake of PNC services among women of G S?
- To suggest recommendations that might help stake holder in improving PNC in Governmental primary health care clinics in GS.

1.6 Research Questions

1) What is the prevalence of PNC utilization in GS?
2) What are the knowledge factors of mothers influencing utilization of PNC services in GS?
3) What are the attitude factors of mothers influencing utilization of PNC services in GS?
4) What are the socioeconomic-demographic factors influencing uptake of PNC services in G S?
5) What are the health care providers factors influencing uptake of PNC services among women of G S?
6) What are the suggest recommendations that might help stakeholder in improving PNC in Governmental primary health care clinics in GS.

1.7 The political context

Palestine has been marked by the ongoing Palestinian-Israeli conflict, as well as by the disruption of fifty years of occupation and the progressive fragmentation of its territory. Following the 1967 occupation, East Jerusalem was illegally. Palestine has been characterized by regular cycles of violence and wars that have led, amongst others, to the construction of a separation barrier since 2002, the movement restrictions imposed by Israel on the GS since the early 1990s and intensified in June 2007 with its closure and imposition of the land, air and sea blockade and three Israeli military operations in the GS (2008, 2009, 2012 and 2014). The separation barrier separates Palestinian communities from their relatives, agricultural lands, workplaces, health facilities, schools, religious sites and water wells and is illegal under international law, where constructed beyond the 1967 border (European, 2017).

1.8 The demographic context

1.8.1 Geography

The location of Palestine is at the eastern coast of the Mediterranean Sea. Palestine is located to the south of Lebanon and to the west of Jordan. Palestine Geography consists of four regions in the country. The four regions of Palestine Geography are Jordan valley and Ghawr, coastal and inner plains, Mountain and Hills and Southern Desert.

The GS is a coastal strip of land along the Mediterranean Sea, bordering Egypt on the South –west, it is about 41 Kilometers long and between 6 and 12 Kilometers wide, with a total area of 360 square Kilometers. According to updated Palestinian Central Bureau of statistics (PCBS) census in (2017), the population of Palestine was 4705601 of whom 2.4 million were males compared to 2.3 million females in GS, out of this number West Bank (WB) population was 2.8 million, while GS population was 1.87 million (PCBS, 2017).

1.8.2 Primary health care centers by health providers sectors

The number of Primary health care(PHC) centers in Palestine reached to743 in 2017, of which 583 are in WB and 160 in GS. 466 PHC centers belong to the Palestinian MOH, which constitutes centers managed by Nongovernmental Organizations (NGOs) reached 192,constituting 25.8% of all primary health care facilities, while the number of UNRWA centers reached 65, and the military medical centers reached to 20 centers (MoH, 2017).

1.8.3 Primary Health Care Centers Level

The number of PNC centers of MoH in Palestine increased from 203 in 1994 to 466 in 2017 with variation rate of 129.6%, the MoH classified PHC centers into four levels of which 69 clinics are level one, constituting 14.8% of the total centers of MoH and 242 clinics are level two, accounting for 51.9% of total clinics, 125 clinics were classified as level three 26.8% of total centers and 26 clinics are level four,5.6% of the total centers. In addition four PHC mobile clinics provided health services in Jerusalem, Beth Lehem and Yata, these four mobile clinics constitute 0.9% of total clinic (MoH, 2017).

1.8.4 Proportion distribution of PNC in registered PHC centers

The total number of visits by maternal and child centers in 2017 were 19561 visits per physician at 25.1% of the reported live births and 59848 visits per nurse at 76.7% of reported live births (MoH, 2017).

1.9 The selected PHCs in the current study

The selected clinics (Bet Lahia clinic, Jabalia clinic, AL Remaal clinic, Zaitoun clinic, Deer AL Baleh clinic,EL Zwaida clinic, Kha Younis clinic,Bani Sohela clinic, Rafah clinic and Tal EL Soltan clinic were classified as third and fourth level centers (MoH , 2018).

1.9.1 Beit Lahia martyrs Center

The clinic has been operating since 1985 and started to provide primary care services gradually, with a staff of 12 employees. It served a residential area of 15 thousand people. It is frequented by about 150 reviewers a day. It was rebuilt in 1998 and new sections were opened. In the present the center serves a residential area of 25,000 people. The average number of auditors is 260, and the center is one-time and the center is considered at the third level (MoH, 2017).

1.9.2 Jabalia Martyrs Center

The center has been operating since 1970 and started to provide primary care services. Gradually, in 1994, it was fully staffed by 25 employees. It served a residential area of 30,000 inhabitants. The number of visitors was about 250 daily

In 1997, the number of employees now stands at 88, serving an area of 60,000 people. The average number of auditors is 600, and one morning is at the fourth level (MoH, 2017).

1.9.3 AL Remal Clinic

AL Remal Clinic was opened in 1972. It is a specialized clinic with visiting doctors. During the era of the Authority, it was reconstructed behind the old building with methods in the advanced health centers. The new five-role building was opened under the name of Martyrs Center in 1998 at the expense of the bank. In cooperation with the MoH. The center is considered one of the most important health centers in the GS. It covers an area with a population of more than 150,000 and employs a staff of 135 employees. The average number of visitors is 450 daily. The building also includes the general administration of primary care, the department of administrative and financial affairs (MoH, 2017).

1.9.4 Al-Zaytoun Martyrs Center

The Al-Zaytoun Martyrs Center was establishes in 21, 1997, 27 cadres and serves a residential area of 50 thousand people. The number of visitors to the center is about 300 daily. The center is equipped with several sections. The upper floor of the building was added in 2007 at the expense of the late Saeb Abu Dhabi and now the number of employees reached 55 employees, In the present time the center serve for approximaly 60,000 population and the number of auditors about 550 cases a day, the fourth level (MoH, 2017).

1.9.5 Al-Zawaida Clinic

Al-Zawaida clinic started in 1983 and the clinic employs six staff members and serves the residents of Zawaideh and surrounding areas. The services provided to the population increased during the period of the authority due to the increase in the population and the clinic was provided by dermatologist a specialist. The number of employees has increased to eleven and the clinic has about fifty cases per day. Now, the number of employees is 17, serving a residential area of about 15,000 people. The average number of visitors is about 60 cases per day. The second level (MoH, 2017).

1.9.6 Deir al-Balah Martyrs Center

Deir El Balah Clinic was established in 1985. It serves the city of Deir El Balah and the camp and the number of beneficiaries of the clinic is about 35 thousand people. The clinic has primary care services. The clinic has many departments including the dental department, the laboratory section, the preventive department, the emergency department and the maternity ward. The number of auditors is about 445, but now it employs 52 staff

members serving an area with a population of about 20,000 and an average of 400 visitors per day (MoH, 2017).

1.9.7 Khan Yunis Martyrs Center

The center was established in 1967. It was a health office for births and deaths. Medical care was added to it in 1976 and it was developed until 1994. It employs 25 staff members. The center has about 350 referrals per day and the center served a residential area of 65 thousand people In the era of the National Authority, the center was rebuilt from two floors. The number of employees increased by more than 100%, reaching 66 employees. The number of beneficiaries increased to more than 550 consumers daily. The center serves a residential area of 100,000 people. The center is located on the fourth level. the system operates 12 hours daily (MoH, 2017).

1.9.8 Bani Suhaila martyrs Center

The Center was established in 1978, with a staff of about 12 employees. The center is staffed by about 80 people, and the center serves a residential area of population 18,000. In 1994, the center was reconstructed and by adding extra two floors. The center has 180 consumers daily and the center serves a residential area of 40 thousand population. The laboratory and dental departments were added to the center and equipped with the radiology department and the center, which operates on a one-period basis at the third level (MoH, 2017).

1.9.9 Rafah Martyrs Center

It was established in 1964, and was developed and added new sections. In the beginning of the nineties, the number of its employees reached 22 employees, serving an area with a

population of 70,000 and an average of 200 daily visits. An area of 60 thousand population and the number of visitors increase to 400 cases per day, but now the number has increased to 88 employees serving a population of 80 thousand people and the average number of auditors 450 cases a day, the fourth level (MoH, 2017).

1.9.10 Tal Al Sultan Clinic

It was established at the expense of the government in 1983, with a human cadre of 16 employees. The number of auditors was 200 daily. The treatment and preventive services are provided. It has a ray department, a laboratory section, a dental unit and a family planning section. Estimated at 28 thousand population. The number of employees in the era of the National Authority 88 employees and the number of auditors to 230 references daily and the clinic has become serving about 80 thousand population, and the clinic is the fourth level (MoH, 2017).

1.10 Scientific definition of variables

1- **Maternal health:** Maternal health refers to the well-being of a mother during pregnancy and after pregnancy.

2- **Postnatal care:** PNC is the assistance care given to a mother for a period of six weeks from the time of delivery

3- **Postnatal services**: Postnatal services comprise of physiotherapy, physical examination, immunizations, family planning, and healthcare education on childcare, breast-feeding, treatment and counseling services after delivery.

4- **Knowledge:** This is a familiarity or awareness of services available in the post-natal care, such as; counseling on breast feeding and nutrition, health checks on mother and child. A composite indicator was constructed and knowledge of services ranked into very knowledgeable, average knowledge and low knowledge.

5- **Attitude**: This is an expression of favor or disfavor towards utilization of Post-natal services, reported as positive or negative.

6- **Socio Demographic Factors:** Characteristics of the study population expressed in age, highest education level attained, parity, household wealth status.

7- **Utilization of services:** Utilization refers to use of postnatal services by women following delivery of their babies.

8- **Barriers to utilization of services:** In the case of this study barriers refer to what prevents the women from utilizing postnatal services.

9- **Health care providers:** Nurses and midwives who work at primary health care centers of mother child health.

Chapter Two

Conceptual Framework and Literature Review:

2.1 Conceptual Framework

The conceptual framework was designed by the researcher based on the review of the available literature. Conceptual framework is the map that guides the design and the implementation of the study and its effect mechanism for illustration and summarizing the whole study variables.

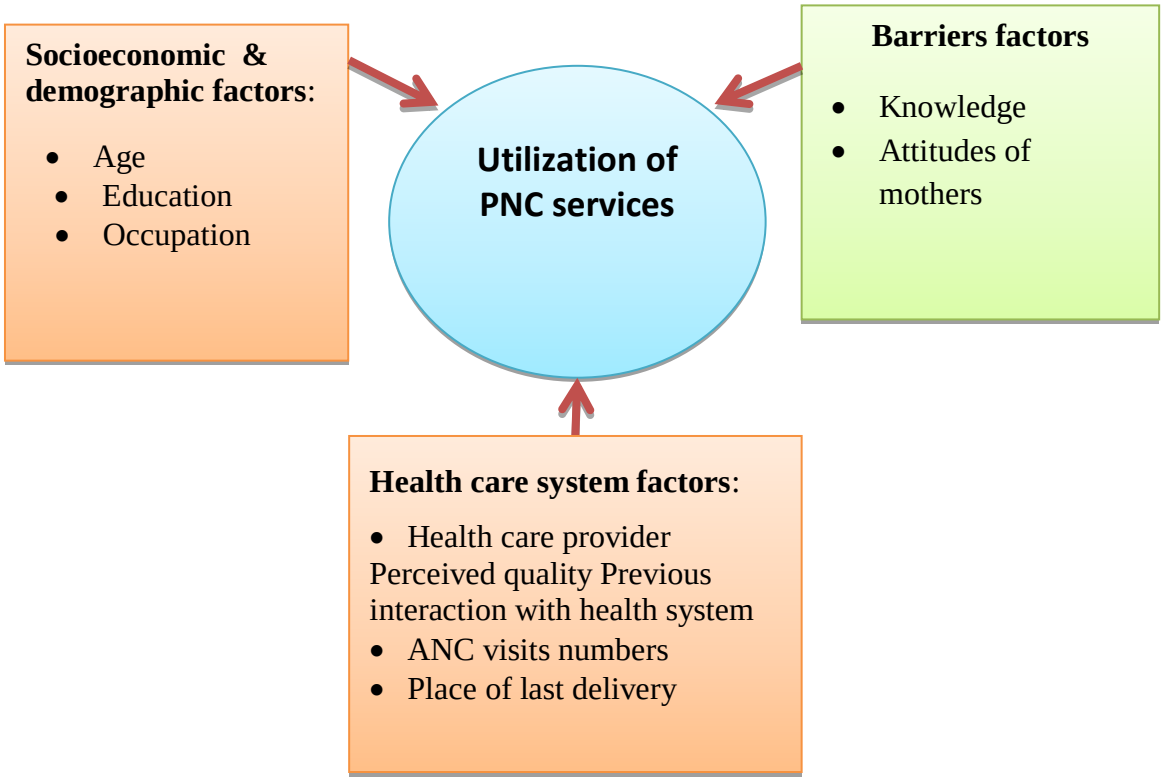


Figure (2.1): Diagram of conceptual framework (self-developed)

2.2 Literature Review:

2.2.1 Introduction:

This chapter reviews different studies concern the factors affecting utilization of PNC services at primary health care. Relevant studies in both developing and developed countries was reviewed.

2.2.2 Maternal health

Maternal health refers to the health of women during pregnancy, childbirth and the PPP, whereas perinatal health refers to health from 22 completed weeks of gestation until 7 completed days after birth. Newborn health is the babies' first month of life. (WHO, 2018).

2.2.3 Postnatal care services

PNC services can be defined as preventive care practices and assessments that are designed to identify and manage or refer complications for both the mother and the neonate. (WHO, 2016).

2.2.4 Postnatal period

According WHO (2015) definition the postpartum (or postnatal) period begins immediately after the birth of a child as the mother's body, including hormone levels and uterus size, returns to a non-pregnant state. The terms puerperium or puerperal period, or immediate PPP are commonly used to refer to the first 6 weeks following childbirth. WHO describes the postnatal period as the most critical and yet the most neglected phase in the lives of mothers and babies; most maternal and/or newborn deaths occur during the postnatal period.

Postnatal Care Competent

Mother and newborn health professionals provide comprehensive and evidence-based postpartum and PNC. This includes education on breastfeeding and family planning, and provision of contraceptive services, as well as provision of or referral for lactation support and for bereavement care after miscarriage, stillbirth, neonatal and/or maternal death (Hug, 2018).

The health care professionals are the responsible for providing PNC to women and their newborns. The guidelines are also expected to be used by policy-makers and managers of maternal and child health programs, health facilities, and teaching institutions to set up and maintain maternity and newborn care services (WHO, 2014). Unfortunately, the majority of mothers and newborns in low- and middle-income countries do not receive optimal care during these periods Basic care for all newborns should include promoting and supporting early and exclusive breastfeeding, keeping the baby warm, increasing hand washing and providing hygienic umbilical cord and skin care, identifying conditions requiring additional care and counseling on when to take a newborn to a health facility(WHO, 2014).

Newborns and their mothers should be examined for danger signs during the first day after delivery by conducting home visits. At the same time, families should be counseled on identification of these danger signs and the need for prompt care seeking if one or more of them are present. Newborns who are premature have or low birth weight, should not be sent home in the crucial first 24 hours of life after delivery, postnatal visits should be scheduled, for all home births mothers should be provided PNC as soon as possible after birth. In high mortality settings and where access to facility based care is limited, WHO and UNICEF recommend at least two home visits for all home births: the first visit should occur within 24 hours from birth and the second visit on third day. If possible, a third visit

should be made before the end of the first week of life (WHO, 2017). Normally the first two days following delivery are critical for monitoring complications that may arise during this time. This is the main reason why a postnatal and PPC visit is ideal during this time to educate a new mother on how to care for herself and her newborn as they tend to value child than self (Neupane and Doku, 2013).

2.2.5 Utilization of Postnatal Care services

All mothers and babies need at least four postnatal checkups in the first 6 weeks. This is a notable change to the previous guidance, which recommended only two postnatal checkups within 2 to 3 days and at 6 weeks after birth. In addition to PNC with two full assessments on the first day, three additional visits are recommended third day (48–72 hours), between days 7–14 and 6 weeks after birth. These contacts can be made at home or in a health facility, depending on the context and the provider. Additional contacts may be needed to address issues or concerns (WHO, 2015).

The risks of maternal mortality and morbidity are highest at birth and in the period immediately after birth. For newborns and mothers, there is the danger of complications as neonatal sepsis or post-partum hemorrhage and a delay of even a few hours before appropriate care is delivered can be fatal or result in long-term injuries or disability to the child and the mother (lawn *et al.,* 2010). Care in the period following birth is critical not only for survival but also to the future of mothers and newborn babies. Major changes occur during this period that determines their well-being and potential for a healthy future.

The major purposes of post-natal care are to maintain and promote the health of the woman and her baby and to foster an environment that offers help and support to family and community on health needs.

In addition, new parents need support for parenting and its responsibilities. Thus, the conceptual framework for guidance on post-natal care should place the woman and her baby at the center of care provision. This concept promotes the appreciation of delivery of all PNC in partnership with the woman and her family and be individualized to meet the needs of each mother-infant as reported (Izudi & Amongin, 2015). There is a rare studies conducted in Gaza except Najjar, (2008) in her study entitle conducted in Gaza Governorates at UNRWA health care center showed that 96.5% of mothers visited PNC unit according to previous appointment, 94.8% who came for first visit PNC within the first 14 days of delivery, while only 24.4% came within the first 6 days as recommended by WHO.

The most aspects of received PNC service above (97%) were directed to newborn health (Najjar, 2008). Another study conducted in three clinics in the West Bank found that women who had a caesarean delivery or an instrumental delivery, delivered in a private hospital, and women who had problems in delivery were more likely to seek PNC, in that study, uptake of postnatal services was found to be low with only 36.6% of women seeking PNC services (Dhaher et al 2008). Another study from Nepal also reported that there was low utilization of PNC services, as only 5% of women whose deliveries were assisted by skilled personnel had postnatal check-ups while 10% of women whose deliveries were assisted by other personnel and who had no attendants had postnatal check-ups (Neupane & Doku, 2013).

Another study done in Uganda showed that about 15.4% of mothers attend the early post-natal care (Izudi & Amongin, 2015). In a study conducted by WHO in 30 developing countries, an average of 40% of all women with a live birth in the previous five years did not receive any PPC check-ups (WHO, 2010). In other study in Nepal on PNC uptake,

services use was very low among the mothers despite them having maternity incentive scheme in place and a major focus on maternal health emphasized (Paudel et a, 2013).

In Northwest Ethiopia study revealed that the level of PNC service utilizations was 34.8% (Hordofa et al, 2015). The previous studies showed different percent for postnatal attendance for example women in Damascus were given an appointment for a postnatal visit with less than 9%, In India and South East Ethiopia early PNC services utilization in the study area was less than 50 % (Pal & Pal, 2016). The main reasons in Ethiopia for low percentage of PNC attendance as mentioned by as having no information on the importance of early PNC, it is not customary to go out of home before a week after delivery, lack/no transportation access to reach health facility and distance of health facility from their residence implying the need to travel longer distances on foot to get the service (Teklehaymanot, 2016).

According to number of postnatal weeks visit it was reported that for example in Nepal 13.5%of women reported attending immediate PNC while 25.1% reported attending PNC within the first six weeks of birth. In the other hand-the majority of PNC mothers in Nepal did not seek PNC in first week (Paudel et al, 2013). In comparison to other county such as India one study found that 64% women in India received PNC within 10 days after delivery and 48% newborns received care within 24 hours after birth (Singh et al, 2012).

The above mentioned studies did not matched with a study was conducted in Asella Town, the overall prevalence of PNC service utilization was 72.8%, this may related to The health care providers and policy makers are recommended to increase the awareness of mothers on PNC services (Tumbure et al, 2018).

2.2.6 Health Systems Factors

Health systems factors are presented in two dimensions: quality and accessibility of services. The ultimate aim of a health system is to equitably maintain or restore the health of all the people it serves. Health system is defined by WHO, (2010) as the sum of the organizations, institutions, and resources whose shared primary purpose is to improve health. At the center of health system are two groups of people; the health care providers and the clients, the goal of providing quality health care cannot be achieved without the powerful interaction of these two groups of people (WHO, 2010).

2.2.6.1 Health care providers

Health care providers who have experience working on the front line are often placed in the unique position of educating, training and preparing the environment for change in addition to influencing national health care policy. WHO reported that health care providers at PNC services must be well qualified, well trained and particularly sensitive to the needs of the women and the baby during this transitional time (WHO, 2016). The presence of competent health providers is essential in providing health care which affect the quality of care provided to both mother and newborn particularly in the early postnatal period because good quality care is essential to ensuring a healthy start for the women and her new born, in comparison, the poor quality care reduce opportunities for health promotion and adequate management of problems and disease (WHO, 2013). Besides, specific knowledge, skills and training are required for health care especially for effective timely referral and management of complications(Bernis et al, 2003).

Moreover, if services of PNC are provided by skilled providers, problems are early identified and accessibility to functional referral services is present then these together could reduce the incidence of mortality of mothers and newborns (WHO, 2016).

The education and training of health professional are needs to provide quality health services either in the work place or through professional associations, one of the reports for safe motherhood stressed the extension of the professional associations as doctor, midwives, nurses, as they play an important role in working to words ensuring safe motherhood and newborn health. There is a little information and less practice of PNC follow up in the community. Maternal educational, awareness and knowledge creation on PNC for women's should be strengthening. Health professionals should provide proper information and counseling to mothers during ANC follow up and delivery service. Monitoring and evaluation inside the health institution with strong integration of all maternal health care services should be strengthening.

In women's empowerment still there are problems especially at the house hold level that needs follow up and integration women's association with youth and farmers association to improve and to solve the husband influence on women's at house hold level (Aregay et al,2014).

2.2.6.2 Antenatal care attendance by women and PNC

ANC attendance is key in preparation of PPC as information is first shared here. Women who had antenatal follow up were aware of PPC than those who did not as its part of preparation for continuum of care after delivery (Tesfahun *et al.,* 2014).

A study in Uttarakrand, India found a positive association between use of antenatal care services and the utilization of PNC. They found that women who received partial and full antenatal care were 1.7 and 2.9 times respectively more likely to go for postnatal checkup than women who received no antenatal care (Chimankar and Sahoo, 2011).

2.2.6.3 Place of Delivery and postnatal care

Place of delivery was one of the strongest predictors of PNC service utilization. Those mothers who gave birth to their latest child at health institution were 1.68 times more likely to get PNC service utilization when compared with those mothers who gave birth to their latest child at home (limenih et al,2016). Other study in Nepal which was community-based also discovered that mothers who had delivery assisted by healthcare workers and had their delivery at a health care facility were more likely to utilize early PNC services than their counterparts who did not (Paudel *et al.*, 2013).

2.2.7 Socioeconomic- demographics factors influencing utilization of PNC services

2.2.7.1 Maternal age and postnatal care

Age of the mother is one of the key factors that is assumed to have an influence on PNC utilization among mothers in developing countries, in West Bank, on parity and marital status it revealed that majority of the postnatal women had married at less than 20 years of age, had more than one child making them not utilize PPC as expected as they said had other responsibilities to take care. Utilization of PPC was significantly higher among those who were more 21 years of age at the time of their first marriage than any other group (Dhaher et al., 2008).

Study in Ethiopia PNC utilization showed that mothers who were 30 years and above were more likely to utilized PNC services than the young mothers, with the least being within the age group of 15-19 years (Khadka et al, 2014,Tesfahun et al, 2014).

2.2.7.2 Maternal and husband Education level and postnatal care

Education level of a mother is a very important factor that has been assumed to influence postnatal health care utilization among mothers across the nation. Studies in developing

countries has consistently shown that there is strong relationship between education and the utilization of PNC. It has been consistently established by several studies that education affects utilization of PNC services, concluding that better educated mothers are more likely to utilize PNC services (Rahman *et al.,* 2011; Neupane & Doku, 2013).

Moreover in a study focusing on education in Pakistan indicated that education level of husband and wife are the prime factors that determine the utilization of antenatal and postnatal care services (Akhtar et al, 2013). In a local study was conducted in West Bank by Dhaher (2008) proved that, educated women are more likely to enjoy more autonomy within and outside the household and the skills acquired from schooling enable women to communicate with the health professionals and demand health care services (Dhaher et al, 2008). Moreover, other study was conducted in Nepal that concluded the educated mothers seek regular ANC attendance, delivered at health facility had delivery assistance from health workers and ended up utilizing PNC services (Paudel *et al.,* 2013).

Educated women are also likely to have improved knowledge and information on modern medical treatment and have greater capacity to recognize specific illness and appreciate the need to seek health care (Titaley et al., 2009). Moreover, education not only exposes the women to information, but also enhances understanding in all issues regarding their reproductive health life-style; such a development enhances their health related decisions (Singh *et al.,* 2012).

Furthermore Singh *et al.* (2013) pointed out that it is through education that women acquire self-worth and confidence which acts as a driver that assists them in quick reproductive health choices in critical times such as prepartum, intrapartum and PPPs. Other study mentioned that father's level of education has also positive effect on mother PNC, whereby mothers who had partners with higher education were more likely to utilize PNC services (Khanal et al, 2014).

2.2.7.3 Occupation and its relation to PNC

Occupation status of the mother has been found to contribute much to the probability of the mother utilizing PNC services. A study conducted in Adwa, Tigray, in Ethiopia showed that women's occupation status was a significant factor determining PNC utilization. Self-employed mothers were more likely to have had PNC than women who had no job at all (Hailerman, 2013). In a similar study found that PNC utilization increased with higher formal employment (Ononokpono et al, 2013).

Women who were in formal employment were more likely to receive PNC than the unemployed women. In the same time women who were working as farmers, agricultural and laborers were less likely to use all the three levels of maternal care services including PNC services in comparison with professional women this may related to does not has enough time to utilization of PNC (Jat et al, 2011).

However, It has been observed that unemployed women lack an opportunity cost of investigating in their own health as compared to the employed women and often the unemployed women experience a lot of economic disadvantages (Singh *et al*, 2012). Other study was conducted in Malaw noted that mothers who were married to husbands who were unemployed are associated with a reduced likelihood of uptake of PNC as compared to those who are married to men who were employed (Sakala and Kazembe, 2011).

2.2.7.4 Household level of income and postnatal care

Although GS faces many economic and social challenges; some due to the siege that has been ongoing for a decade, however there is no effect on utilization of PNC, accessibility and receive of PNCS is provided free of charge at primary health care centers. Many studies have been conducted to find the relationship between household level of income

and mothers ability to utilize postnatal health care service. found a significant relationship between household worth status and PNC attendance.

According to Aseweh et.al, (2011) mothers from middle and rich income level were more likely to attend PNC than those mothers from poor families (Aseweh et al, 2011).

A study conducted in India PNC service utilization was unequal between the poor and the rich, with the rich utilizing PNC services more compared with the poor. Moreover, the rich-poor ration in case of babies receiving two or more check-ups within first 10 days after birth was at 1.8. Thus, babies belonging to the richer households were more likely to be examined in a private facility, which had high quality PNC services, as compared to the poor who were more likely to be examined postnatal in the government facilities whose postnatal services were lower in quality as compared to the services offered under private institution (Signh et al, 2012).

In Nigeria decreases as the household level of income increases and that women from families living below poverty line were less likely to use maternal health care services including PNC services as compared to women living above poverty line. Moreover, wealthier women also have enough resources to meet the expenses on health care whereas, women from poor households, often less educated and unemployed, have innumerable difficulties to manage enough money to pay for health care expenses. Most of their earnings go into daily living expenses like food, leaving behind little or no amount to be spent on health care (Somefun & Ibisomi, 2016). However Mohan et al, (2015) in their study on determinants of PNC use at health facilities in rural Tanzania: Multilevel analysis of a household survey, found no association between household level of income and PNC service utilization among mothers.

2.2.7.5 Parity and postnatal care

Parity or number of children also effect on PNC utilization. In a study on PNC in Pakistan, on the number of children a woman had, birth order was found to have a statistically significant effect on the fact that, the higher the birth order, the lower the need for PPC utilization (Budhwani *et al.,* 2015). On parity too, the women who utilized healthcare more had fewer children, but those who had more than five children it was less(Neupane & Doku, 2013).

Furthermore contrary to the findings other studies done elsewhere reported the number of children that the woman has no effect on PNC service utilization (Abok, 2012; Nandjila, 2008, Dhaher et al., 2008).

In other study in Kenya found that there is a significant relationship between the parity of the mother and PNC utilization. In his study on factors affecting utilization of PNC services in Kenya, Kinuthia found that with each additional birth, utilization level of PNC services decreases(Kinuthia, 2014).

In Ghana, further argued that larger families do face resource constraints, a development which negatively affects their reproductive health care choices (Aseweh ,et al. 2011). In a study was conducted in Palestine by (Institute of Community and Public Health, 2010) found that utilization of PNC services was also higher among women giving birth to their first child. This is probably associated with their lack of previous childbirth experiences and their need for more information

2.2.8 Mothers Knowledge and Attitude to word PNC

Lack of awareness is an important factor underlying maternal healthcare utilization**.** Lack of information affects women's capabilities to make their own decisions about seeking help. A study conducted in UNRWA health centers in GS about assessment of PNC

services found major a women had very law knowledge about danger sign which needs more health education and information (Najjar, 2008). A study conducted in West Bank on factors associated with lack of PNC among Palestinian Women, the study discovered that the most frequent reason for not obtaining PNC services was that women did not feel sick and therefore did not require PNC services. Another obstacles is the failure by Health provider to inform them about the PNC services and when and where to obtain care (Dhaher et al., 2008). A study conducted in Gondar Zuria District, established that majority 76.0% of the women were aware they were supposed to go for PPC services. This agrees with (Tesfahun *et al*, 2014) who found out that majority of mothers were aware that they were supposed to receive PPC services after delivery.

A study conducted in China by Chen *et al., (*2014) who found out that there was lack of awareness on the availability of free services, but strongly willing to receive PPC. This may have been so because in this study majority of the women attended ANC clinic, delivered in health facilities and were told by the health care provider thereby increasing awareness (Chen *et al.,* 2014).

A study was conducted in Kenya found that 41.3% of the respondents had no knowledge about PNC services and only 16.3% of the respondents had good knowledge about the PNC services available. In line with this fact 44.2% of the respondents who did not attend PNC services gave a reason like having no problem worth attending the PNC, while 49.5% did not think it was necessary (Kinuthia, 2014).

Other study conducted in Indonesia Low utilization of PNC services is, attributed to, women's lack of knowledge about its importance, their lack of perceived need; especially if they are feeling well (Titaley et al, 2009). A cross-sectional study using a mixed-method approach conducted in Bandarban District in the remote south-eastern part of Bangladesh revealed that 94% of the women did not utilize PNC services. From the qualitative results,

the non-utilization of PNC services among the women was due to large distances to service centers, illiteracy, lack of awareness of health issues and language barriers (Islam & Odland, 2011). A study was confirmed in Morocco the low rate of the PNC standards due to lac women awareness on the importance of PPC (Elkhoudri et al, 2017).

A study assessed PNC services utilization in Halaba Kulito Town found Awareness about postpartum danger signs was directly associated with low PNC utilization (Abebo et al, 2018). Astudy was confirmed in Deber Birhan Ethiopia found that Women who had awareness/knowledge of the postnatal services did utilize the PNC service two times higher than those women who were not adequately informed about the PNC service (Angore et al, 2018).

A study was conducted in rural Jordanian postpartum founded that mothers depended on cultural beliefs and practices as a mode of health seeking behavior, in preference to available government health care services for care of their infants. For more explanation the study concluded that cultural health practices which depended on the Jordanian women cultural health beliefs and knowledge influenced the care of their newborn infants more than other factors. As consequence this influence can interfere with health practices in a way that may harm or not harm the baby,, for example swaddling and salting the infant may be harm to their babies while early breastfeeding, even it is not exclusive breastfeeding would be useful health practices. So the useful cultural practices should be emphasized to the rural mothers during health education programs in order to increase their health knowledge and enhance recommended practices (Abuidhail, 2014).

In n addition, both paternal and maternal education, place of delivery, knowledge about postpartum service availability predicts positively on PNC in Ethiopia (Aregay *et al.,* 2014). In Jabitena district at Ethiopia mothers knowledge of postpartum obstetric danger signs was also found to be strong predictor of PNC utilization. Mothers who were

knowledgeable to for at least one postpartum obstetric danger sign were more likely to utilize PNC service as compared to those who did not spontaneously mentioned any postpartum obstetric danger sign (Workineh& Hailu, 2014).

A study by (Souza *et al.* 2011) found that information about pregnancy complication, which was timely delivered among women, was associated with increased use of maternal health care services before, during and after childbirth periods. In developing countries, women spend more time on many multiple household chores than on their own health as observed by to give priority to the health needs of their infants rather than their own. This is in contrast to the fact that many women appreciate the need of monitoring child's health but do not see the need for post-natal checkups themselves especially if delivery was uneventful (Tao et al., 2011).

2.2.9 Summary

There are factors contribute to maternal and child health outcomes, the use of PNC services is important in the continuum of care to improve the health and survival of mothers and infants. As recommended that a women and her infant should receive to at least three assessments within the first six weeks after childbirth. The numbers of visits or contacts that women and their infants have with their health-care providers are not well documented. The literature review assisted the researcher in the development of the questionnaire. To determine the current status of PNC in GS.

Chapter Three

Materials and Methods

3.1 Introduction

This chapter describes the methodology used in establishing the factors affecting utilization of PNC services by women in GS. It provides detailed information on how the objectives of the study are achieved and allowed for comprehensive analysis of the description of the association between the dependent variable and independent variables. It explains the research setting, the study design, the sample size, the research instrument, and the procedure followed in obtaining the information, the analysis used to interpret the information, the limitations and the ethical issues relating to the study are also given.

3.2 Study design

The design of this study is quantitative descriptive cross sectional design to identify the factors influencing utilization of PNC at primary health care services in GS.

This allowed for comprehensive analysis of the description of the association between the dependent variable and independent variables.

The researcher preferred to use this design, as the researcher deals with human being and mental health behavior, in addition to the ethically reason.

A cross-sectional study involves looking at people who differ on one key characteristic at one specific point in time. The data is collected at the same time from people who are similar on other characteristics but different on a key factor of interest such as age, income levels, or geographic location. Cross sectional studies don't require a follow-up, thus, it is less costly and quicker than other research designs. Finally, if the sample of cross sectional design is drawn in representative way, the findings of cress sectional surveys could be generalized to similar population(Setia, 2016).

Like any research studies, cross sectional survey is used as evidence to plan for public health interventions and decision making.

3.3 Study Setting

The study was conducted at Governmental PHC clinics that provide antenatal, postnatal and vaccination health services for the mother and the newborn, the clinics were selected according Cluster sampling: Cluster sampling occurs when a random sample is drawn from certain aggregation geographical groups. the researcher divides the population into separate five groups according the governorate of GS, the groups contain all clinics of GS which contain ANC, PNC, vaccination then two clinics were taken from each group and the sample was taken from this clinics.

These health centers are distributed in five governorate in GS, and selected 10 health centers which distributed all over Gaza governorates as follows: in North Gaza are 2 health centers Jabalia clinic and Bet Lahia clinic, in Gaza city 2 health centers AL Remaal clinic and Zaitoun clinic, in mid Zone 2 health centers Deer AL Baleh clinic and EL Zwaida clinic, in Khan Younis 2 health centers Kha Younis clinic and Bani Sohela clinic and Rafah 2health centers Rafah clinic and Tal EL Soltan clinic.

3.4 Study population

The study population was included two target groups:

- The first group: is women whose previously delivered within the last year and the infant was more than two weeks old, when coming for vaccination her baby in clinics and have a file in these clinic during pregnancy follow up,
- The second group: is health care providers (nurses, midwives) that were working in the PNC clinic during the implementation of the study the number of actually provide the services was 32 health providers.

3.5 Study period

The study consumed 14 months after the approval of the proposal by Faculty of health profession-AL Quds University in December 2017,the researcher constructed questionnaires, then an ethical approval from Helsinki committee was obtained. The pilot study was conducted in June 2018. Actual data collected started in July, the data was entry in the same day of data collection, August 2018. Data management was completed during January and February 2019.

3.6 Sampling

- Convenience sampling (also known as availability sampling) is a specific type of non-probability sampling method that relies on data collection from population members (women who are conveniently available to participate in study) during data collection period.
- The researcher was collect data from the mothers who have new baby during one year in the PNC clinic regarding Epi-Info-program(epidemiological information statistical program) by sample size calculation (Raosoft) (annex 4), to confidence level 95%, margin of error 5% were accepted. The sample size was estimated 285 mothers from 10 health center services clinic.
- All health care providers who provided the services for PNC (census sample) their number was 32 health providers.

3.7 Eligibility criteria

3.7.1 Inclusion Criteria

Health care providers and women.

- The study targeted was including all midwives and nurses both Registered and Enrolled who are working in the PNC clinic.

- Women whose previous delivery was within the year and the infant was more than two weeks old.
- Women who were willing to participate in the study by signing the consent form.

3.8 Construction of questionnaires design

The two questionnaires were self-constructed by the researcher after reviewing related literature and depending on her experience and observation in the field of this study as she was medical officer for mother child health care. The questionnaires were prepared in particularly to suit the study objectives and allow gathering information related to them. Two questionnaires were put up one for mother and other for the health care provider. The questions of both questionnaires were formulated using cleared to avoid any difficulties and misunderstanding by the interviewers or by the participants and to provide information concerning PNC services.

3.9 Research Instruments

The researcher used two types of questionnaire, The questionnaire was design in English language. Items were clear and specific to assure validity. The questionnaire used closed ended questions and a categorical scale.

The first type was self-administration questionnaire for PHC midwifes and nurses which include three parts (Annex 2):

Section 1: Personal Data. In section one, respondents were asked for personal information with regard to age, marital status, qualifications years of experience, received any training courses in MCH.

Section 2: services delivered to the women and newborn after delivery as schedule of PNC, appointment system, number of visits within the first six weeks, technical instructions about PNC.

Section 3: Health care working environment as all essential investigation and examination, equipment and tools, waiting rooms, privacy, referral system, consultant staff. This information was essential to provide a descriptive profile of the respondents which could influence the utilization of PNC clinics.

the second type was face to face interview administration questionnaire for mother which include the following data (Annex 3):

Section 1:socio-demographic Characteristics included age of mother, residence education level of mother and husband, mother and husband works, family monthly income, family structures.

Section 2: related to obstetric history: included age of marriage, Number of gravida, parity and abortion, Gestational weeks of last pregnancy, complications of pregnancy, date of last delivery, mode of last delivery, place of delivery, Birth attendant, time stayed in the place after delivery, complications during or after delivery, number ANC visits.

Section 3: related to mother knowledge about PNC: included idea about PNC, women access PNC Services, visits should women make PNC Services, important for a mother attending PNC.

Section 4: mother Attitude about PNC. useful Post-natal services for health of mother, Post-natal services are important for the child's health, recommend the post-natal services to others.

Section 5: Utilization of PNC services: Received PNC after last delivery, the barrier to attend PNC services, how many times you supposed to attend PNC services.

3.10 Study tools and instruments

Two different instruments was used in this study, the first was self -administered questionnaire for the midwives and the second was structure interview questionnaire for the mothers:

1- Self - administered questionnaire was used for health care providers.

2- An exit structure interview questionnaire was completed by the researcher herself.

It was preferred in order to offer them the opportunity of adequately completion of questionnaire.

3.11 Pilot study

After institutional review approval Public Health at Al-Quds University and Helsinki Committee and examining the validity of the questionnaire by the supervisor

A pilot study on 30 (10%) of the study sample was done to explore the appropriateness of the study instruments and let the researcher train for data collection. The mothers and health care providers were asked to give comments on the clarity of the instrument, it's appropriateness time taken to complete the questionnaire and any other general comments. After ending the piloting process the researcher did not make modification of any questions. This was also allow for further improvement of the study validity and reliability of the study. The pilot subjects were added on the study sample.

3.12 Data collection

The data for this study come from the 2017 GS Population, following institutional review approval Public Health at Al-Quds University and Helsinki Committee and examining the validity of the questionnaire by the supervisor and after conducting the pilot study the researcher was collected the data from the mothers and health care providers. The data was collected by researcher herself who is Registered nurse and midwife, the researcher visit all the study setting and worked alone. The researcher used two types of questionnaire.

The first type was self-administration questionnaire for PHC the data was collected by the researcher herself distributed the self-administrated questionnaire by hand for every participants.

The second was structure interview questionnaire for the mothers. after take consent form from the mother data collection a face to face interview was completed by the researcher herself directly when the mother has received vaccination for her baby, each questionnaire was answered taken between 15-20 minutes to complete. The researcher looked over all collected questionnaires on daily basis to ensure fulfillment of the information.

3.13 Data entry and analysis

The two questionnaire was overview and then data entry models was design for the two collection instrument using the computer package for social sciences (SPSS) version 22 for data entry and analysis. Frqueacy, Crosstabulation "Chisqure", Independent Sample t test.

All the questions was coded and entered into the computer, after data entry, data cleaning was perform to ensure that all data was entre correctly. Descriptive statistics (Frequencies and percentage) were used to describe the main features of a collection of data in quantitative terms and construct the needed tables to answer the research questions. Descriptive statistics were used to describe the basic features of the data in the study. They provided simple summaries about the sample and the measures. Together with simple graphics analysis, they formed the basis of virtually every quantitative analysis of data and simplified describing what was or what the data showed about the characteristic of population (socioeconomic and demographic status).

3.14 Scientific rigor

3.14.1 Validity of the questionnaire

Validity indicates the degree to which an instrument measures what is supposed to measure, the accuracy, soundness and effectiveness with which it is intended to measure (Mugenda, 2011). The two questionnaires was self-construct after reviewing related literature, the researcher will get some advice from experts in Mother and Child Health

(MCH) (Annex 5) field to ensure relevance clarity and completeness, as a result questionnaires was prepare with high face and content validity. In order to increase the content validity of questionnaires the researcher was send them with the objectives to experts with different background including Public Health, MCH, and Obstetrics with whom the questionnaire validity was fully discuses.

3.14.2 Reliability of the questionnaire

Reliability is the extent to which results are consistent over time and an accurate representation of the total population under study.

The following steps was be done to assure instruments reliability:

- Researcher training of data collectors on the client interviewing steps and the way of asking questions. This was assure standardization of questionnaire filling.
- Then, the data was entry in the same day of data collection would allow possible interventions to check the data quality or to re-fill the questionnaire when required.
- Internal consistency reliability was established as measured by Cronbachs alpha coefficient (alpha $r > 0.827$).

3.15 Ethical and Administrative consideration

An ethical approval was obtained from The Faculty of Health Professions at Al-Quads University and Helsinki Committee, (Annex 6). The permission to conduct the study granted from Palestinian‘s Ministry of Health (Annex7). The cases asked for their agreement for participation in the study. To guarantee participants rights, a covering letter indicating that the participation is voluntary and confidentiality was assured for all of them. For the clients who will be selected from the clinics they were asked for their agreement to participate in the study.

3.16 Response rate

The number of respondents was 287 participants out of 285 participants so, the response rate was 99%.

3.17 Limitations of the study

- The study covered only the PHC clinics of the MOH, the other UNRWA health care centers and NGOs clinics were not included. So generalization of the study will by only for MOH centers.
- Electricity cuts off for long period.
- Lack of studies was conducted in GS related to my study.

Chapter Four

Results and Discussion

4.1 Introduction

The results describe Factors Affecting the utilization of PNC services at Governmental Primary Health Care Clinics in GS, socio-demographic characteristics of the women, relationships between socio-demographic variables, knowledge of postnatal services, and health systems factors.

4.2 Part One questionnaire (Women part)

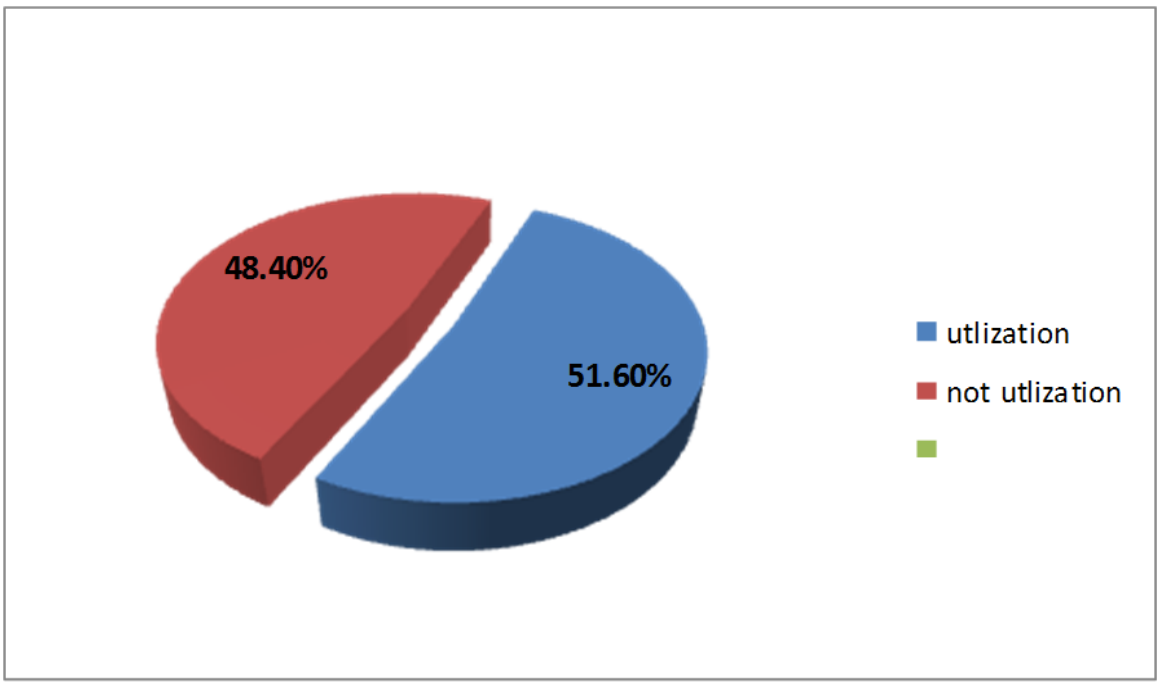


Figure (4.1) Distribution of participants according utilization of PNC services.

Figure (4.1) shows nearly half 147 (51.6%) of the participants were received PNC services and all of them were received PNC services at one week only, while 138 (48.4%) did not received PNC service.

4.2.1 Distribution of the study participants according to their Utilization of PNC services

Table (4.1) Distribution of the study participants according to their Utilization of PNC services(n=285)

Items	Yes		No	
	Nu.	%	Nu.	%
Received PNC services	147	51.6	138	48.4
If yes when (First week)	147	100.0	0	0.0
what the barrier to attend PNC services				
Not aware about the services	117	84.8	21	15.2
Did not think it was necessary as I was feeling well	31	22.5	107	77.5
Waiting time is too long	2	1.4	136	98.6
Within the first six weeks after delivery how many times are you are supposed to attend postnatal care services:				
Once	60	21.1		
Twice	130	45.6		
Three	68	23.9		
Four	27	9.4		
Total	**285**	**100.0**		
Do you Advice friends to receive the PNC services	285	100.0	0	0.0

In table (4.1) shows majority of participants 117 (84.8%) reported that the barrier to received PNC services that they are not aware about services, followed 31(22.5%) whose did not think it was necessary as they were feeling will, and only 2 (1.4%) of participants reported waiting time is too long. For the question number two how many time you suppose to attend to PNC 130 (45.6%) of the participants reported that they supposed to attend PNC services two times, followed 68 (23.9%) reported three times, and lest 27

(9.4%) four times. Furthermore all participants 285 (100%) reported they advise friends to receive PNC services.

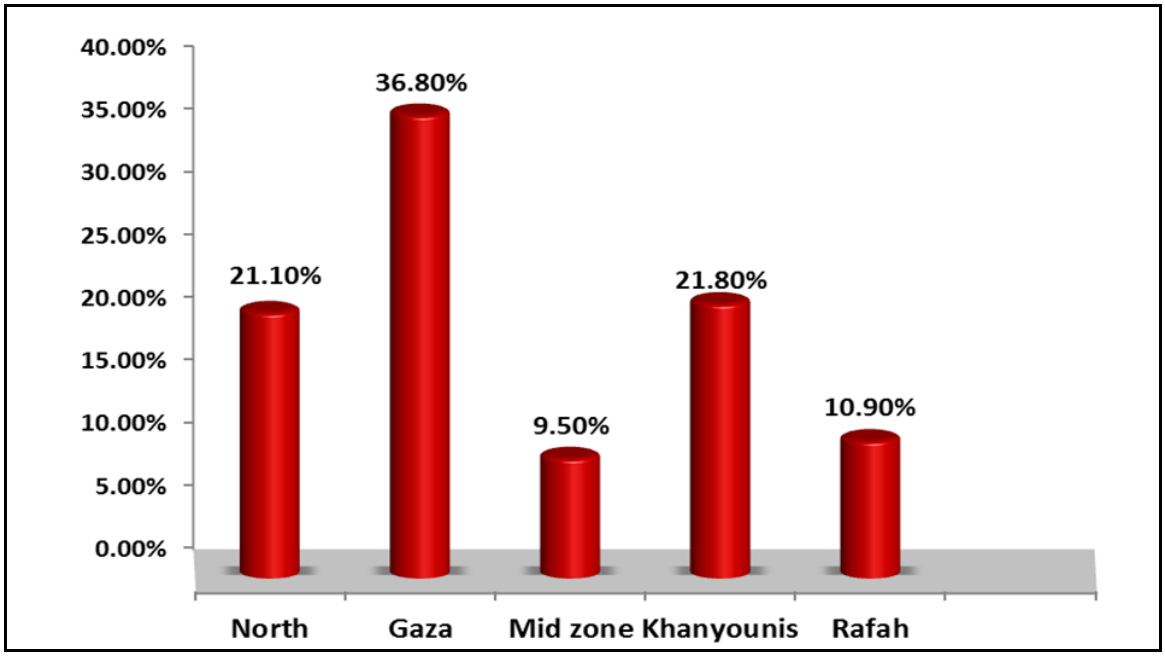


Figure (4.2): Distribution of the study participants according to residency

Figure (4.2) shows the highest percentage of women participants in Gaza (36.8%), followed by Khanyounis (21.8%), North Gaza (21.1%), Rafah (10.9%) and Mid Zone (9.5%).

4.2.2 Distribution of the study participants (women) according to Socioeconomic and demographic factors

Table (4.2) Distribution of the study participants (women) according to Socioeconomic and demographic factors (n=285)

Women Age	**Nu**	**%**
20 Years and less	43	15.1
From 21 to 25 Years	109	38.4
From 26 to 29 Years	65	22.5
30 Years and more	68	23.9
Mean = 25.69, MD = 25.0, Std= 4.81		
Education level of mothers		
Primary	44	15.5
Secondary	155	54.2
College	28	9.9
University	58	20.4
Mother works		
No	276	96.8
Yes	9	3.2
Husband works		
No	82	28.8
Yes	203	71.2
Income		
Under poverty line	249	94.7
Above poverty line	14	5.3
Mean = 678.94, MD = 400.0, Std= 815.96		
Home		
Own	262	91.9
Tenanted	23	8.1
Family Structures		
Nuclear	140	49.1
Extended Family	145	50.9
Total	**285**	**100.0**

The result in Table (4.2) shows that the mean age of participant mother was 25.69 years with (SD 4.81) years and the median was 25.6 The highest age of participants 109 (38.4%) was between 21-25 years, and less participants age 43(15.1%) was from 26 to 29 years, followed by woman aged 68 (23.9%) more than 30 years. The largest proportion of the women's (54.2%) finished secondary school, 58 (20.4% have bachelor,44 (15.5%) completed primary school,28 (9.9%) finished college.

The result shows that (4.2) the vast majority of women 276 (96.8%) at the time of data collection were housewives while about 9 (3.2%) were employed, the finding regarding husbands employment status shows that the percentage of employed husbands was higher than women and reached 203 (71.2%) of them. The majority 262 (91.9%) of women have own home. Half 145 (50.9%) lived in extended family.

4.2.3 Distribution of the study participants according to Obstetric characteristics

Table (4.3a) Distribution of the study participants according to Obstetric characteristics (n=285)

Items	Nu	%
Age at marriage:		
17 years and less	72	25.3
From 18 to 20 Years	142	49.8
Above 20 Years	71	24.9
Total	285	100.0
Mean = 19.4, MD = 19.0, Std= 3.1		
Number of gravida		
Once	60	21.1
Twice	64	22.5
Three	58	20.4
Four	38	13.3
Five and more	65	22.8
Mean = 3.27, MD = 3.0, Std= 2.1		
Number of parity		
Once	69	24.2
Twice	71	24.9
Three	58	20.4
Four	39	13.7
Five and more	48	16.8
Mean = 2.88, MD = 3.0, Std= 1.7		
Number of living children		
Once	69	24.2
Twice	71	24.9
Three	59	20.7
Four	39	13.7
Five and more	47	16.5
Mean = 2.87, MD = 3.0, Std= 1.7		

Table (4.3b) Distribution of the study participants according to Obstetric characteristics (n=285)

Gestational weeks of last pregnancy		
Preterm	15	5.3
Full term	254	89.1
Post term	16	5.6
Do you have any history of the following previous pregnancy complications		
PIH	18	6.3
DM	2	0.7
Anemia	87	30.5
Bleeding	11	3.9
Mode of last delivery		
Normal vaginal delivery	234	82.1
Cesarean section	51	17.9
Place of delivery		
Governmental Hospital	228	80.0
NGOs Governmental	57	20.0
Birth attendant		
Doctor	177	62.1
Midwife	108	37.9
Time stayed in the place after deliver by hrs for normal Delivery		
Less Six hours	191	81.6
Six Hours	24	10.3
More than 6 hours	19	8.1
Total	234	100.0
Mean = 4.32, MD = 3.0, Std= 5.73		
Time stayed in the place after deliver by hrs for Cesarean section		
24 hours and less	41	80.4
More than 24 hours	10	19.6
Total	51	100.0
Mean = 22.29, MD = 18.0, Std= 14.07		
Complications during or after delivery		
Nothing	254	89.1
Bleeding	17	6.0
Fever	14	4.9
Number of visit to the ANC During pregnancy		
Four and less	41	14.5
Five	38	13.4
Six	52	18.4
Seven	97	34.3
Eight and more	55	19.4
Mean = 6.4, MD = 7.0, Std= 4.6		

Table (4.3) shows the previous obstetric history of the participants is illustrated in table (4.3a) shows that the mean of marital age of the participants was 19.4 years old with (SD 3.1), 142 (49.8%) were married at age from 18 to 20 years old. 72 (25.3%) were married at age 17 and less, 71 (24.9%) were married above 20 years old. The highest number 71 (24.9%) of women have two children, 69 (24.2%) one children, 59 (20.7%) three children, 47 (16.5%) five and more children, 39 (13.7%) four children, the overall mean and stander deviation of parity similar the number of children mean was 2.8 with (SD 3.0). In table (4.3b) the majority 254 (89.1%) of woman have complete the term of pregnancy, while 16 (5.6%) post term, and 15 (5.3%) premature baby. One-third 87 (30.5%) of women having anemia, 18 (6.3%) pregnancy induce hypertension, 11 (3.9%) bleeding, 2 (0.7%) Diabetes mellitus.

The highest number 234 (82.1%) of women normal vaginal delivery, while 51 (17.9%) by cesarean section. Regarding place of delivery as shown in table (4.5), more than four fifths 228 (80%) of women delivered in Governmental hospital, 42 (14.7%) in NGOS, while 14 (4.9%) in privet clinics, one case delivered in care (0.4%). Additionally, 177 (62.1%) of women delivered by doctor while 107 (37.5%) by midwife, the highest number 191 (81.6%) stayed in place after normal vaginal delivery less than six hours, while 24 (10.3%) stayed six hours, only 19 (8.1%) stayed more than six hours, the mean stayed in place 4.32 hours with (SD 5.73). The women delivered by cesarean section stayed in the place 41(80.4%) less than 24 hours, while 10 (19.6%) more than 24 hours, the mean 22.29 hours with (SD14.7). The majority 254 (89.1%) of women did not have any complication after delivery, while 17 (6.0%) had bleeding, 14 (4.3%) had fever. The highest number 97 (34.3%) of ANC visit during pregnancy seven times and the least number38 (13.4%) five times while 41 (14.5%) four times and less, mean number of ANC 6.4 times with (SD 4.6).

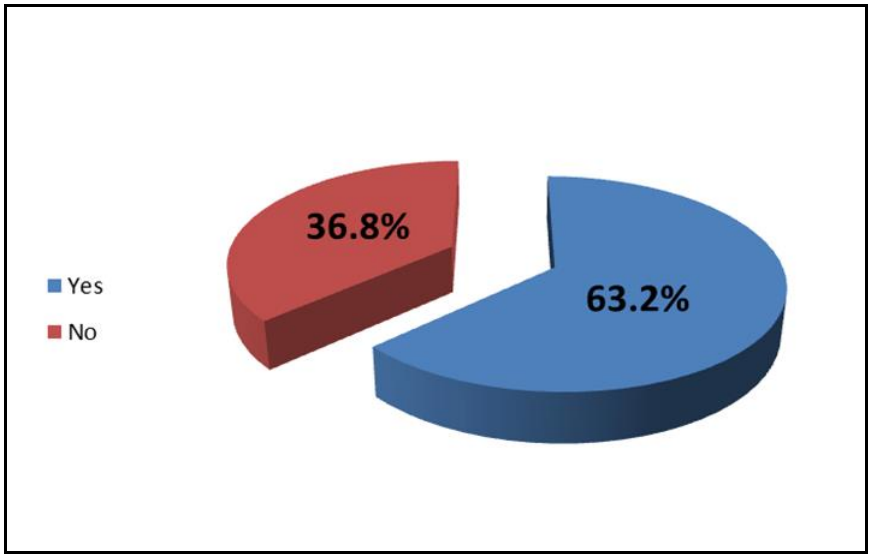


Figure (4.3) Distribution of the study participants according to their information about PNC

In figure (4.3) shows that more than half 180 (63.2%) of participants was had idea about PNC while 105 (36.8%) of participants had no idea.

4.2.4 Distribution of the study participants according to knowledge about PNC

Table (4.4) Distribution of the study participants according to knowledge about PNC (n=285)

Items	Nu	%
Have you information about PNC		
No	105	36.8
Yes	180	63.2
Total	**285**	**100.0**
If the answer for above Q yes From where you hear about		
From midwife at ANC	130	72.2
From Hospital after delivery	34	18.9
From internet	47	26.1
Friends	24	13.3
Other	26	14.4
Total	**261**	**100.0**

Table (4.4) shows 130 (72.2%) of the participants had their idea about PNC from midwife at ANC, while 47 (26.1%) from internet, 34 (18.9%) from Hospital after delivery, and 24 (13.3%) from friends.

4.2.5 Distribution of the study participants according to knowledge about PNC Services

Table (4.5a) Distribution of the study participants according to knowledge about PNC Services (n=285)

Items		S. Disagree	Disagree	Neutral	Agree	S. Agree	Weighted Mean
A care given to mother and her newborn soon after delivery to 6 weeks	**N**	0	132	91	49	13	56.0
	%	0.0	46.3	31.9	17.2	4.6	
Advice on infant feeding	**N**	0	44	70	135	36	71.4
	%	0.0	15.4	24.6	47.4	12.6	
Family planning services	**N**	0	32	63	151	39	73.8
	%	0.0	11.2	22.1	53.0	13.7	
Information on breastfeeding	**N**	0	2	26	209	48	81.2
	%	0.0	0.7	9.1	73.3	16.8	
Access PNC Services							
During 1st six weeks after delivery	**N**	0	106	123	38	18	57.8
	%	0.0	37.2	43.2	13.3	6.3	
Day 1, 7, 28 and 42 days after delivery.	**N**	0	113	154	14	4	53.6
	%	0.0	39.6	54	4.9	1.4	
Any day when she is not ok.	**N**	0	2	6	103	174	91.6
	%	0.0	0.7	2.1	36.1	61.1	
Three months after delivery.	**N**	1	99	167	13	5	54.6
	%	0.4	34.7	58.6	4.6	1.8	

Table (4.5b) Distribution of the study participants according to knowledge about PNC Services (n=285)

Items		S. Disagree	Disagree	Neutral	Agree	S. Agree	Weighted Mean
times of visits should women make PNC Services after delivery							
One time	**N**	0	4	24	189	68	82.6
	%	0.0	1.4	8.4	66.3	23.9	
Two times	**N**	0	3	26	168	88	84.0
	%	0.0	1.1	9.1	58.9	30.9	
Three times	**N**	0	9	52	129	95	81.8
	%	0.0	3.2	18.2	45.3	33.3	
Four times.	**N**	0	12	75	146	52	76.8
	%	0.0	4.2	26.3	51.2	18.2	
More	**N**	0	13	81	156	35	75.0
	%	0.0	4.6	28.4	54.7	12.3	
Important for a mother attending PNC							
Infants receiving immunizations	**N**	0	0	7	167	111	87.2
	%	0.0	0.0	2.5	58.6	38.9	
Knowledge on breastfeeding.	**N**	0	0	6	168	111	87.4
	%	0.0	0.0	2.1	58.9	38.9	
Family planning counseling.	**N**	0	11	56	144	74	79.8
	%	0.0	3.9	19.6	50.5	26	
Postnatal exercise.	**N**	0	12	63	138	72	79.0
	%	0.0	4.2	22.1	48.4	25.3	

In table (4.5a) shows present knowledge of participants about PNC services, the high score were obtained from this finding 257 (90.1%) of participants know information about breast feeding services with weighted mean was 81.2, followed by 190 (66.7%) know family planning services with weighted mean was 73.8, and 171 (60%) know about advice on infant feeding services with Weighted mean was 71.4, while 91 (17.2%) did not know about a care given to mother and her newborn soon after delivery to sex weeks.

In table (4.a) shows knowledge of participants about access PNC services. The high score 277 (97.2%) mother know access PNC services when she did not ok that Weighted mean

was 91.6, 167 (58.6%) did know about services at three month after delivery with weighted mean was 54.6, followed by 154 (54%) did not know about services at 1,7,28and 42 days after delivery with weighted mean was 57.8, and 123 (43.2%) did not know about services during first six weeks after delivery with weighted mean was 57.8.

In table (4.5b) shows the knowledge of participants about number of time visits should women makes PNC services after delivery. The majority of participants reported (90%) one to two times women should visit PNC with mean was 83, followed by (79%) reported three times with Weighted mean 81.8, and last (69%) reported four or more than, the Weighted mean was 75.

In table (4.5b) illustrated knowledge of participants about importance attending PNC for mother. The majority (95%) of participants reported PNC importance for infants receiving immunization and knowledge on breast feeding with Weighted mean was 87, while (75%) reported importance for family planning and postnatal exercise with Weighted mean was 79.8.

4.2.6 Distribution of the study participants according to mean score of knowledge about PNC

Table (4.6) Distribution of the study participants according to mean score of knowledge about PNC?

Items	Mean	Median	Std
Know about PNC services	70.6	70.0	12.9
Access to PNC services	64.3	65.0	10.0
Number of visits for receiving PNC services after delivery	80.0	80.0	10.2
Important for a mother attending PNC	83.3	80.0	11.8
Total	74.9	75.3	8.7

Table (4.6) regarding knowledge of participants women about PNC the highest score is important for mother attending PNC the mean was 83.3 with std 11.8, while number of visits for receiving PNC services after delivery mean was 80.0 with std 10.2 , know about

PNC services mean was 70.7 with std 12.9, the lowest score access to PNC services mean was 64.3 with std 10.0.

4.2.7 Distribution of the study participants according to their Attitude about PNC

Table (4.7) Distribution of the study participants according to their Attitude about PNC (n=285)

Items		S. Disagree	Disagree	Neutral	Agree	S. Agree	Weighted Mean
Your recommended that women go to health facility after delivery	**N**	0	1	1	187	96	86.6
	%	0.0	0.4	0.4	65.6	33.7	
Post-natal services are useful to the health of mother	**N**	0	0	0	182	103	87.2
	%	0.0	0.0	0.0	63.9	36.1	
Post-natal services are important for the child's health	**N**	0	0	0	173	112	87.8
	%	0.0	0.0	0.0	60.7	39.3	
You would attend Post-natal services in future	**N**	0	0	0	180	105	87.4
	%	0.0	0.0	0.0	63.2	36.8	
You would recommend the post-natal services to others	**N**	0	0	0	188	97	86.8
	%	0.0	0.0	0.0	66.0	34.0	
Mean = 87.2, Median = 80.0, Std = 9.3							

In table (4.7) illustrated attitude about PNC. All the participants (100%) were reported that postnatal services are useful to the health of mother, & the child's health, for the second item about if the mother would attend postnatal services in the future &would recommend the postnatal services to others with weighted mean was 87, followed (99.3%) reported recommended that women go to health facility with Weighted mean was 86.

4.3 Part two questionnaire (HCP)

4.3.1 Distribution of the study participants according to their Demographic data

Table (4.8) Distribution of the study HCP according to their Demographic data(n=36)

Items	Nu	%
Health Center		
Gaza	9	25
North	8	22.2
Middle Zone	8	22.2
Khanyounis	5	10.8
Rafah	6	16,6
Total	36	100.0
Age		
Less than 35 Years	9	26.5
From 35 to 40 years	12	32.4
Above 40 years	15	41.1
Mean= 38.76, MD = 39.50, Std= 8.128		
Years of experience		
15 Years and less	12	33.3
From 16 to 20 Years	11	30.6
Above 20 Years	13	36.1
Mean= 17.14, MD = 18.00, Std= 5.96		
Professional title		
Nurse	10	27.8
Midwife	22	61.1
Senior staff nurse	4	11.1
Level of Education		
Diploma	23	63.9
Bachelor degree	13	36.1
Total	36	100.0
Receiving training courses in MCH		
No	2	5.6
Yes	34	94.4
Total	36	100.0

Table (4.8) shows that the highest percentage of health care provider were working in Gaza zone 9 (25%) followed by North 8 (22.2), middle zone 8 (22.2), Khanyounis 5 (10.8) &Rafah 6 (16.6). The mean age of health care providers were 38.76 years old. The

majority of health care providers 41% age above 40 years old. For the working experience more than third of health care provider 36% Above 20 Year old with mean age 17.14 years old. For the professional title 61,1% (22) were midwife while 27,8 (10) are nurses.

4.3.2 Distribution of the study participants according to their services delivered to the women and newborn after delivery

Table (4.9) Distribution of the study HCP according to their services delivered to the women and newborn after delivery (n=36)

Services	No		Yes		Total	
	Nu	%	Nu	%	Nu	%
Do you have fixing schedule in the week for PNC in your clinic	9	25.0	27	75.0	36	100.0
Do you have appointment system for PNC in your clinic	8	22.2	28	77.8	36	100
If the answer yes When the appointment of PNC will be given						
Less than 5 Days	26	92.9	2	7.1	28	100
Five days	20	71.4	8	28.6	28	100
More than 5 Days	10	35.7	18	64.3	28	100
Within the first six weeks after delivery how many times you supposed to attend PNC services						
One time	14	38.9	22	61.1	36	100
Two Times	15	41.7	21	58.3	36	100
Three times	26	72.2	10	27.8	36	100
Four times	28	77.8	8	22.2	36	100
More than 5 times	28	77.8	8	22.2	36	100
f the mother not attend PNC there is any call or visit for her	31	86.1	5	13.9	36	100
Availability of guide line or technical instructions about PNC	3	8.3	33	91.7	36	100
If yes services provided according to technical instruction regularly	3	8.3	33	91.7	36	100
According to your opinion, number of PNC visits are Suitable	23	63.9	13	36.1	36	100
According to these instructions how many routine PNC visits should be done						
One visit	3	8.3	33	91.7	36	100
Two visits	33	91.7	3	8.3	36	100

Table (4.9) shows that two-third 27 (75.0%) of HCP was reported they have fixing schedule in the week for PNC. More than two third 28 (77.8%) of HCP reported there is an appointment system for PNC. The highest percentage 18 (64.3%) of HCP reported that the appointment of PNC is given after the fifth day after delivery, 8 (28.6%) during 5 days of

women post -delivery, 2 (7.1%) less than 5 days post-delivery. The result showed that 22 (61.1%) of HCP assured that women are supposed to attend PNC services one time at least, 21 (58.3%) two times, 10 (27.8%) three times, 8 (22.2%) four times, 8 (22.2%) more than 5 times. The majority of HCP 31 (86.1%) of reported that, there is no any call or home visit to the mother if she not attend PNC. The majority of HCP 33 (91.7%) reported that, the availability of guide line or technical instructions about PNC in the work area, the majority 33 (91.7%) of HCP was reported services provided according to these technical instruction regularly. More than half 23 (63.9%) of HCP reported that, the number of PNC visits are not suitable, and the majority 33 (91.7%) of HCP reported that, the routine PNC visits only one visit.

4.3.3 Distribution of the study HCPs according to their Health care working environment

Table (4.10) Distribution of the study HCPs according to their Health care working environment (n=36)

Work environment	No		Yes		Total		Rank
	Nu	%	Nu	%	Nu	%	
All essential investigation and examination needed for mother and newborn done at health center	3	8.3	33	91.7	36	100.0	2
Equipment and tools needed are always available	5	13.9	31	86.1	36	100.0	4
Waiting rooms wide and suitable	15	41.7	21	58.3	36	100.0	6
Counseling done in special place inside the health center	10	27.8	26	72.2	36	100.0	5
Privacy is considered during providing services	1	2.8	35	97.2	36	100.0	1
Efficient referral system	3	8.3	33	91.7	36	100.0	2
availability of staff, consultant	18	50.0	18	50.0	36	100.0	7

Table (4.10) shows that the majority 35 (97.2%) providing privacy during providing services. The majority 33 (91.7%) of HCP reported all essential investigation and examination needed for PNC are available, The majority 33 (91.7%) there efficient referral system, and about half 18 (50.0%) availability of staff, consultant. Moreover 31 (86.1%) of HCP reported always equipment and tools needed are always available, most 21 (72.2%) of HCP reported there is suitable waiting room, 26 (72.2%) there is special place for counseling inside the clinics.

4.4 Inferential Statistics:

4.4.1 Relationship between Utilization of Receiving PNC and Governorates

Table (4.11) Relationship between Utilization of Receiving PNC and Governorates (n=285)

Governorates	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
North	21	35.0	39	65.0	60	100.0	12.540	0.014
Gaza	60	57.1	45	42.9	105	100.0		
Midzone	12	44.4	15	55.6	27	100.0		
Khanyounis	25	40.3	37	59.7	62	100.0		
Rafah	20	64.5	11	35.5	31	100.0		
Total	**138**	**48.3**	**147**	**51.7**	**285**	**100.0**		

* Fisher chi-square

* Significant $P \leq 0.05$-is statistically significant

Table (4.11) shows that there is a statistical significant relationship between receiving PNC and Governorates with p- value ≤ 0.05, the highest percentage of women were utilize PNC 65.0% who live in North Governorate, then in 59.7% in Khanyounis, 55.6% in Midzon, 42.9% in Gaza, and the lowest 35.5% in Rafah were utilize PNC.

4.4.2 Relationship between Utilization of Receiving PNC and Mother education

Table (4.12) Relationship between Utilization of Receiving PNC and Mother education (n=285)

Education	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
Primary	22	50.0	22	50.0	44	100.0	4.968	0.174
Secondary	82	53.2	72	46.8	154	100.0		
College	11	39.3	17	60.7	28	100.0		
University	22	37.9	36	62.1	58	100.0		
Total	137	48.2	147	51.8	284	100.0		

* Significant P ≤ 0.05-is statistically significant

Table (4.12) the results shows that insignificant statistical differences in utilization of receiving PNC after last delivery and Mother education with p- value ≤ 0.05. The results shows 62.1% of women who finished university were utilize PNC, while 60.7% who finished college, 50.0% who finished primary school, and 46.85% who finished secondary school were utilize PNC.

4.4.3 Relationship between Utilization of Receiving PNC and Mother Work

Table (4.13) Relationship between Utilization of Receiving PNC y and Mother Work (n=285)

Mother Work	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
No	135	48.9	141	51.1	276	100.0	0.847	0.503
Yes	3	33.3	6	66.7	9	100.0		
Total	138	48.4	147	51.6	285	100.0		

Significant P ≤ 0.05-is statistically significant

Table (4.13) shows the results indicate statistically insignificant differences in Utilization of Receiving PNC after last delivery and mother work with p- value ≤ 0.05. the highest

prevalence of women not work , 51.1% of them utilize of PNC while 66.7% of mother who not word utilize PNC.

4.4.4 Relationship between Utilization of Receiving PNC and Mother Family Type

Table (4.14) Relationship between Utilization of Receiving PNC and Family Type (n=285)

Family Type	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
Nuclear	135	48.9	141	51.1	276	100.0	0.807	0.407
Extended	3	33.3	6	66.7	9	100.0		
Total	138	48.4	147	51.6	285	100.0		

Significant P ≤ 0.05-is statistically significant

Table (4.14) shows the results indicate statistically insignificant differences in utilization of receiving PNC after last delivery and Family Type with p- value ≤ 0.05. Women who live in extended family 66.7% of them were utilized PNC, while 51.1% of women who live in nuclear family were utilize PNC. The results shows women who live in extended family more than utilization of PNC from women who live in nuclear family.

4.4.5 Relationship between Utilization of Receiving PNC and Mother Age

Table (4.15) Relationship between Utilization of Receiving PNC and Mother Age (n=285)

Mother Age	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
20 Years and less	25	58.1	18	41.9	43	100.0	3.326	0.344
21 to 25 Years	52	47.7	57	52.3	109	100.0		
26 to 29 Years	33	51.6	31	48.4	64	100.0		
30 Years and more	28	41.2	40	58.8	68	100.0		
Total	138	48.4	147	51.6	285	100.0		

Significant P ≤ 0.05-is statistically significant

Table (4.15) shows the results indicate statistically insignificant differences in utilization of ueceiving PNC after last delivery and mother age with p- value ≤ 0.05. The highest 58.8% of mother age were utilized PNC 30 years and above, then 52.3% of mother age from 21 to 25 years,48.4% of mother age from 26 to 29 years, the lowest 41.9% mother age 20 years and less were utilized PNC.

4.4.6 Relationship between Utilization of Receiving PNC and Family Income

Table (4.16) Relationship between Utilization of Receiving PNC and Family Income (n 285)

Income	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
Under poverty line	115	46.2	134	53.8	249	100.0	0.639	0.229
Above poverty line	8	57.1	6	42.9	14	100.0		
Total	138	48.4	147	51.6	285	100.0		

Significant P ≤ 0.05-is statistically significant

Table (4.16) shows the results indicate statistically insignificant differences in utilization of ueceiving PNC after last delivery and Family Income with P ≤ 0.05. The highest 53.8% of women under poverty line were utilized PNC, while 42.9% of women who above poverty line were utilized PNC.

4.4.7 Differences between Utilization of Receiving PNC and obstetric history

Table (4.17) Differences between Utilization of Receiving PNC and obstetric history (n 285)

	Receiving PNC after last delivery	N	Mean	Std	t	Sig.
Age at marriage	No	138	19.40	3.237	-0.045	0.964
	Yes	147	19.41	2.979		
Number of parity	No	138	2.72	1.712	-1.504	0.134
	Yes	147	3.03	1.684		
Time stayed in the place after delivery	No	138	8.85	12.924	2.052	0.041
	Yes	147	6.32	7.260		
Number of visit to the ANC During pregnancy.	No	137	5.83	2.300	-2.021	0.044
	Yes	146	6.93	5.964		

* Significant $P \leq 0.05$

In table (4.17) shows the results indicated statistically insignificant differences in Utilization of Receiving PNC after last delivery and Age of marriage, Number of parity, while the results indicated statistically significant differences in time stayed in the place after delivery, number of visit to the ANC during pregnancy.

4.4.8 Relationship between Utilization of Receiving PNC and previous pregnancy complications

Table (4.18) Relationship between Utilization of Receiving PNC and previous pregnancy complications (n=285)

Complications	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
PIH (yes)	4	22.2	14	77.8	18	100.0	5.280	0.018
DM(yes)	0	0.0	2	100.0	2	100.0	1.891	0.265
Anemia(yes)	42	48.3	45	51.7	87	100.0	0.001	0.539
Bleeding(yes)	6	54.5	5	45.5	11	100.0	0.174	0.457

Significant $P \leq 0.05$-is statistically significant

Table (4.18) the results indicate statistically significant differences in utilization of receiving PNC after last delivery and mother was had PIH during pregnancy with p- value ≤ 0.05, 77.8% of women who have PIH were utilized PNC. While the results indicate statistically insignificant differences in DM, anemia and bleeding with p- value ≤ 0.05. All women 100.0% who have DM were utilized PNC, 51.7% of women who have anemia were utilized PNC, and 45.5% of women who have bleeding after last delivery were utilized PNC.

4.4.9 Relationship between Utilization of Receiving PNC and Mode of last delivery

Table (4.19) Relationship between Utilization of Receiving PNC and Mode of last delivery (n=285)

Mode of last delivery	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
Normal vaginal delivery	108	46.2	126	53.8	234	100.0	0.269	0.069
Cesarean section	30	58.8	21	41.2	51	100.0		
Total	138	48.4	147	51.6	285	100.0		

Significant P ≤ 0.05-is statistically significant

Table (4.19) the results indicate statistically insignificant differences in utilization of receiving PNC after last delivery and mode of last delivery with p- value ≤ 0.05. 53.8:% of women who have normal vaginal delivery were utilized PNC, while 41.2% of women who have cesarean section were utilized PNC.

4.4.10 Relationship between Utilization of Receiving PNC and Place of delivery

Table (4.20) Relationship between Utilization of Receiving PNC and Place of delivery (n=285)

Place of last delivery	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
Governmental Hospital	107	46.9	121	53.1	228	100.0	7.583	0.055
NGOs	27	64.3	15	35.7	42	100.0		
Private	4	26.7	11	73.3	15	100.0		
Total	138	48.4	147	51.6	285	100.0		

Significant $P \leq 0.05$-is statistically significant

Table (4.20) the results indicate statistically insignificant differences in utilization of receiving PNC after last delivery and Place of last delivery with p- value ≤ 0.05.

73.3% of women who delivered in privet clinic were utilized PNC, while 53.1% of women who delivered in Governmental Hospital were utilized PNC, and 35.7% of women who delivered in NGOs were utilized PNC. The result shows women who delivered at private clinic utilize PNC more than women delivered in Governmental Hospital and NGOs.

4.4.11 Relationship between Utilization of Receiving PNC and Birth attendant

Table (4.21) Relationship between Utilization of Receiving PNC and Birth attendant (n=285)

Birth attendant	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
Doctor	88	49.7	89	50.3	177	100.0	1.181	0.554
Midwife	50	46.7	58	53.3	107	100.0		
Total	138	48.4	147	51.6	285	100.0		

Significant $P \leq 0.05$-is statistically significant

Table (4.21) the results indicate statistically insignificant differences in utilization of receiving PNC after last delivery and birth attendant with p- value ≤ 0.05.

53.3% of women who birth attendant by Doctor were utilized PNC, while 50.3% of women who birth attendant by midwife were utilized PNC.

4.4.12 Relationship between Utilization of Receiving PNC and Complications during or after delivery

Table (4.22) Relationship between Utilization of Receiving PNC and Complications during or after delivery (n=285)

Complications during or after delivery	No		Yes		Total		X^2	Sig.
	Nu	%	Nu	%	Nu	%		
Nothing	124	48.8	130	51.2	254	100.0	1.615	0.446
Bleeding	6	35.3	11	64.7	17	100.0		
Fever	8	57.1	6	42.9	14	100.0		
Total	138	48.4	147	51.6	285	100.0		

Significant P ≤ 0.05-is statistically significant

Table (4.22) the results indicate statistically insignificant differences in utilization of receiving PNC after last delivery and complications during or after delivery with p- value ≤ 0.05. Moreover 64.7% of women who have bleeding after delivery were utilized PNC, while 51.2% of women who not have any complication during and after delivery were utilized PNC, and 42.9% of women who have fever during and after delivery were utilized PNC.

4.4.13 Differences between Knowledge, Attitude and Receiving PNC

Table (4.23) Differences between Knowledge, Attitude and Receiving PNC

	Attitude and Receiving PNC after last delivery	N	Mean	Std	t	Sig.
Knowledge	No	138	70.90	7.81	-8.410	0.000
	Yes	147	78.63	7.70		
Attitude	No	138	84.55	8.23	-4.760	0.000
	Yes	147	89.61	9.59		

* Significant P ≤ 0.05

Table (4.23) shows there were statistically significant positive relationship at p- value ≤ 0.05 between knowledge and attitudes of participants Receiving PNC after last delivery.

4.5 Discussion of the Study Results

4.5.1 Introduction

The result indicated that midwives and nurses who participated as HCP in the study, aged between 35-40 years old with mean was 38.67 years, the vast majority were married and slightly more than three-fifths midwives and less than third were nurses about three fifths were had diploma while two fifths had bachelor degree. In addition, more than third of them had 20 years' experience, third of them had 15 years and less experience, and slightly less third had above 20 years' experience, The vast majority of them were received training courses in MCH care, that mean MoH is seeking to improve of HCP knowledge and skills by training courses for nurses and midwives.

4.5.2 Services delivered to the women and newborn after delivery

The results of our study shows that three-quarters of midwives and nurses that PNC services are provided with schedule and appointment system, this finding gives an indication that there is opportunity to PNC visits are organized according to of the appointment system. On other hand more than 50% of HCPs reported that the women get the postnatal delivering services after the fifth day of their delivery in the same day of their babies first vaccination does. In comparison with WHO recommendation this result not consist with that recommended, mothers and newborns should receive PNC on day three (48-72hours) after delivery (WHO, 2014).

The timing of PNC is essential for treating and diagnosing complications arising after delivery and enables detection of complications that may threaten the survival of the mother. The timing of PNC is important to provide the best outcome possible so the mother should seek postnatal services within two days after delivery since this is the time when most maternal death occurs (Titaley et al., 2009). My opinion there is inadequate

information on the timing of uptake of PNC services in GS. The majority of midwives and nurses reported routine PNC visits are one visit only, additionally if the mothers not attend PNC they will not be in called or visited by HCPs, and more than third of HCPs reported according their opinion number of PNC one visits are suitable and supposed attend PNC services one time visit only within the first six weeks after delivery that's results not consistent with WHO recommendation after mothers and newborns discharge at least additional three visits for all mothers and newborns, on day three (48-72 hours) and between days 7-14 after birth, and six weeks after birth (WHO, 2014).

The present study finding revealed that two fifths of HCPs reported that there is no adequately suitable waiting room in the health centers. It means that some health centers suffer from overcrowded because of narrow, unsuitable waiting rooms. Half of HCP reported there is not availability of staff consultant. The vast majority of HCP reported all essential investigation and examinations, equipment and tools needed are available the result consist with Najjar, (2008) that's revealed available of essential investigation and examinations at health care centers in UNRWA.

4.5.3 Socioeconomic and demographic factors

The present results indicated that the mean age of women participated was 25.69 years old this result is similar to other study where the mean age was 25.5years old (Nassar, 2018). According to PCBS (2017) the total fertility rate in GS was 4.5 and in this study shown the highest number age category among women aged between 21 to 25 years, these together give a large sign about importance of PNC including providing family planning services to this group which may contributes in reducing the total fertility rate in the future.

More than third of participants from Gaza that reflecting in high population density of the city (PCBS, 2016). More than of half of participants was finished secondary school while

one fifths have bachelor. In addition, the vast majority were housewives. The finding regarding their husbands less half finish secondary school, while slightly less third have bachelor and about two third worked, and the mean their income was 678.94 with SD 815.96 1500 Shekel. The majority of participants have own house, while of them life in extended family however there is no effect on utilization of PNC, accessibility and receive of PNC service is provided free of charge at primary health care centers. This results are similar of Fekadu (2019) study revealed that The cost of all maternal health services are provided free of charge.

4.5.4 Previous obstetric history

The mean of marriage age of participants was 19.4 years, and one fourth marriage less than 18 years this results similar PCBS (2016) 23.7% of total married population in GS married less than 18 years old and the mean of age married was 19.1years old. The early marriage is an indication about the importance of PNC services that is needed such as counseling of family planning that's will give the chance for the women to strength their physical condition and for the children to grow up in better and healthy environment. Half of participants have one or two children. In addition, the majority of participants women reach full term in the last pregnancy, about third have anemia at last of pregnancy, one ten have other complication during last pregnancy as pregnancy induce hypertension (PIH), Diabetes mellitus (DM), bleeding. The majority of women were delivered by normal vaginal delivery, regarding the place of delivery the majority were delivered in governmental hospitals, while one fifths were delivered in nongovernmental hospitals, this finding are consistent with MoH annual report at (2017). These results indicated that the rate of institutions delivery in GS are hundred percentage and better than many developing countries and reflect also the increase in health awareness of the Palestineian people about

the importance of the institutional delivery, therefore it is a great opportunity to the health providers to take care and monitor women and their newborns. The present study results not consistent with Elkhoudri, et al, (2017) in Marocco which revealed that less than two third of delivered took place in institutional hospitals. Another study in Thailand revealed that more than three fifths of deliveries took home place (Mon et al., 2018).

The present study revealed that the majority of women stayed in place of delivery after normal vaginal delivery with a total time less than 6 hours, and less than 24 hours after cesarean section., this results not follow MoH obstetric guidelines & protocol in the year (2016) which recommended that discharge is to be planned after 24 hours after normal vaginal delivery and for cesarean section after two to three days. Moreover, WHO (2013) recommends that all women need to stay in facilities at least 24 h in postpartum,. While the present result Matching with Campbell et al, (2016) who reported that the proportions of staying hours after delivery that were too short. More than two thirds of maternal and newborn deaths occur, the majority three-fifths of maternal deaths occur in the postnatal period and more than half of these takes place within a day of delivery (Rahman et al., 2011). Stayed long time in place was one is the strongest predictors PNC services utilization. staying enough time after delivery give HCPs opportunity to take care, monitor, manage and prevent any early complication after delivery for both women and their newborns.

In my opinion the women not stayed in the hospital after delivery due to increase number of new admission beside the women are not aware of complications that could occur, the other reason could be related to routine are that hospitals permit the mother to discharge after first six hour after delivery that's lead to shortage period staying the mother in the ward.

In addition, providing first and early PNC checkup, ensure that the women and relatives have appropriate knowledge and understanding baby care breastfeeding, dangerous sign for the mother and their newborns, mother nutrition, hygiene, wound care, and importance to follow up at primary health care centers for PNC. The majority of women have no complication after delivery, while about one tenth was had fever and bleeding. Women with anemia should be follow up to monitoring hemoglobin level and management of anemia. Women with PIH should be early time PNC after delivery monitored BP and informed signs and symptoms of preeclampsia. Regarding antenatal care (ANC) slightly more than third six number of visits during pregnancy, while one-sixth four and less visits, the present result revealed that's the majority of women more than five visits of visits ANC, the result congruent the result of Nassar, (2018) that reported the majority of women frequency of visit ANC.

The present study results are not consistent with a study in Saudi Pregnant Women that revealed more than third of pregnant women attending ANC consistency and regularly (hazmi,2017). The study result revealed very high percentage of women receiving ANC that give clear indication that the awareness of the women about the importance of ANC is high and resulting high in utilization of these services as well, on other hand it is an indication that ANC is perceived as important services and provided in most of the health providing sectors.

4.5.5 Participants according to knowledge about PNC

The present study results revealed that more than third of women have lack information about PNC. The present study results were congruent with a study in Ethiopia that revealed more than two third of women were heard about PNC, two third of women got their idea about PNC services from HCPs during ANC visits. My opinion the main factors found to

affect the utilization of postnatal visit is women were not receiving information on PNC during ANC visits, and after delivery before discharge from the hospital. This results a similar study results in Palestinian women Refugee (2010). And congruent with a study conducted in Thailand that revealed lack PNC utilization due to the participants were not likely to be informed about the importance of PNC during ANC visits and at the hospital after delivery (Mon, 2018).

Regarding knowledge of the women about PNC services more than half of women know that a care given to mother and her newborns soon after delivery to six weeks, while more than two third know about family planning and information on breastfeeding. This results reveled that's the knowledge about PNC services moderate to high, that's not consistent with a study in Zambia that's revealed that most women did not have knowledge on activities conducted in PNC clinics (Chembe & Siziya, 2017). On other hand the majority of women reported that they should seek of PNC any day when they are not ok.

Regarding answers about times of visits should women make PNC services after delivery, this findings reveled to the majority of women was reported one, two and three visits should mothers follow up that's means if the women was informed to follow up more than one visits she will attended the PNC as she attended ANC but in health care centers in GS PNC only one visits as a routine although some health care centers not have PNC services, that's means the big barrier of PNC utilization is mother not informed to follow up more than one visits that's not consistent with WHO (2014) that recommendation number of postnatal contacts must be at least four visits.

This present results revealed that the majority of women aware to important of PNC to infant receiving immunizations and breast feeding, while two third know important of PNC to family planning counseling and postnatal exercise.

My opinion the importance and the essential need of all women have required information on PNC, so HCPS should exert more effort to provide all the needed information and care to the women because increasing awareness of the women is crucial in helping them to promote their own and their newborns life and to encourage them to recognize health problems and to know to deal with them. Adding to that this care will help in preventing and early discovering of complications and managing those which already happened.

4.5.6 Participants according to Utilization of PNC services

The present study revealed the prevalence rate of PNC utilization of services attendance are one visit. that proportion of utilization of postnatal services among 285 mothers at health care centers in GS, slightly more than half of participants attended of PNC clinics one time only, On the other hand, this proportion higher than Annual Report of MoH, (2017) that's reveled to the utilization of PNC visits less than third. this percentage is right because the researcher was took the sample from the heath care centers which provide PNC services, while there is many health care centers there is not provide the services, that means the PNC services in GS is very poor and need attention from health care system.

The current study confirms that in the PNC services have low utilization and insufficient maternal neonate continuum of care compared to ANC attendance, that not follow recommended the universal access of maternal services as advocated by the WHO,(2014). The current study similar study in Egypt that's revealed that half of women utilization of PNC services (Hamed et al, 2018). This study not consisted with study in Palestinian women's that's reveled to about third of women reported attending the postnatal checkup(Institute of Community and Public Health, 2010). Also the study results not consisted with a studies in many country as Nepal reveled to poor utilization of PNC services around third of women attended PNC services (Khadkaf, et al, 2017). In Maroco

PNC services third of women attended PNC services (Elkhoudri et al, 2016).Also the present study not consisted with other study in Nigeria that reveled of the majority of women not utilized PNC services (Ibisomi, 2014).

The present study concluded that there are several barriers that decrease PNC attends, there barriers as follow: first lack of women awareness, second women thought PNC unnecessary, attend with sick only, that demonstrates these women not recognize the important of PNC for prevention the complications after delivery, women might ignore some of negative health outcomes that can occur during the puerperium, may not be noticed early or initial dangers signs, that's not consistent with WHO, (2014) recommended PNC for all mothers and infants include those who do not perceive any problem for purpose of general assessment of both physical and mental well-being. There was perception that only women and neonates with health problems need to make efforts to receive PNC. In addition, the result revealed that all women advice the friend to receive PNC services. The result similar with study of Qiong et al, (2014) that's revealed were that mothers did not know about PNC and thought it was unnecessary.

The last question in questionnaire was open question, the researcher was asked the participants to give suggestions how PNC services can be improved.

Some women reported that indicated the nurse was gave the vitamins only and they are not receive any checkup, such as hemoglobin level, urine test, blood pressure, weight, temperature, and not give information about important of PNC. Also some women indicated that increase number of visits and provide home visit services and give appointment for follow up are required. Some women indicated that the nurses must improve their communications with us. most women indicated that the HCPs must make lecture about importance of PNC services and how to care the newborns. Women who not

attend PNC services indicated that they must be informed by HCPs during ANC visits or in hospital after delivery.

4.5.7 Relationship between Utilization of Receiving PNC &maternal characteristics

The results showed that there is a significant positive relationship between utilization of receiving PNC after delivery and Governorates of GS ($p \leq 0.05$).

While there is no significant difference in utilization of receiving PNC after delivery and mothers education($p \leq 0.05$). The study results revealed to there is no illiterate women in the sample and less finished Primary school. That's similar study of Kinuthia, (2014) who mentioned in his study that maternal education did not influence utilization of PNC services. In the same time Tumbure in their study (2018)reported that participant whose level of education was secondary school and above showed better utilization of PNC service as compared to illiterate women. Also there is no significant difference in utilization of receiving PNC after delivery and Mother Work. Additionally, There is no significant difference in Utilization of Receiving PNC after delivery and Mother Age and Income. These results are consistent with the results of Rwabufigiri, (2016) no significant difference in utilization PNC income barriers to PNC free universal PNC services, this controversy between our study and other study could related to PNC is provided free of charge at the primary health care centers that belong to Palestinian MoH or United Nations and Work Agency for Palestinian Refugees. However, not all women take advantage of this free services and other do not receive PNC for a variety of reasons.

4.5.8 Differences between Utilization PNC and obstetric history

The results showed there is no significant difference in Utilization PNC after delivery and age at marriage. Also no significant difference in Utilization PNC after delivery and Number of parity. These results are not consistent with the results of Ibisomi, (2014) which

showed that Birth size was negatively associated with PNC. While The results showed there is significant positive relationship between utilization of PNC and Time stayed in the place after delivery. This results are consistent with the results of Workineh &Hailu, (2014) stay the women in the health institution after delivery have greater opportunity to get exposed to health education related to PNC services and thus get access to learn about benefits and availabilities of PNC services during their stay in the health institutions. Additionally, The results showed there is significant positive relationship between Utilization PNC and number of visit to the ANC During pregnancy. This results are consistent with the results of Vural et al, (2015) in their study, which found that women who attended ANC services in Turkey awareness and access to receive PNC services. Our study agreements with other study results of Tesfahun et al., (2014), ANC attendance is key in preparation of PNC as information is first shared here. Women who had antenatal follow up were aware of PPC than those who did not have antenatal follow up. Also congruent with the results of Liben et al, (2018) that revealed women who attended ANC visits were utilize PNC services more than who lack ANC. All of the study reported that ANC attendance is key in preparation of PNC and suitable time to increase women awareness regarding utilization of PNC and possible complications that could be prevented.

4.5.9 Differences between Knowledge, Attitude and Receiving PNC

The results showed there is statistically significant positive relationship between knowledge and attitudes of participants Receiving PNC after last delivery. Low utilization of PNC services has been related to women's lack of knowledge about its importance and their lack of perceived need especially if they are feeling well. The majority of the mothers had an awareness of PNC services but they did not know when they should seek those

services. From the results of this study, can be concluded that mothers awareness about PNC service is more focused on the vaccination of their newborn component than others. Attitude towards care was also a predictor to services use. those with a positive attitude were more likely to utilize PNC services than those who with negative attitude. The fact that PNC was perceived to be unnecessary by women who did not feel sick demonstrates that these women do not recognize the importance of PNC for preventive health care. reported that the most frequent reason for not obtaining PNC services was that women did not feel sick and therefore did not need PNC services. The results in agreements with the study results of Angore, (2018), revealed that a respondent's knowledge of PNC services is an important predictor of PNC Utilization. mothers who have knowledge of PNC services are more likely to utilize PNC than mother's who do not have knowledge on PNC services.

Chapter Five

Conclusion and Recommendation

5.1 Conclusion

PNC utilization is a significant part of maternal and child health care. It is connected with the physical, nutritional and emotional well-being of mothers and new born (WHO, 2014). Several studies have concentrated on the issues of maternal and neonatal mortality because of the great impact they have on the national health scenario. However, studies on PNC utilization which is an important component of maternal and child health is hardly done. Therefore, This study was conducted to assess factors associated with PNC service utilization among mothers who gave birth at the last year prior to this survey.

The present study finding concluded that the routine of PNC visits in MoH in GS one visits only, moreover the mother not informed when receive this services. The postnatal women in GS receive the PNC services in the same time that she get new baby vaccination time. Furthermore, the present study result clarified that, leaving the hospital after delivery within time less than 24 hours was one of the major factors that affect women lack of information about PNC services. On other hand the results of present study indicated that majority of women who attended ANC not receive health education and awareness about the important of attending the PNC services first hour after delivery. In addition, the present study result revealed that lack of awareness about the PNC services was as the major determinant factor accounting half of the raised reason. The study result concluded that, the postnatal women did not know when they should seek those services. According to mothers narrating statement they concluded that they are more focused on the immunization of newborn component than others the maternal postnatal required care. In addition, attitude about PNC was perceived to be unnecessary by women who did not feel sick demonstrates that these women do not recognize the importance of PNC for preventive health care.

5.2 Recommendations

In the light of the study results, the researcher recommends the following:

5.2.1 Ministry of health

- Increase the mother awareness regarding the required number of routine PNC visits to match with WHO recommended visits schedule.
- The health care providers at primary health care centers need to focus in giving information to women about PNC services and schedule appointments during ANC visits during her pregnancy routine visits.
- Hospital postnatal discharge teaching plan need to include informing the mother about the required information about important to attend PNC after delivery.
- The plan for home visit PNC within two days after delivery by healthcare providers to follow up PNC visits during the first weeks are recommended. This is a crucial aspect of PNC to respond to women's need physically, psychosocially, practically and otherwise.

5.2.2 Suggestions for further research

- To conduct a study about women knowledge, attitudes and practices regarding PNC is recommended.
- To carry out a study at the national level including other health providers such as UNRWA, NGOs is recommended.

References

Abebo, T,A. Tesfaye, TMJ. (2018): Postnatal care utilization and associated factors among women of reproductive age Group in Halaba Kulito. Hawassa University. Hawassa, Ethiopia.

Abok, R. E. (2012). Factors influencing maternity services utilization in Loima and Turkana Central Districts of Turkana County, Kenya. Maternal and Child Health Journal, 1(1), 1–12.

Abuidhail, J. (2014): Rural Jordanian Mothers' Beliefs, Knowledge and Practices of Postnatal Care. Faculty of Nursing, Hashemite University, Jordan.

Ahmed, S., Creanga, A. A., Gillespie, D. G., and Tsui, A. O. (2010). Economic Status, Education and Empowerment: Implications For Maternal Health Service Utilization In Developing Countries. PloS one, 5(6), e11190.

Akhtar, N., Akhtar, S., Zafar, M.I., & Ali, T. (2013). Impact of education on utilization of Antenatal and Postnatal services in Punjab, Pakistan. Pakistan Journal of Social Sciences, 33(2), 463-470.

Angore, N, B. Tufa,G, E. Bisetegen, F.(2018): Determinants of postnatal care utilization in urban community among women in Debre Birhan Town, Northern Shewa, Ethiopia 41043-018-0140-6.

Aregay, A., Alemayehu, M, Assefa, H., Terefe, W. (2014). Factors Associated With Maternal Health Care Services in Enderta District, Tigray, and Northern Ethiopia: A Cross Sectional Study. American Journal of Nursing Science, 3(6), 117-125.

Aseweh Abor, P., Abekah-Nkrumah, G., Sakyi, K., Adjasi, C.K. and Abor, J. (2011). The Socio- Economic Determinants of Maternal Health Care Utilization in Ghana. International Journal of Social Economics, 38(7), 628-648.

Bashour, H., A. Abdulsalam, (2008). "Patterns and determinants of maternity care in Damascus." East Mediterr Health J 14(3): 595-604.

Bernis, L, Sherratt, D ,Abouzahes, C, Lerberghe, W (2003): Skilled attendants for pregnancy, Childbirth and postnatal care: B ritish Medical Bulletin, no 67.pp39-56.Oxford University press, 2003.

Budhwani, H., Hearld, K. R., & Harbison, H. (2015). Individual and Area Level Factors Associated with Prenatal, Delivery, and Postnatal Care in Pakistan. Matern Child Health J, 1007(1095), 1-15.

Campbell, R, O. Cegolon, L. Macleod, D. Benova, L. (2016): Length of Stay After Childbirth in 92 Countries and Associated Factors in 30 Low- and Middle- Income Countries: Faculty of Epidemiology and Population Health, London School of Hygiene & Tropical Medicine, London, United Kingdom.

Chembe, B. Siziya, S.(2017): Level of knowledge on postnatal care and its associated factors in Ndola, Zambia. Copperbelt University, Ndola, Zambia.

Chen,L. Qiong, W. Velthoven, M. Yanfeng, Z.Shuyi, Z. Ye, L. Wei, W, Xiaozhen, D. Ting, Z. (2014): Coverage, quality of and barriers to postnatal care in rural Hebei, China: a mixed method study. BMC Pregnancy and Childbirth 2014. http://www.biomedcentral.com/1471-2393/14/31.

Chimankar, A, D. Sahoo, H. (2011): Factors influencing the Utilization of Maternal Health Care Services in UttaraKha limenind. Fakir Mohan University, Balasore, Orissa. India.

Dhaher E., Mikolajczyk, R.T., Maxwell, A.E., Krämer, A. (2008). Factors associated with lack of postnatal care among Palestinian women: A cross-sectional study of three clinics in the West Bank. BMC Pregnancy Childbirth, 8(1), 26. http://dx.doi.org/10.1186/1471-2393-8-26 pmid: 18638395.

Elkhoudri, N. Baali, A. Amor, H. (2017): Postnatal Care: Levels and Determinants in Morocco. Iran J Public Health.46(2): 242–248.

European joint strategy in support of Palestine. (2017): European Union.

Fekadu, A, G. Ambaw,F. Kidanie,A,S.(2019): Facility delivery and postnatal care services use among mothers who attended four or more antenatal care visits in Ethiopia. BMC Pregnancy and Childbirth2019. 19:64.

Gabrysch S, Cousens S, Cox J, Campbell O (2011), The influence of distance and level of care on delivery place in rural Zambia: a study of linked national data in a geographic information system. PLoS Med, 8(1): e1000394.

Global Health Observatory (GHO) Data, World Health Organization, Maternal and Reproductive Health, 2015.

Hailerman, B., Tilahun,. W., Aregay, A., Bruh, G., & Gebremedhin, H. (2013). Utilization and associated factors of postnatal care in Adwa town, Tigray, Ethiopia- A cross sectional study. Advanced Research in Pharmaceuticals and Biologicals, 3(1), 27-44.

Hamed, A, F. Roshdy, E. Sabry, M. (2018): Egyptian status of continuum of care for maternal, newborn, and child health: Sohag Governorate as an example. Sohag University. Egypt.

Hazmi, J, M. Habib, H, M. Sebeih, H,S. Elmaghrabi, A, S. Sebeih,S ,H. Khan. M. Elmaghrabi,S, R. Mahmoud, N, H.(2017): Awareness of Antenatal Care Importance among Saudi Pregnant Women in Madina. Medical intern, Taibah University, Saudi Arabia.

Hordofa, M, A. Almaw, S, S. Berhanu, M, G. Lemiso,H,B.(2015): Postnatal Care Service Utilization and Associated Factors Among Women in Dembecha District, Northwest Ethiopia. Science Journal of Public Health,5. 686-692.

Hug, L. Sharrow, D. Zhong, K. You, D .(2018): Levels & Trends in Child Mortality. United Nations Children's Fund.

Ibisomi, L. (2014): Determinant's of postnatal care non utilization among women. University of Witwatersrand, Johannesburg. Nigeria.

Institute of Community and Public Health.(2010): The Postnatal Checkup: Content of Health Visit and Factors Associated with its Utilization by Palestinian Women United Nations Educational, Scientific and Cultural Organization. Birzeit University Palestinian.

Islam, M. R., and Odland, O. D. (2011). Determinants of antenatal and postnatal care visits among Indigenous people in Bangladesh: A study of the Mru community. Rural Remote Health J 11:1672.

Izudi, J., and Amongin, D. (2015). Use of early postnatal care among postpartum women in Eastern Uganda. International Federation of Gynecology and Obstetrics. 129(2) .161-164.

Jat, T. R., Ng, N., & Sebastian, M.S. (2011): Factors affecting the use of maternal health services in Madhya Pradesh State of India: A multilevel analysis. International Journal for Equity in Health, 10, 59.

Joint UNICEF/WHO database 2016 of skilled health personnel, based on population based national household survey data and routine health systems

Khadka, R. Hong, S. Thepthien, B. (2017): Postnatal care service utilization and its determinants in Ramechhap district, Nepal:A community-based cross-sectional study. Institute for Health Development, Mahidol University. Nepal.

Khadkaf, V., Adhikari, M., Karkee, R., & Gavidia, T. (2014). Factors associated with the utilization of postnatal care services among the mothers of Nepal: Analysis of Nepal Demographic and Health Survey 2011. BMC Women's Health, 14(1), 1–13.

Khanal,V., Adhikari, M., Karkee, R., Gavidia, T.,(2014): Factors associated with the utilization of postnatal care services among the mothers of Nepal: analysis of Nepal Demographic and Health Survey 2011. BMC Women's Health2014, 14:19.

Kinuthia, M. P. (2014). Factors affecting utilization of postnatal care services in Kenya. South American Journal of Public Health, 2(3), 499–527.

Langlois EV, Miszkurka M, Zunzunegui M, Ghaffar A, Ziegler D, et al. (2015) Inequities in postnatal care in low- and middle- income countries: a systematic review and meta-analysis. Bulletin of the World Health Organization 2015 (93): 259G- 270G.

Lawn, J. E., Gravett, M. G., Nunes, T. M., Rubens, C. E., Stanton, C. (2010). Global report on preterm birth and stillbirth (1 of 7): definitions, description of the burden and opportunities to improve data. BMC Pregnancy Childbirth, 10(1):S1.

Liben, M, L. Zepro, N, P. Gebre,A .Reddy, S . (2018): postnatal care service utilization and associated factors among pastoralist communities in afar national regional state, northeastern. International Journal of Scientific Research. 22.77-8179: 93.98.

Limenih, M, A. Endale, Z ,M. Dachew, B ,A. (2016): Postnatal Care Service Utilization and Associated Factors among Women Who Gave Birth in the Last 12 Months prior to the Study in Debre Markos Town, Northwestern Ethiopia: University of Gondar. Ethiopia.

Maternal and newborn health [website]. Copenhagen: WHO Regional Office for Europe; 2017 (http://www.euro.who.int/en/healthtopics/Life-stages/maternal-and-newborn-health/maternal-and-newborn-health, accessed 19 October 2017).

Ministry of Health. (2018). Health First quarter 2018 report, PHIS, MOH, Gaza Strip.

Ministry of Health - MOH, (2017). Health annual report, July (2018). Palestine Health information system, Rammallah, Palestine.

Mohan, D., Gupta, S., LeFevre, A., Bazant, E., Killewo, J., & Baqui, A. H. (2015). Determinants of postnatal care use at health facilities in rural Tanzania: Multilevel analusis of a household survey. BMC Pregnancy and Childbirth, 15(1), 282-290.

Mon, S, A. Phyu, M. ThinKha, B. limenimrop, W.(2018): Utilization of full postnatal care services among rural Myanmar women and its determinants: a cross-sectional study Department of Biostatistics, University of Public Health, Yangon .Thailand.

Mrisho, M., Obrist, B., Schellenberg, J. A., Haws, R. A., Mushi, A. K., Mshinda, H., Tanner, M., & Schellenberg, D. (2009).The use of antenatal and postnatal care: 85 perspectives and experiences of women and health care providers in rural southern Tanzania. BMC Pregnancy and Childbirth, 9(10).

Mugenda, A. G. (2011) Social Science Research. Theory and principles. (2nded). Acts Press, Nairobi, Kenya.

Najjar, K. (2008): Assessment of postnatal care services provided by UNRWA Health centers in Gaza Governorates.AL-Quds university. Palestine.

Nandjila, R. T. (2008). Factors influencing utilisation of Postnatal Care Services by mothers in Grootfontein District, Namibia. BMC Pregnancy and Childbirth, 1(1),1–16.

Nassar,A.(2018):Factor Influencing the Quality of Antenatal Care at Governmental Clinics in Gaza Strip. Deanship of Studies Al-Quds University.

Neupane, S., & Doku, D. (2013). Utilization of Postnatal Care among Nepalese Women. Matern Child Health J, 17(10)1922–1930.

Ononokpono, D. N., Odimegwu, C. O., Imasiku, E. N., & Adedini, S. A. (2013). Does it Really Matter Where Women Live? A Multilevel Analysis of the Determinants of Postnatal Care in Nigeria. Maternal and child health journal, 1(1), 1-10

Pal, R. Mehndiratta, A. (2016): Assessment of Utilization of Postnatal Care Services in Tertiary Care Center of Delhi. IOSR Journal of Dental and Medical Sciences,6. PP 72-75.

Palestinian Central Bureau of Statistics PCBS, (2016).Annual Palestinian statistical book Palestine: PCBS.

Palestinian Central Bureau of Statistics, (2017). Census 2017. Ramallah, Palestine. (http://www.pcbs.gov.ps).

Palestinian Women Research and Documentation Center, UNESCO. (2010): The Postnatal Checkup Content of Health Visit and Factors Associated with its Utilization by Palestinian Women. Institute of Community and Public Health, Birzeit University.

Paudel, M., Khanal, V., Acharya, B., & Adhikari, M. (2013). Determinants of Postnatal Service utilization in a Western District of Nepal: Community Based Cross Sectional Study. J Women health Care, 2, 126.

Qiong, C, L. Velthoven, H, M. Yanfeng, Z. Shuy, Z. (2014): Coverage, quality of and barriers to postnatal care in rural Hebei, China: a mixed method study. BMC Pregnancy Childbirth. 14: 31.

Rahman, M., Haque, S. E., & Zahan, S. (2011). Factors affecting the utilization of postpartumcare among young mothers in Bangladesh. Health and Social Care in the Community,19(2), 138–147.

Rwabufigiri, N, B. Mukamurigo, J. Thomson, R,D. Gautier, B.(2016): Factors associated with postnatal care utilization in Rwanda: A secondary analysis of 2010 Demographic and Health Survey data. BMC Pregnancy and ChildbirthBMC series 1471-2393.

Sakala, B., & Kazembe, A. (2011). Factors influencing the utilization of postnatal care at one week and six weeks among mothers at Zomba Central Hospital in Malawi. Edidence Based Midwifery, 4(1), 18-33.

Setia, M, S. (2016): Methodology Series Module 3: Cross-sectional Studies. Indian Journal of Dermatology. 61(3): 261–264.

Shukure, R. Mohammed, H. Wudmetas, A. Mohammed, S.(2018): Assessment of Knowledge and Factors Affecting Utilization of Postnatal Care in Fiche Town, Oromia Region, Ethiopia. Nursing, Salale University, Oromia, Ethiopia.

Singh, A., Singh, A. and Mahapatra, B., (2013). The consequences of unintended pregnancy for maternal and child health in rural India: evidence from prospective data. Maternal and Child Health Journal, 17(3), 493-500.

Singh, A. & Yadav, A. (2012a). Utilization of postnatal care for Newborns and its association with neonatal mortality in India: An analytical appraisal. BMC Pregnancy Childbirth, 12 (33), 142-159.

Singh, L., Rai, R. K., and Singh, P. K. (2012b). Assessing the utilization of maternal and child health care among married adolescent women: evidence from India. Journal of Biosocial Science, 44(01), 1-26.

Somefun, O. D., & Ibisomi, L. (2016). Determinants of postnatal care non-utilization among women in Nigeria. BMC Research Notes, 9(1),21-36.

Souza, J. P., Gülmezoglu, A. M., Carroli, G., Lumbiganon, P., and Qureshi, Z. (2011). The world health organization multi-country survey on maternal and newborn health: study protocol. BMC health services research, 11(1), 286.

Tao, F.; Huang, K.; Long, X.; Tolhurst, R. & Raven, J. (2011). Low post-natal care rates in two rural counties in Anhui Province, China: Perceptions of key stakeholders. Midwifery 27 (2011) 707–715.

Teklehaymanot, A, N. Niguse, D. Tesfay, A. (2016): Early Postnatal Care Service Utilization and Associated Factors among Mothers Who Gave Birth in the Last 12 Months. Jimma University, Ethiopia.

Tesfahun, F., Worku, W., Mazengiya, F., Kifle, M. (2014). Knowledge , Perception and Utilization of Postnatal Care of Mothers in Gondar Zuria District , Ethiopia : A Cross-Sectional Study. Maternal Child Health Journal, 18(1), 2341–2351. http://doi.org/10.1007/s10995-014-1474-3.

Titaley, C. R., Dibley, M. J., Roberts, C. L,.(2009). Factors associated with non-utilisation of postnatal care services in Indonesia. Journal of Epidemiology and Community Health.2009: 827–31.

Tumbure, A. Argaw, D. Fantahun, E. Negusu, M. Yitbarek, T. Tadesse, L. Desalegn,L. (2018): Assessment of Postnatal Care Service Utilization and Associated, Department of Public Health, Asella College of Health Science, Arsi University, Ethiopia.

Vural,F. Yildirim, F. Vural , B.(2015): The impact of integrated obstetric and neonatal services on utilization of postpartum maternal health care services Kocaeli University Faculty of Medicine, Kocaeli, Turkey.

Wang,W., Soumya, A.; Shanxiao, W. and Alfredo, F. (2011). Levels and Trends in the Use of Maternal Health Services in Developing Countries. DHS Comparative Reports No. 26. Calverton, Maryland, USA: ICF Macro.

Workineh, Y, G . Hailu,D,A.(2014):Factors Affecting Utilization of Postnatal Care Service in Amhara Region, Jabitena District. Science Journal of Public Health. Vol. 2, No. 3, 2014, pp. 169-176.

World Health Organization (2018): [webpage on the Internet]. Standards for improving quality of maternal and newborn care in health facilities; 2016. Available from

http://www.who.int/maternal_child_adolescent/ documents/improving-maternal-newborn-care-quality/en/. Accessed March 13, 2018.

World Health Organization. (2017): Trends in Maternal Mortality: 1990 to 2013. Available from: http://www.who. int/reproductive health/publications/monitoring/ maternal-mortality-2013/en/ [Accessed 2017 March 10].

World health organization Maternal Mortality Estimates.2015. Available from: http://www.who.int/reproductivehealth/projects/AGH06-MMR-estimates.pdf [Accessed2017 June10].

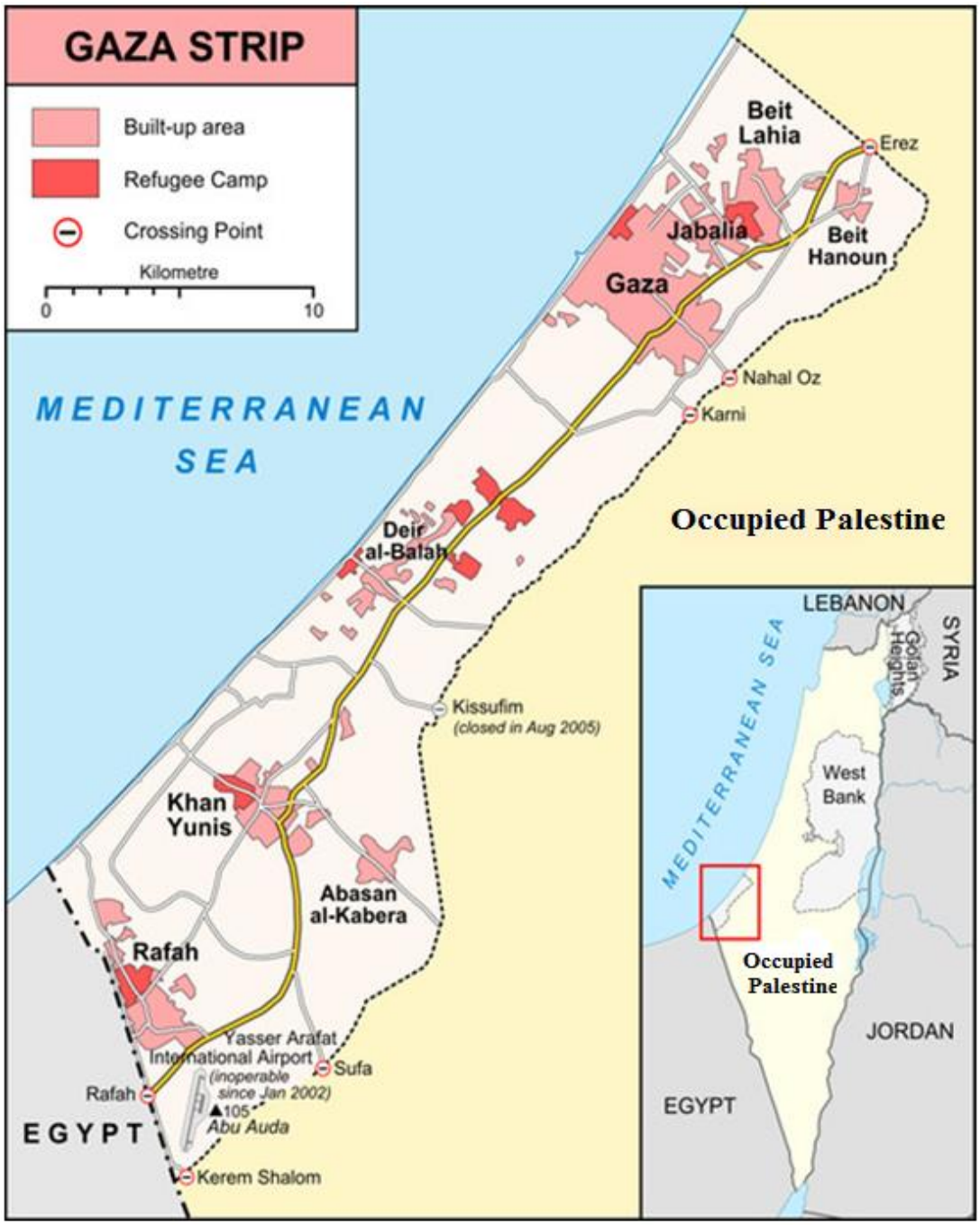
World health organization WHO. (2014). Postpartum care of the mother and newborn: a practical guide, Department of Reproductive Health and Research, WHO: Geneva, Switzerland.

World Health Organization. (2013): WHO recommendations on postnatal care of the mother and newborn. Geneva: World Health Organization; 2013.

World health organization WHO. (2010). Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies. World Health Organization, 2010. Geneva.

Annexes

Annex (1): Map of Palestine, Gaza Strip



Annex (2): Health care provider Questionnaire

السلام عليكم ورحمة الله وبركاته،

أنا الباحثة: فداء صالح المصري، ملتحقة ببرنامج ماجستير صحة الأم والطفل، جامعة القدس– أبو ديس؛ أقوم بإعداد بحث بعنوان:

Factors Affecting Utilization of Postnatal Care Services at Governmental Primary Health Care Clinics in Gaza Strip.

نأمل من سيادتكم التكرم و المشاركة في تعبئة الاستبانة التي قد تستغرق من وقتك (10) دقائق؛ مشاركتك اختيارية، ومن حقك رفض المشاركة؛ السرية التامة مكفولة؛ ولا داعي لذكر اسمك؛ يرجى التكرم بقراءة العبارات بدقة والإجابة عنها بموضعية لما في ذلك من أثر كبير على صحة النتائج، والنصائح التي سوف يتوصل إليها الباحث؛ كما أن المعلومات التي يتم جمعها سوف تستخدم لأغراض البحث العلمي فقط.

شاكرين لكم حسن تعاونكم..

الباحثة: فداء المصري

Factors Affecting Utilization of Postnatal Care Services at Governmental Primary Health Care Clinics in Gaza Strip.

Health care provider Questionnaire:

Date: ……

1	Serial No:
2	Health center name:

Section 1: Personal Data

3	Age of Employee:…….years			
4	Years of experience:……years			
5	Marital status: 1-marreied 2- single 3- divorce 4- widow			
6	Job	1-Nurse		
		2- Midwife		
		3-Senior staff nurse		
		4-Practical nurse		
7	Level of Education	1-Diploma		
		2- Bachelor degree		
		3-High education		
		4- Others ……		
8	Have you received any training courses in MCH?		Yes	No

Section 2 : services delivered to the women and newborn after delivery

9	Do you have fixed schedule in the week for PNC in your clinic?	Yes	No
10	Do you have appointment system for PNC in your clinic?		
11	If the answer yes		
	When the appointment of PNC will be given? At first ……..days after delivery		
12	Within the first six weeks after delivery how many times you supposed to attend postnatal care services 1) One time.		
	2) Two times.		
	3) Three times.		
	4) Four times.		

	5) More.		
13	If the mother not attend PNC there is any call or visit for her		
14	Availability of guide line or technical instructions about PNC		
15	If yes services provided according to technical instruction regularly		
16	According to these instruction how many routine PNC visits should be done……visits.		
17	According to your opinion, number of PNC visits are Suitable		

Section 3:Health care working environment

18	All essential investigation and examination needed for mother and newborn done at health center	Yes	No
19	Equipment and tools needed are always available		
20	Waiting rooms wide and suitable		
21	Counseling done in special place inside the health center		
22	Privacy is considered during providing services		
23	Efficient referral system		
24	availability of staff, consultant		

Thank you for your cooperation

Annex (3): Women Questionnaire

السلام عليكم ورحمة الله و بركاته،

أنا الباحثة: فداء صالح المصري، ملتحقة ببرنامج ماجستير صحة الأم والطفل، جامعة القدس– أبو ديس؛ أقوم بإعداد بحث بعنوان:

العوامل المؤثرة في الاستفادة من خدمات رعاية ما بعد الولادة في عيادات الرعاية الصحية الأولية الحكومية في قطاع غزة.

نأمل من سيادتكم التكرم والمشاركة في تعبئة الاستبانة التي قد تستغرق من وقتك (15) دقائق، مشاركتك اختيارية، ومن حقك رفض المشاركة؛ السرية التامة مكفولة؛ ولا داعي لذكر اسمك؛ يرجى التكرم بقراءة العبارات بدقة والاجابة عنها بموضوعية لما في ذلك من أثر كبير على صحة النتائج، والنصائح التي سوف يتوصل اليها الباحث؛ كما أن المعلومات التي يتم جمعها سوف تستخدم لأغراض البحث العلمي فقط.

شاكرين لكم حسن تعاونكم..

الباحثة: فداء المصري

Factors Affecting Utilization of Postnatal Care Services at Governmental Primary Health Care Clinics in Gaza Strip

Mother Questionnaire:

Date: / / .

1	Serial No:
2	Health center name:

S ECTION I: Questions related to socio-demographic Characteristics of the Participants:

1	Age of mother……years		
2	Residence	1) North governorate	2) Gaza governorate
		3) Mid zone governorate	4) Khanyonis governorate
		Rafah governorate 5)	
3	Education level of mother	1) Illiterate	2)Primary
		3) secondary	4) College
		5) University	others
4	Mother works	Yes	No
5	Husband works	Yes	No
6	Husband Education	1) Illiterate	2)Primary
		3) secondary	4) College
		5) University	others
7	Family monthly income ……Nsh.		
8	Home	Owned	Tenanted
9	Family Structures	1) Nuclear Family	
		2) Extended Family	

Section2 questions related to obstetric history:

10	Age of marriage:	
11	Number of gravida: Number of parity: Living: Abortion:	
12	Gestational weeks of last pregnancy…….	
13	Do you have any history of the following previous pregnancy complications ?	1) PIH. 2) DM. 3) Anemia. 4) Bleeding. 5) others
14	Date of last delivery: …….	
15	Mode of last delivery	1) Normal vaginal delivery 2) Cesarean section 3) Instrumental delivery
16	Place of delivery	1)Governmental Hospital 2) NGOS Governmental 3) Privet clinic 4) Home 5) Other
17	Birth attendant	1) Doctor 2) Midwife 3) other
18	Time stayed in the place after delivery……hrs.	
19	Complications during or after delivery	1) Bleeding 2) Convulsion 3) Others
20	Number of visit to the ANC During pregnancy ……..	

SECTION 3: questions related to women knowledge about PNC:

21	**Have you information about postnatal care (PNC)?**				Yes	No
22	**If the answer for above Q yes From where you hear about PNC?:** From midwife at ANC					
	From Hospital after delivery					
	From internet					
	Friends					
	others					
23	**what do you know about Postnatal Care Services?** 1. A care given to mother and her newborn soon after delivery to 6 weeks	**Strongly agree**	**Agree**	**Undecided**	**Disagree**	**Strongly disagree**
	2. Postnatal exercise					
	3. Family planning services					
	4- Information on breastfeeding					
24	**when should women access Postnatal Care Services?** 1) During 1st six weeks after delivery.					
	2) Day 1, 7, 28 and 42 days after delivery.					
	3) Any day when she is not ok.					
	4) Three months after delivery.					
25	**How many visits should women make Postnatal Care Services after delivery ?** 1) One time**.**					
	2) Two times**.**					
	3) Three times.					
	4) Four times.					

	5) More.					
26	**Why is it important for a mother attending PNC?** 1) Infants receiving immunizations.					
	2) Knowledge on breastfeeding.					
	3) Family planning counseling.					
	4) Postnatal exercise.					

Section 4: Attitude about PNC

From your opinion rate the following statements: where 1 indicates strongly disagree and 5 strongly agree

		Strongly agree	**Agree**	**Undecided**	**Disagree**	**Strongly disagree**
27	Your recommended that women go to health facility after delivery.					
28	Post-natal services are useful to the health of mother.					
29	Post-natal services are important for the child's health.					
30	You would attend Post-natal services in future.					
31	You would recommend the post-natal services to others.					

Section 5: Utilization of PNC services:

32	Did you Recived PNC after last delivery.	Yes	No
33	**If the answer for above Q yes when did you attend PNC**		

	was: First week		
	Second weeks.		
	Third weeks.		
34	**If the answer; no what the barrier to attend PNC services:** Family who make decision about seeking health care services		
	There is any cultural factors that prevent women from attending postnatal services.		
	Not aware about the services.		
	Did not think it was necessary as I was feeling well.		
	No money for transport.		
	Waiting time is too long.		
35	**Within the first six weeks after delivery how many times you supposed to attend postnatal care services:**		
37	**Do you Advice friends to receive the PNC services?**		

38) Give suggestions how postnatal care services can be improved:

……

……

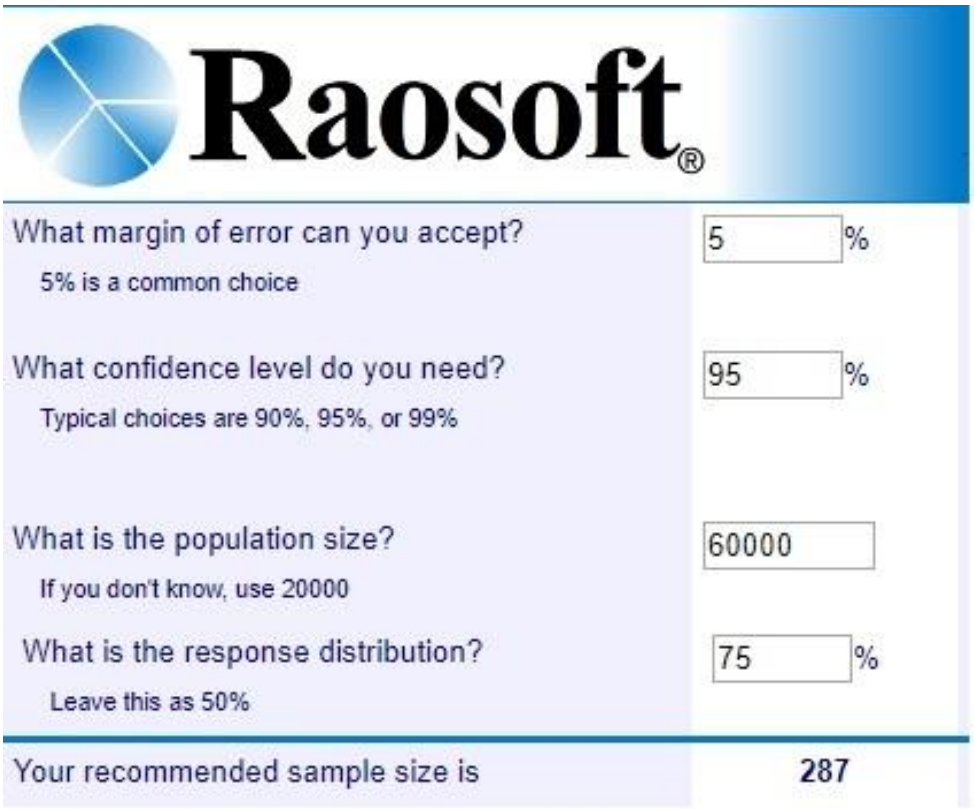
……

……

……

Thank you for your cooperation

Annex (4): Sample size calculation



Annex (5): Helsinki Committee

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: 2019/04/01 **Number:** PHRC/HC/533/19

Name: Fedaa Saleh El Masree 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:

Factors Affecting Utilization of Postnatal Care Services at Governmental Primary Health Care Clinics in Gaza Strip

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/533/19 in its meeting on 2019/04/01 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

Gaza - Palestine غزة - فلسطين

شارع النصر - مفترق العيون

Annex (6): Approval from MOH

State of Palestine
Ministry of health

دولة فلسطين
وزارة الصحة

السيد : رامي عيد سليمان العبادله المحترم

التاريخ:30/05/2018
رقم المراسلة 219503

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

السلام عليكم,,,

الموضوع/ تسهيل مهمة الباحثة//فداء المصري

التفاصيل //
بخصوص الموضوع أعلاه،يرجي تسهيل مهمة الباحثة/ فداء صالح المصري
الملتحقة ببرنامج ماجستير التمريض – تخصص صحة الأم والطفل- جامعة القدس أبوديس في إجراء بحث بعنوان:-
"Factors Affecting Utilization of Postnatal Care Services Governmental Primary Health Care Services in Gaza Strip"
حيث الباحثة بحاجة لتعبئة استبانة من عدد من النساء المترددات على مراكز الرعاية الأولية التي تقدم خدمات التطعيم للأطفال وكذلك من عدد من الممرضات التي يقدمن خدمات ما بعد الولادة للنساء في ذات المراكز.
نأمل توجيهاتكم لذوي الاختصاص بضرورة الحصول على الموافقة المستنيرة من النساء اللاتي هن على استعداد للمشاركة في الدراسة ومن ثم تمكين الباحثة من التواصل معهن، بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، ودون تحمل الوزارة أي أعباء أو مسئولية.
وتفضلوا بقبول التحية والتقدير,,,
ملاحظة/ البحث حصل على موافقة لجنة اخلاقيات البحث الصحي
ملاحظة / تسهيل المهمة الخاص بالدراسة أعلاه صالح لمدة 6 شهر من تاريخه.

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

الادعوه مشرف البحث
الادعوه رؤساء البحث
تسهيل مهمة الباحثة
الادعو.

وزارة الصحة
الإدارة العامة لتمريض
MINISTRY OF HEALTH
Department of H.R.C Nursing
دائرة تنمية القوى التمريضية

Gaza Tel. (+970) 8-2846949 Fax. (+970) 8-2826295
غزة تلفون. (+970) 8-2846949 فاكس. (+970) 8-2826295

Annex (7): Table of Experts.

No.	Name of expert	Work title
1.	Dr. Areefa SM Al -Alkasseh	Islamic University of Gaza
2.	Dr. Mazen Abu Gamar	Al-Azhar University-Gaza
3.	Dr. Ahmed Nejem	Al-Azhar University-Gaza
4.	Dr. Ahmed El Shaaer	Islamic University of Gaza
5.	Dr. Nahla heles	MoH
6.	Mis. Sabreen Nashabat	MoH

Annex (8): Postnatal care crevice at MoH

رعاية الأمهات بعد الولادة:

- متابعة العمل بالنظام المحوسب لرعاية الامهات بعد الولادة في المراكز الصحية التي تم ادخال النظام فيها.
- متابعة تقديم خدمة مميزة للأمهات بعد الولادة .
- متابعه إعطاء فيتامين A للسيدات بعد الولادة في المراكز الصحية من خلال الجولات الميدانية .
- التأكيد على الاستمرارية ببرنامج الزيارات المنزلية كما هو الحال.
- عمل اجتماعات لجميع القابلات والممرضات العاملات ببرنامج الزيارات المنزلية بحضور مديرة الدائرة ومشرفة التمريض ومدير دائرة تمريض الرعاية و مسئولة برنامج الزيارات المنزلية في اليونيسيف حيث يتم مناقشة العمل بالبرنامج و مناقشة المعيقات التي تواجه القابلات بالبرنامج.

رعاية الأمهات بعد الولادة		
الزيارات المنزلية	الرعاية في المركز	المجموع
4757	9525	**14282**

***تشمل الزيارات المنزلية السيدات البكارى والحمل الخطر.**

Annex (9): Multiple Comparisons

Multiple Comparisons

Bonferroni

Dependent Variable	(I) Q02	(J) Q02	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Knowledge	1	2	6.45098*	1.33061	.000	2.6861	10.2159
		3	-.10240	1.90538	1.000	-5.4936	5.2888
		4	5.78558*	1.48898	.001	1.5726	9.9986
		5	2.29412	1.81863	1.000	-2.8516	7.4398
	2	1	-6.45098*	1.33061	.000	-10.2159	-2.6861
		3	-6.55338*	1.77415	.003	-11.5732	-1.5335
		4	-.66540	1.31688	1.000	-4.3915	3.0607
		5	-4.15686	1.68064	.140	-8.9121	.5984
	3	1	.10240	1.90538	1.000	-5.2888	5.4936
		2	6.55338*	1.77415	.003	1.5335	11.5732
		4	5.88798*	1.89582	.021	.5238	11.2521
		5	2.39651	2.16437	1.000	-3.7275	8.5205
	4	1	-5.78558*	1.48898	.001	-9.9986	-1.5726
		2	.66540	1.31688	1.000	-3.0607	4.3915
		3	-5.88798*	1.89582	.021	-11.2521	-.5238
		5	-3.49146	1.80861	.546	-8.6088	1.6259
	5	1	-2.29412	1.81863	1.000	-7.4398	2.8516
		2	4.15686	1.68064	.140	-.5984	8.9121
		3	-2.39651	2.16437	1.000	-8.5205	3.7275
		4	3.49146	1.80861	.546	-1.6259	8.6088
Attitude	1	2	4.68571*	1.44214	.013	.6053	8.7662
		3	-1.12593	2.06508	1.000	-6.9690	4.7171
		4	6.32688*	1.61378	.001	1.7608	10.8930
		5	-.18925	1.97106	1.000	-5.7663	5.3878
	2	1	-4.68571*	1.44214	.013	-8.7662	-.6053
		3	-5.81164*	1.92285	.027	-11.2523	-.3710
		4	1.64117	1.42726	1.000	-2.3972	5.6795
		5	-4.87496	1.82150	.079	-10.0288	.2789
	3	1	1.12593	2.06508	1.000	-4.7171	6.9690
		2	5.81164*	1.92285	.027	.3710	11.2523
		4	7.45281*	2.05472	.003	1.6391	13.2665
		5	.93668	2.34577	1.000	-5.7006	7.5739
	4	1	-6.32688*	1.61378	.001	-10.8930	-1.7608
		2	-1.64117	1.42726	1.000	-5.6795	2.3972
		3	-7.45281*	2.05472	.003	-13.2665	-1.6391
		5	-6.51613*	1.96020	.010	-12.0624	-.9698
	5	1	.18925	1.97106	1.000	-5.3878	5.7663
		2	4.87496	1.82150	.079	-.2789	10.0288
		3	-.93668	2.34577	1.000	-7.5739	5.7006
		4	6.51613*	1.96020	.010	.9698	12.0624

*. The mean difference is significant at the 0.05 level.

عنوان الدراسة: العوامل المؤثرة في الاستفادة من خدمات رعاية ما بعد الولادة في عيادات الرعاية الصحية الأولية الحكومية في قطاع غزة.

الباحثة: فداء صالح المصري

إشراف: د. عريفة الكسيح

ملخص الدراسة:

رعاية ما بعد الولادة هي حلقة مهمة في استمرارية الرعاية لصحة الأم. تعد فترة ما بعد الولادة حرجة لأن معظم وفيات الأمهات تحدث خلال هذه الفترة، حيث أن خدمات رعاية ما بعد الولادة ضرورية في الأسابيع الستة الأولى. الهدف من هذه الدراسة هو تقييم العوامل المؤثرة في مقدار استفادة النساء من خدمات ما بعد الولادة في عيادات الرعاية الصحية الأولية الحكومية في قطاع غزة. تصميم الدراسة الحالية هي دراسة وصفية تحليلية استقصائية، تم إجراءها في عشرة مراكز للرعاية الصحية في خمس محافظات في قطاع غزة. العينات الملائمة بلغت (285) من النساء، وبلغت (36) لمقدمي الرعاية الصحية الذين يعملون في عيادات صحة الأم والطفل.

كان معدل الاستجابة 99 ٪. تم إجراء دراسة تجريبية على 30 أم لاستكشاف مدى ملائمة أدوات الدراسة.

تم جمع البيانات باستخدام استبانة المقابلة المنظمة تم استخدامها للسيدات، أما القابلات والممرضات فقد تم استخدام استبانة يتم تعبئتها ذاتيا، وقد تم تحليل البيانات باستخدام برنامج SPSS الإصدار (22) لإدخال البيانات وتحليلها.،. تم طلب موافقة أخلاقية من كلية الصحة العامة بجامعة القدس ولجنة هلسنكي.

كما أظهرت نتائج هذه الدراسة أن (38.4%) من النساء اللواتي شاركن في الدراسة تتراوح أعمارهن بين 25-21 سنة ، وان أكثر من النصف (54.2%) حصلن غلي الثانوية العامة (91.7 ٪) من مقدمي الخدمة أفادوا أن الرعاية بعد الولادة الروتينية زيارة واحدة فقط كما ان (34.3 ٪) من السيدات تم تلقيهم الرعاية أثناء الحمل سبع مرات. أيضا(50.6%) من الأمهات يستخدمن خدمة رعاية ما بعد الولادة كما تبين ان (63.2%) من النساء لديهن فكرة عن خدمات الرعاية ما بعد الولادة وتم تلقيهم جميعًا خدمات الرعاية في زيارة واحدة فقط في الأسبوع الأول بعد الولادة (81.6 ٪) بقيت في مكانها بعد الولادة المهبلية العادية أقل من ست ساعات ، وبقيت النساء التي أجريت لهن عملية قيصرية في المكان 41 (80.4 ٪) أقل من 24 ساعة، (84.8 ٪) أفادوا أن المانع من تلقي خدمات الرعاية بعد الولادة أنهم لا يدركون الخدمات، كما أن الاستفادة من خدمات ما بعد الولادة ذات دلالة إحصائية، وتعتمد على عوامل مختلفة بما في ذلك التوعية حول استخدام خدمة الرعاية ما بعد الولادة من قبل مقدم الرعاية الصحية، والمعرفة خلال متابعة الحمل السيدة فترة أو في المتشفى بعد الولادة، الخلاصة: الدراسة الحالية أظهرت أن نسبة النساء اللائي يستخدمن خدمة الرعاية بعد الولادة منخفضة ،مقارنة مع توصيات منظمة الصحة العالمية.

كما أوصت هذه الدراسة بزيادة وعي الأم بشأن العدد المطلوب من زيارات PNC الروتينية لتتناسب مع جدول الزيارات الموصى به لمنظمة الصحة العالمية.