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Assessment of Postnatal Care Services Provided by UNRWA Health Centers in Gaza Governorates

Kefah El- Najjar

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Prepared by: Kefah Mohammad El-Najjar
Registration No: 20512005

Supervisor: Dr. Suzanne Shasha'a

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The names and signatures of the examining committee member are as follows:

1-Head of Committee: Dr.Bassam Abu Hamad Signature Basa Hamad
2-Internal Examiner: Dr.Yehia Abed Signature
3-External Examiner: Dr. Pierre Claquin Signature

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Kefah Mohammad El- Najjar

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Dedication

I dedicate this work to

Those who I will always love:

My father who planted the seeds of loving learning inside me

My mother who never stops encouraging me for continuing learning

My precious husband and my lovely children Laila, Tareq and Ahmad for their patience love and support.

Kefah El-Najjar

Declaration

I certify that this thesis submitted for the degree of master is the result of my own research, except where other wise acknowledged, and that this thesis has not been submitted for a higher degree to any other university or institution.

Signed

Kefah Mohammad El- Najjar

Date: April -2008

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Abstract

Although postnatal care is still considered as having little value for many people, it is one of the most critical components of mother and child health care services which largely affect the wellbeing of mother and her infant as well. The overall aim of this study is to assess the postnatal care services provided to mothers and their newborns at the United Nations Relief and Works Agency health centers operating in Gaza Governorates.

This study is a descriptive analytical triangulated cross-sectional one, conducted on a sample of 10 United Nations Relief and Works Agency health centers in Gaza. Sums of 270 mothers chosen through a multi-stage sampling method were interviewed immediately after receiving the postnatal services through a self-constructed exit interviewed questionnaire with a response rate of 96.7%. Additionally, all the postnatal care providers working in the selected clinics were requested to complete a self-administered questionnaire with a response rate of 96.6%.

The study findings revealed that most of the key components of the postnatal care were covered. Meanwhile, high compliance with the technical instructions was found in certain components, low compliance was reported in others. In particular, high commitment to the appointment system (96.5%) was reported.

The study showed that the conducted examinations and investigations were more directed to the newborns than to mothers; more than 97% of the newborn were physically checked, immunized and measured for weight, height and head circumference, whereas mothers' blood pressure measurement, blood sugar testing abdominal examination, hemoglobin testing, temperature measurement and breast examination were variant and ranged between 49.8% and 97.3%. Moreover, the management of anemia cases was not as needed. Health education was mainly concentrated on family planning (94.2%), breastfeeding (87.4%) and iron intake (83.6%). Less focus was directed to other important issues such as personal hygiene (68.0%), rest and sleep (58.9%) and simple exercises (37.9%). The study points to an obvious lack of mothers' knowledge about maternal and neonatal danger signs (above 50% don't know some of the danger signs) with significant variations between the different governorates. More importantly, the study points to wide variations between the responses of health providers and mothers' responses about the services they had received; particularly in reference to the mother's component of the postnatal services.

Regarding the timing of postnatal care visits, around quarter of mothers received the first post natal care visit within the WHO-recommended first 6 days and the 42 days' visit did not totally exist. Around half of the surveyed health providers reported that the waiting halls were not adequately spaced and around quarter reported that lacking special places for examination. Additionally, 36.8% of the surveyed health providers perceived the waiting time as long.

The study provided a set of tentative recommendations that could improve the quality of postnatal services including; providing more practical training on postnatal care particularly to the newly hired staff, promoting effective counseling to mothers, emphasizing effective monitoring and follow up and strengthening the supervision system. Health managers and policy makers could improve the quality of postnatal care services by adopting at least some of the study recommendations and implementing them as much as possible.

ملخص الدراسة

يعتبر الكثير من الناس أن الرعاية الصحية التي تقدم للأم والطفل في فترة بعد الولادة قليلة الفائدة، إلا أنها من أهم مكونات الرعاية التي تقدم للأم والطفل، والتي تؤثر بشكل كبير على صحة كليهما. إن الهدف الرئيسي من هذه الدراسة هو تقييم خدمات رعاية الأمهات وأطفالهن في فترة بعد الولادة المقدمة في مراكز الرعاية الصحية الأولية في وكالة الغوث الدولية في قطاع غزة.

إن هذه الدراسة هي وصفية تحليلية قطعية، نفذت في مراكز تابعة لوكالة الغوث الدولية في قطاع غزة. لقد اختيرت عينة السيدات البالغة 270 سيدة باعتماد الطريقة الطبقية النسبية المتعددة، وتمت مقابلتهم مباشرة بعد تلقي الخدمة اللازمة لرعاية الأم والطفل بعد الولادة، وذلك بتعبئة استبانة تم إعدادها بواسطة الباحثة وكان معدل الاستجابة 96.7%. بالإضافة إلى ذلك لقد طلب من كل مقدمي خدمة رعاية الأم والطفل في فترة ما بعد الولادة الذين يعملون في المراكز الصحية المختارة بتعبئة استبانة أخرى، وقد كان معدل الاستجابة 96.6%.

لقد أظهرت الدراسة أن معظم المكونات الأساسية لرعاية السيدات وأطفالهن في فترة ما بعد الولادة تقدم لهن. كذلك أظهرت الدراسة أن التعليمات التقنية تطبق بشكل جيد في بعض جوانب الخدمة وفي جوانب أخرى لا تطبق كما يجب. بشكل خاص، كان هناك التزام من السيدات بالحضور حسب الموعد المحدد لهن (96.5%).

كما وأظهرت نتائج الدراسة أن الفحوصات كانت مرجحة لصالح الطفل أكثر منها للأم. إن حوالي 97% من الأطفال تم الكشف عليهم وعملت لهم الفحوصات اللازمة، وقد تم تطعيمهم، قياس أوزانهم، محيط رؤوسهم وأطوالهم، في المقابل، إن الخدمات المقدمة للأم مثل قياس الضغط وفحص نسبة السكر في الدم للحالات اللازمة وفحص البطن، وكذلك فحص نسبة هيموجلوبين الدم وقياس الحرارة وفحص الثدي كانت مقدمة للسيدات بنسب مختلفة تتراوح بين 49.8% و 97.3%.

كما وأظهرت الدراسة أن معالجة حالات فقر الدم لدى السيدات بعد الولادة لا تتم بالشكل المطلوب وكذلك أوضحت الدراسة أن التثقيف الصحي كان مركزاً على تنظيم الأسرة (94.2%) والرضاعة الطبيعية (87.4%) وطريقة أخذ أقراص الحديد (83.6%) وكان التركيز في التثقيف الصحي بصورة أقل على أشياء أخرى رغم أهميتها مثل النظافة الشخصية (68.0%) والراحة النوم (58.9%) وممارسة الرياضة الخفيفة (37.9%). كما وأشارت الدراسة إلى أن الأمهات تنقصهن المعرفة بعلامات الخطر الخاصة بالسيدة بعد الولادة كذلك علامات الخطر الخاصة بالطفل بعد الولادة (حوالي أكثر من 50.0% من السيدات لا يعرفن بعض علامات الخطر)، وبشأن تلك المعرفة بعلامات الخطر أظهرت الدراسة وجود اختلافاً واضحاً ذو دلالة موجبة بين المحافظات المختلفة. علاوة على ذلك أن هناك اختلافاً بين ما تقوله الأم وما يقوله مقدمو الخدمة وبشكل خاص بالنسبة لما يقدم من خدمات خاصة بالأمهات.

بالنسبة لتوقيت تقديم خدمة ما بعد الولادة، فإن الدراسة أوضحت أن تقريباً ربع السيدات تقدم لهن هذه الخدمة خلال الستة أيام الأولى من الولادة حسب ما هو موصى به من منظمة الصحة العالمية، أما بالنسبة لزيارة ثانية في اليوم 42 من الولادة للسيدات فإنها غير موجودة. كما أوضحت الدراسة أن تقريباً نصف مقدمي الخدمة أقروا أن قاعات الانتظار ومساحتها ضيقة وتقريباً ربع مقدمي الخدمة أقروا أنه لا توجد أماكن مخصصة لتقديم الخدمة. وكذلك 36.8% من السيدات أقروا أن وقت انتظار الخدمة كان طويلاً.

بناء على هذه الدراسة هناك توصيات مقترحة ممكن أن تساهم في تحسين جودة الخدمات المقدمة للأم والطفل في فترة بعد الولادة، وهذه التوصيات تشمل تقديم تدريبات عملية في مجال رعاية الأم والطفل بشكل خاص للموظفين والموظفات الجدد، دعم وتشجيع تقديم المشورة الفعالة للأمهات، الاهتمام بالمتابعة وتقوية نظام المراقبة. إن مديري الصحة وصانعي القرارت بإمكانهم تحسين جودة الخدمة المقدمة للسيدات وأطفالهن في فترة بعد الولادة بتبني على الأقل بعضاً من هذه التوصيات المقترحة وتطبيقها.

Table of Contents

List of Tables

List of Figures

List of Annexes

Abbreviations

ANC	Ante Natal Care
CS	Cesarean Section
FP	Family Planning
GS	Gaza Strip
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
MO	Medical Officer
MOH	Ministry of Health
MW	Midwife
NGOs	Non-Governmental Organizations
NHS	National health system
NICE	National Institute for Health and Clinical Excellence
PC/WB&G Office	Population Council's West Bank and Gaza Office
PCBS	Palestine Central Bureau of Statistics
PHP	Pilot Health Project
PN	Practical Nurse
PN	Practical Nurse
PNC	Post Natal Care
RCM	The Royal College of Midwives
SPSS	Statistical Package of Social Science
SSN	Senior Staff Nurse
TBA	Traditional Birth Attendant
UN	United Nation
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
WB	West Bank
USAID	United States Agency for International Development

Definitions of terms

Competence:	Is the state or quality of being adequately or well qualified, having the ability to perform a specific role. Key competencies are personal attributes, knowledge,experience, skillsand values- to meet the organization's long term needs(Wilson, 1999).
Compliance:	In general, means conforming to a specification or policy, standard or law that has been clearly defined (Wikipedia, 2008-a).
Early postpartum period:	Is the first week after child birth
Guideline:	Is any document that aims to streamline particular processes according to a set routine. Guidelines may be issued by and used by any organization (governmental or private) to make the actions of its employees or divisions more predictable, and presumably of higher quality (Wikipedia, 2007)
Immediate postpartum period:	Is the first 24 hours after child birth
Late postpartum period:	Is the second through the sixth week after childbirth
Maternal mortality:	Is a death of a woman while pregnant or within 42 days of termination of pregnancy, due to complications from the pregnancy, delivery or management of either or due to existing medical conditions that were aggravated by the pregnancy or delivery, but not from accidental or incidental causes (WHO, 1998-c).
Postpartum period:	Are the period starts about an hour after the delivery of the placenta and includes the following six weeks (WHO, 1998-b)
Postnatal care:	Is the care of mothers and their newborns during the first days, weeks and months following child birth (WHO,1998-b)

Quality: Is according to Crosby (1979) "Conformance to requirements"**,** according to Deming (1982) "Quality should be aimed at the needed of the consumer, present and future" and according to Juran (1989) "Fitness for purpose" (Wilson, 1999).

Safe Motherhood: Is an internationally recognized term which refers to a woman s ability to access the care she needs to be safe and healthy throughout her pregnancy and childbirth and to deliver a healthy baby (WHO, 1998-b)

Chapter 1: Introduction

1.1 Research background

Postnatal care has traditionally been seen as the 'Cinderella' of the maternity services and as a consequence has often been under resourced (Cullen and Fraser, 2006). Now it is becoming recognized that inadequate support, advice and treatment for the mother and her newborn in this important period can impact quite considerably upon the woman's daily life, her newborn, her relationships with family and friends and her parenting abilities (Cullen and Fraser, 2006).

More than half a million women die every year due to complications caused by childbirth (Ronsman and Graham, 2006). Almost 40% of women experience complications after delivery and nearly 15% of these women develop potentially life-threatening problems (Ashford, 2004). Each year four million infants die within their first month of life and nearly all maternal deaths as newborn deaths occur in developing countries (Sines, Syed, Wall, and Worly, 2007).

Postnatal care is regarded as one of the most important maternal and child health care services specially for the prevention of complication of childbirth for both the mother and the newborn since the postnatal period, the time just after delivery and through the six weeks of life, is one of the most critical times for both specially for their survival (WHO, 1998-b). So it is worth to mention that the improvement of maternal health and child health are very important and have been considered as two of the eight Millennium Development Goals (MDGs) by the year 2015; and thus the provision of proper and quality post natal care services will distribute in achieving these goals (WHO, 2008).

In many countries especially in developing countries the majority of women deliver at home without considering its consequences, they also don't receive postnatal care services (Sines, Syed, Wall, and Worley, 2007). In the same source, the authors added that more than 60 million women deliver at home each year without the assistance of skilled care and almost all newborn deaths happen in developing countries and most of them occur at home, regardless of whether delivery was in the home or in a health care facility.

In sub- Sahara Africa postnatal care (PNC) programs are among the weakest of all reproductive and child health programs in the region (Warren, Daly, Toure, and Mongi, 2006). In most developing countries, however postnatal care may only occur if provided through home visits, because geographic, financial, and cultural barriers typically limit care outside the home during the early postnatal period (Winch, 2005). In this regard many countries adopt strategies that take into account unique cultural and social contexts and the available financial and human resources, furthermore the existing health systems should vary or be modified to target the poorest groups of women and newborns (Sines, Syed, Wall, and Worley, 2007).

Additionally, an integrated provision of PNC for the mother and the newborn should be encouraged, provided by well trained health workers if possible and should also include physical examination, immunization, health education, and family planning services. As recommended by the World Health Organization (WHO) it is stated that "the emphasis of safe motherhood programs should be placed on providing postnatal and neonatal care for both mothers and newborns, focusing on health education to improve mothers' knowledge and thereby to enhance early detection of complications and prompt referral, in addition to routine postnatal care" (WHO, 2001).

In Palestine PNC is provided through three health sectors: governmental, UNRWA and Non Governmental Organizations (NGOs), at different health care levels and different quality of care, whereas PNC services can be delivered at a health facility, through home visits by health providers, or through a combination of care in facilities and at home (MOH, 2005).

In Gaza, health facilities of the Ministry of Health (MOH) provide the PNC only through home visits which is an incomplete and interrupted process and provided only for high risk pregnant women after delivery. MOH provide neonatal services to the newborn in the Primary Health Care (PHC) facilities such as immunization, screening, and physical examination. UNRWA in their five fields including Gaza and West Bank plays a very important role in providing post natal care services to refugee mothers and mothers married to none refugees and for their newborns (UNRWA, 2006), where most of these services are provided mostly in the first 14 days after delivery and through further visits at the primary health care centers and selective visits are provided at home (UNRWA, 2003-b). This time range of 14 days is a long range as postnatal care is needed to be provided early to encourage preventive behaviors and practices. Moreover early PNC is needed to increase the likelihood that potentially life-threatening complications for both newborns and mothers in order to be detected, referred, and treated as early as possible. In addition to that one visit is not enough to cover the needs of the mother and the newborn.

Not only the time when to provide post natal care is important but also the quality of the services is as important as well. Therefore the providing of proper, good quality and integrated post natal care for both the mother and newborn offers an opportunity to link maternal and newborn health care and to reduce the risk of death, disability and morbidity to both (Sines, Syed, Wall, and Worley, 2007).

1.2 Research problem

In UNRWA, Gaza Field the coverage rate of women receiving PNC of expected deliveries is used as an indicator to assess these services. This rate is always high; in the year 2006 it was 98.7 % in Gaza field (UNRWA, 2006). This high coverage leaves a gap for our knowledge about if this care is provided according to the technical instruction of the UNRWA, especially regarding the mothers, in a good manner as possible and if the information, counseling and examinations needed are provided properly to all women and newborns. This is very important in order to provide complete and timely post natal care services, because as it is known from the experience that the PNC services are geared to the newborn more than the mother and the antenatal care services is perceived to be more important than PNC.

It is also very important to pay a great attention to the time of PNC service provision taking in consideration that the ideal time to deliver interventions to improve the health and survival of both the newborn and the mother is the early postnatal period. The WHO guidelines on postnatal care recommend postnatal visits within six to 12 hours after birth, three to six days, six weeks, and at six months (6-6-6-6 model) (WHO, 1998-b), while in UNRWA, PNC services are provided only one time mostly within the 14 days after delivery, and follow up visits are only for women having high blood pressure or diabetes mellitus to follow up these conditions.

1.3 Justification of the problem

Postnatal services are primarily of physical examination, immunization, education and family planning services that provided to maintain the physical and psychological well-being of woman and child therefore, health care providers must be particularly sensitive to

the needs of the woman during this transitional time (WHO, 2002). Many women and their newborns do not receive some of these essential services, yet they need them.

It is widely accepted that the postnatal period is an important and challenging time for a woman and her family and as well as for the health care providers who provide the care at this time. In addition, post natal care is reported to be an area which has been neglected despite the presence of guidance to support service delivery and evidence-based practice (Royal College of Midwives, RCM, 2000).

In many countries the health system is strongly committed to and effective in reaching pregnant women with antenatal care services, but a similar commitment to postnatal care services does not yet exist (Sines, Syed, Wall, and Worley, 2007). In addition to that the lack of postpartum care pays no attention to the fact that the most of maternal deaths and disabilities occur during the postnatal period and also that early neonatal mortality remains high (Sines, Syed, Wall, and Worley, 2007).

Raising up the question why to focus on health care during the post natal period, answered by Ronsman and Graham, on behalf of the Lancet Maternal Survival steering group (2006) who said that "more than half a million women die each year as a result of complications from pregnancy and childbirth, more than 60 million women deliver at home each year without the benefit of skilled care" (Ronsman and Graham, 2006). Adding to that, many short term and long term complications following childbirth are very common especially in developing countries. The long-term maternal complications following childbirth such as chronic pain, impaired mobility, damage to the reproductive system, genital prolapse and infertility are also more common in these countries (UN, 2002). Such complications could be reduced through preventive maternal healthcare services such as physiotherapy, family planning, health education, and screening (Ashford, 2004).

At professional level as the researcher worked for the last 15 years in mother and child health (MCH) field, it is noticeable that the early discharge of women (within<72 hours post delivery) from hospital or from private clinic to home increase the risk of complications for mother and newborn and increase re-referral to hospitals. This makes big evidence to the need of early and good quality postnatal care after discharge from the place where the woman gives birth. Moreover relying on observation and experience in UNRWA the postnatal care is geared to the newborns more than to the mothers and the prioritizing of the wellbeing of the infant. Moreover what is being done to mothers is not as much compared to what should be, on the other hand, the inadequate compliance to the existing technical instruction (TI) makes the problem more difficult.

At UNRWA health centers, services are provided to mothers and newborns, in the first 14 days post delivery, whereas according to the WHO guidelines on postnatal care, postnatal visits are recommended within six to 12 hours after birth, three to six days, six weeks, and at six months (6-6-6-6 model) (WHO, 1998-b).

According to the WHO report for the World Health Day in April, 1998, the attention to the quality of care has been growing, and there have been significant efforts to define criteria and develop methodologies to assess the quality of maternal health services (WHO, 1998-a). The same report takes account of the key determinants of quality including the technical competence of providers, their inter-personal skills, the availability of basic supplies and equipment, the quality of physical facilities and infrastructure, linkages to other health services and the existence of a functional referral system.

UNRWA Annual Report of the Department of Health (2006) shows that the PNC coverage rate of expected deliveries in Gaza was 98.7% where the services were provided by

trained nurses or midwives either at primary health care facilities or at home, (UNRWA, 2006). This seems to suggest that majority of women utilize the available maternal health services and that is a good health indicator, however, one may still wonder whether mother and newborn receive the proper care they really need and whether the health care providers follow and adhere to the TI of the agency in this regard.

1.4 Objectives of the study

General objective:

To assess the services provided to mothers and newborns at UNRWA health centers during the postnatal period in Gaza Governorates.

Specific objectives:

- To assess various activities provided to mothers and newborns during postnatal period at UNRWA health centers.
- To ascertain the adherence of health providers in implementing the technical instructions (TI) regarding post-natal services.
- To identify areas of strengths and weaknesses in the provided PNC at UNRWA health centers.
- To suggest recommendations to improve post natal care health services at UNRWA health centers.

1.5 Context of the study

In order to better understand the health care system, and in particularly in the primary health care sector, the researcher presented some information as background. The maternal

and child health care provided at the primary health care services as any health services are influenced by the demographic, socioeconomic and political situation.

This study was conducted at UNRWA health centers in the Gaza Strip therefore, some of the relevant information considering demographic and health situation were crucial to study and could affect these services.

1.5.1 Demographic context:

Palestine constitutes the southwestern part of a big geographical unity in the eastern part of the Arab world. It used to have common border with Belad El Sham (Lebanon, Syria and Jordan) in addition to Egypt. Palestine Occupied Territories comprises two geographically separated areas the West Bank and the Gaza Strip. The Palestine Occupied Territories has a total area of 6,020sq.Km. It has a total number of populations of 3,762,005 individuals distributed in both areas (MOH, 2006).

The Gaza Strip(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. It has about 1.4 million Palestinian residents (Central Intelligence Agency, CIA, 2008).

In the year 2007 approximately 1.4 million Palestinians live in the GS, of whom almost 1.0 million are United Nation registered refugees. The GS is divided into five provinces which are: Gaza North, Gaza City, Mid Zone, Khan-Younis and Rafah. The majority of the Palestinians in the GS are descendants of refugees. The Strip's population has continued to increase since 1948, one of the main reasons being a total fertility rate of more than 5 children per woman. In a ranking by total fertility rate, this places Gaza 19th of 222 regions (Wikipedia., 2008-b).

1.5.2 Health care system:

The Palestinian health care system constitutes of public sector (as the main provider) which owned by the MOH, UNRWA, NGOs and the Private sectors.

1.5.2.1. Primary health care system:

Primary Health Care system (PHC) is a major component of Palestinian health care system as it provides primary and secondary health care services as well as tertiary health services. The MOH is working with other health sectors in providing the primary health services mainly with UNRWA, and NGOs sector (MOH, 2006).

At the end of 2005, there are 654 PHC centers in Palestine; these centers are cared for about 3.7 million people. There are 129 centers in the Gaza Strip of which 56 PHC centers owned and supervised by the MOH (MOH, 2006). Health centers owned by the MOH provide PNC only for the newborns such as immunization, screening and growth monitoring while regarding mothers the home visit program which was provided to them through a project was ended by the end of the project which funded it

1.5.2.2. Secondary health care system:

The secondary health care delivery system is a mix of governmental, non-governmental, UNRWA and private sectors. There are 77 hospitals in Palestine (MOH, 2006). According to PCBS 2005, 96.4% of births took place at health institutions where the vast majority of them took place in hospitals (PCBS, 2005). In this regard it is worth to mention that in these hospitals there is a great opportunity to provide early PNC services but unfortunately, this opportunity is missed.

1.5.3 Women health:

"The Palestinian women have a fundamental right to enjoy the highest possible level of health and quality of life" (MOH, 2006). In the year 2005 the percentage of women of childbearing age (15-49) from total population was 22.3% and the total fertility rate in the Palestinian Territory was 4.6 births; in the Gaza Strip it was as high as 5.8 births (PCBS, 2005). This indicates the importance of providing PNC services; where there is a great possibility for counseling as well as providing family planning services to many of these women.

The Palestinian women are aware about the importance of institutional delivery; according to the PCBS (2005) the percentage of deliveries in health institution was 96.4%. In the Gaza Strip, the percentages of births occurring at health institutions and at home were 99.1% and 0.7%, respectively (PCBS, 2005). The percentage of mothers received post-natal care was 33.3% for the Palestinian Territory; 36.2% in the West Bank and 29.5% in the Gaza Strip (PCBS, 2005), which is very low. This again points at the importance of providing early PNC in the places where delivery takes place and the necessity to imply and track PNC services in all other primary health care centers which don't provide these services.

The maternal mortality ratio was 15.4/100,000 live births among women aged 15-49 years in the Gaza Strip and 1.8/100,000 live births in West Bank according to Demographic and Health Survey (DHS) 2004 and Health Status Annual Report 2005 (MOH, 2006). This low ratio doesn't reflect the real situation in both areas especially because of the present problem of under diagnosis and under reporting. All these information give a great indication about the importance of providing maternal services to our women including

PNC in order to let our women do feel having that fundamental right and to contribute in achieving healthy and quality life for them.

1.5.4 Child health:

There are 260 health clinics in MOH which provide services for children including preventive and curative care. Nearly the same services are provided in all of these health centers. It is worth to mention that all these health clinics provide immunization to children. In this regard UNRWA with MOH coordinates and cooperates with each other (MOH, 2006). In particularly, the vaccination program is one of the successful programs in the Palestinian Territory and the vaccination coverage is very high for instant according to PCBS (2005) it was as high as 95.2% of children aged 12-23 months old received BCG vaccines in the year 2004 (PCBS 2005), and it was 100% for the same vaccine in 2005 (MOH, 2006). Data showed that the infant mortality rate (IMR) in the Palestinian Territory during the period from 1999-2003 was 24.2 per 1,000 live births (20.0 in the West Bank and 30.2 in the Gaza Strip) (PCBS 2005). During the last five years the infant mortality rate was nearly the same, with an average of 22.5 per 1,000 live births (MOH, 2006).

1.5.5 UNRWA health program:

UNRWA (United Nation of Relief and Works Agency for Palestine Refugees in the Near East) is a very important agency in the region. It plays an essential role through providing several services including health services to all Palestinian refugees in its five fields of operation (Gaza, West Bank, Jordan, Syria and Lebanon fields). According to UNRWA registration statistics the total number of Palestine refugees registered in the Agency's area

of operation by the end of 2006 was 4,448,429 of them 1,016,964 in the GS (UNRWA, 2006).

UNWRA provides comprehensive health care services, focusing mainly on primary health care which is offered free of charge. The secondary care is provided by outsourcing it at governmental and non governmental hospitals with very selective use of tertiary care services (UNRWA, 2006). The UNRWA provides both preventive and curative primary care such as provision of outpatient medical care, laboratory, radiological and oral health services and physiotherapy. A mother and child heath care (MCH) including antenatal and postnatal care, family planning, vaccination and growth monitoring of children are also provided in addition to other specialized services. Moreover it plays an effective role in the vaccination program services in cooperation with the MOH. As well as environmental health in camps and supplementary feeding to nutritionally vulnerable groups are two important components of its health services (UNRWA, 2006).

These different components of the health program are technically directed through a set of technical instruction (TI) series, guidelines and management protocols. These are revised and updated periodically in accordance with the basic principles and concept of the WHO, approved Agency Policies and best practices in public health. Implementation of The TI, guidelines and management protocols is monitored through systematic assessment of outcomes based on measurable indicators. Any changes of the standing policies are usually decided through upon meeting of the Headquarter and Fields concerned staff and supported by staff of the technical unit in Headquarter and Fields.

The UNRWA owns and operates 55 health facilities in Palestine (37 in West Bank and 18 in the Gaza Strip). In the GS there are fifteen primary health care centers (PHC) and three sub centers distributed as follows: in North Gaza 2 health centers and one sub-center, in

Gaza 4 health centers, in Middle Zone 4 health centers and one sub-center, in Khan Younis 2 health centers and in Rafah 3 health centers and 1 sub-center. These heath centers provide preventive and curative services more or less according to their size. MCH services are provided in all of the health centers as the UNRWA through its strategy tries to focus on this field especially because the demographic profile of the registered Palestine refugees is that of a young population and according to UNRWA registration statistics at the end of 2006 the rate of children below 18 years was 47.6% in the GS and the rate of women of reproductive age (15-49) was 25% Agency wide (UNRWA, 2006). Therefore this study was conducted to assess PNC services regarding mothers and their newborns as one of the most important components of the MCH services provided at UNRWA.

1.5.6 PNC services at UNRWA health centers:

At UNRWA ANC as an important part of MCH program is provided at all health centers for both mother and newborn to assess their health condition. It is provided mostly within the first fourteen days of delivery by a team of midwife (MW), senior staff nurse (SSN), practical nurse (PN) and medical officer (MO).

After the delivery of a pregnant woman who was receiving antenatal care at an UNRWA health center, postnatal standard elements of care should be provided for her and for the newborn infant and a postnatal record should be completed according to the UNRWA-TI (Annex, 5).

At UNRWA health centers and according to the Annual Report of the Department of Health, 2006, the coverage rate of PNC of the expected deliveries was very high as 98.7% in the GS. The prevalence of anemia among the mothers who utilized PNC services according to a UNRWA study conducted in 2004 was 45.7% which considered as public health problem. Maternal mortality ratio was16.2/100,000 Agency wide and 50% of the

cases was in Gaza Field and according to UNRWA study 2003 IMR was 25.2/1000 live birth Agency wide (UNRWA, 2006).

Chapter 2: Literature review

In this chapter the researcher presents the reviewed literature regarding PNC; definition and values of postnatal period, importance and benefits of PNC, coverage and utilization, component of PNC and modern approaches, interventions and policies to improve PNC services. Right through all these some relevant studies to PNC globally and locally were reviewed**.**

2.1 Definition and values of postnatal period

The WHO defines the postpartum period or puerperium as the period starts about an hour after the delivery of the placenta and includes the following six weeks (WHO, 1998-b; MotherNewBorNet, 2005). It is considered as an important transitional time for the woman, her newborn and her family and it has also asocial and a personal meaning in addition to the simple physiological events (WHO, 1998-b).

According to Wikipedia, the Free Ensyclopedia, the postpartum period is defined as" period consisting of the months or weeks immediately after childbirth or delivery; it is a time when the woman adjusts, both physically and psychologically, to the process of childbearing and it last for about six weeks or until the body has completed its adjustment and has returned to a nearly pre- pregnant state" (Wikipedia, 2005).

According to WHO Guideline 1998, PNC means the care of mothers and their newborns during the first days, weeks and months following childbirth (WHO, 1998-b). Therefore the care during this period needs to address any deviation from the expected recovery after birth in order to provide timely intervention at the hospital, at home, at the health center or by referral to hospital (WHO, 1998-b). In the same guideline, it was reported that the aim

of PNC services should be based on the needs and health challenges, incorporate all the essential elements required for the health of the mother and her newborn. Similar to that, Schurman, Mackinon, Lane and Etches 2000, reported that the care during the postnatal period should respond to the special needs of both the mother and the newborn (Schuurmans, Mackinon, Lane, and Etches, 2000).

The National Collaborating Centre for Primary Care Guideline (NCCP) of the United Kingdom emphasized that PNC should be a continuation of the care the woman has received during her pregnancy and labor; therefore it aims to provide consistency of advice and support for recovery from pregnancy and birth (NCC-PC, 2006). In the same guideline, it was reported that the provision of services should also aim to early identification and appropriate management of physical and psychological, emotional and social health needs, and smoothen the progress of family life. It should also aim to empower the mother to care for her baby and herself in order to promote their physiological and emotional wellbeing for longer- period.

In conclusion, PNC primarily aims to provide the services of physical examination, immunization, education and family planning services. It is especially important to maintain the physical and psychological well-being of mother and child. As well as it should include the prevention and early detection and treatment of complications and disease and counseling on maternal nutrition (Schuurmans, Mackinon, lane, and Etches, 2000). According to Wiegers (2006), who supported the last statement above by reporting that the overall aim of postpartum care is to detect health problems of the mother and/or baby at an early stage, to encourage breastfeeding and to give families a good start (Wiegers, 2006).

The aims of home visits according to the American Medical Association are to provide families early with preventive care and preventive services, offer timely referral of problems and complication and enable link with women's preventive health services (American Medical Association, 2007).

2.2 Importance and benefits of PNC

According to the World Program of Action, PNC is regarded as one of the most important maternal healthcare services for the prevention of impairments and disabilities resulting from childbirth (UN, 2002). This care is particularly important because it presents a special challenge, which simply concerns at least the mother and her baby and their needs. As well as its importance forms part of the normal continuum of the woman reproductive cycle regardless the times that the woman experienced this period (WHO, 1998-b). According to the report of the World Health Day on the 7th of April 2005, less than half of mothers and newborns receive care with not full range of their need in the developing countries where there is stagnation in the progress in maternal and child health (WHO, 2005). Therefore, PNC services should be given according to the need of the mother and newborn with quality care because the quality postpartum services are a long-term investment in the future health of the mother and her baby (WHO, 1998-b).

Despite the great need for postnatal services the attention is too often given to pregnancy and birth in both developing and developed countries ignoring the fact that the majority of maternal deaths and disabilities occur during the postpartum period and that early neonatal mortality remains high (WHO, 1998-b; Sines, Syed, Wall, and Worly, 2007). In contrast, from a public health perspective, the importance of the postnatal period as a strategic moment for providing reproductive health services is well recognized in many countries (Jacobs, Brambila and Vernon, 2002). Therefore, the providing of care in the postpartum

period should be in an integrated fashion, which throughout skilled care and early identification of problems could reduce the incidence of death and disability (WHO, 1998-b).

PNC services provide a great opportunity to benefit the mother and the newborn through many activities. This can be offered to both by counseling and discussion between the mother and the health care provider on their health and the health of their babies about practicing healthy behaviors such as adequate nutrition, hygiene, exclusive breastfeeding, (Sines, Syed, Wall, and Worly, 2007). Also providing the mother with iron, folate and vitamin "A" is very important to prevent her from micronutrient deficiencies as well as to prevent and treat anemia especially for mothers who experienced post partum hemorrhage. Another benefit of PNC is the physical examination of the mothers and also for the newborn especially to identify any abnormalities, such as congenital anomalies and developmental abnormalities and other diseases for early and appropriate intervention (WHO, 1998-b). For the mother it is performed to assess the condition of the mother for early identification of any deviation from the expected normal changes after delivery and recognition and management of postpartum complications such as postpartum hemorrhage, eclampcia and puerperal sepsis and other infections (WHO, 1998-b), as well as for follow up and management of diseases in pregnancy such as diabetes mellitus and hypertension.

Another benefit of PNC services is to provide vaccines as preventive measures against communicable diseases for the newborn by immunization according to vaccination programs and schedules. Also to provide information about danger signs regarding the mother and the newborn to be identified treated or referred (Sines, Syed, Wall, and Worly, 2007). One more benefit is providing counseling on modern family planning methods for birth spacing (WHO, 1998-b; Jacobs, Brambila and Vernon, 2002).

Cullen and Frazer (2006) emphasized that the PNC can be expanded to months after post natal period because post natal problems may last for several months; they said that: "Physical care following childbirth should be approached with the expectation that the mother will have a straightforward recovery to good health" (Cullen and Frazer, 2006), they explained that because a large number of women have at least one health problem for several months after the birth.

In order to get more benefits and effectiveness of the PNC services; quality and early PNC services should be provided in integration for both the mothers and their newborns (Tinker, 2005). This needs to take actions by policy makers and programmers, which will certainly strengthen the linkages between maternal health and child health programs (Sines, Syed, Wall, and Worly, 2007). This action will have an important effect because the health system in many countries is strongly committed to antenatal care services, but a similar commitment to postnatal care services does not yet exist. Therefore efforts must be made to inform families, communities and policymakers that postnatal care is just as important as antenatal care (Sines, Syed, Wall, and Worly, 2007).

2.3 Coverage and Utilization of services of PNC

There is a big gap in PNC coverage between developed and developing countries as many factors play a significant role in determination of the utilization of this care.

2.3.1 Determinants of utilization of services of PNC:

After reviewing many studies a number of sociodemographic and cultural factors act as barriers to the utilization of PNC services and affect the trend to seek this care. According to a study conducted in Ethiopia about utilization of maternal health care services and a study conducted in Lebanon, maternal age and parity were good examples that have been

examined as determinants of health care utilization (Mekonnen and Mekonnen, 2002; Kabakian, Khasholin, and Campbell, 2005). Maternal education has also been shown repetitively to be positively associated with the use of maternity care services according to the same two studies. The same was approved by a study conducted in Ghana about the determinants of use of maternal-child health services in Rural Ghana (Addai, 2000).

Other factors were the accessibility to mother and child health facilities and the people's own beliefs in traditional practices as mentioned in a study conducted in Namibia (Ngula, 2005). The service related factors included negative attitude of some nurses, insensitive staff, the disregard of women's traditional norms were also approved as barriers of the utilization of PNC (Ngula, 2005; Kabakian, Khasholin, and Campbell, 2005). Other studies indicate the organization and the delivery of postpartum services as reasons for low utilization, especially, the lack of comprehensive maternal services with links between prenatal, delivery and postpartum health care (Kabakian, Khasholin, and Campbell, 2005).

Having a university education and receiving information on maternal health and information booklet or verbal communication were identified as significant factors associated with the uptake of the post partum visit (Kabakian, Khasholin, and Campbell, 2005). In Ethiopia residence and education of the women and in Nepal occupation and education were factors that significantly associated with the utilisation of PNC in addition to that seeking PNC services was appeared to be strongly motivated when women experiencing health problems (Mekonnen and Mekonnen, 2002; Dhakal, Chapman, Simkhada, Teijlingen, and Stephens, 2007). A study conducted by the USAID- MARAM project in the GS (2004) aimed to provide information about knowledge, attitudes and practices of the women during the postnatal period showed that, refugee, older, educated and working mothers received PNC services more than the non refugees (MARAM, 2004).

2.3.2 Coverage of post natal care services:

WHO reported that in sub Sahara Africa as few as 5% of women receive postpartum care while nearly 90% uptake of those services in developed countries (WHO, 1998-b; WHO, 2002). The majority of women in developing countries receive almost no PNC after delivery (WHO, 2002).

In Africa, based on an analysis of 23 Demographic and Health Surveys (DHS), two thirds of women in sub-Saharan Africa give birth at home, and only 13% of these women receive a postnatal visit within two days of birth (Warren, Daly, Toure, and Mongi, 2006). In The same surveys, according to DHS data in Ethiopia, 90 % of mothers did not receive any PNC within the first six weeks and in Eritrea, 92% of women giving birth at home received no PNC within the first six weeks. Similarly, 85% of women giving birth at home in Mali and 70% of women giving birth at home in Rwanda received no PNC at all.

According to the Namibia National DHS, in the year 2000, the percentage of births in health facilities was 75% and the PNC coverage has 50% from a doctor or trained midwife (Ngula, 2005). In Nepal, the PNC has a low uptake and is often regarded as inadequate (Dhakal, Chapman, Simkhada, Teijlingen, and Stephens, 2007). In the Northern Nigeria 85.3% of the women delivered at home out of them 80.5% were supervised by untrained personnel and only 11.4% of those who received ANC had post natal check up (Galadanci, Ejembi, Iliyasu, Alagh,and Umar, 2007).

In developing countries the uptake of six-week post partum visit varies from high level in Saudi Arabia (88%), to low level in Yemen 6%, in Lebanon it was reported as 39% without organized system of home visits or supported community program as shown in the study which was conducted there (Kabakian, Khasholin, and Campbell, 2005). Moreover

the appointment system plays a very important role in PNC coverage in Lebanon. The same study revealed that among the 70% of the women who received post partum visit, 86% attended the post natal visit with an appointment (Kabakian, Khasholin, and Campbell, 2005). In Egypt only 42.6% of women reported having received PNC (most of them, 70% within 2 days of delivery) in the year 2003 (UNFPA, 2006-a).

Save the Children's Saving Newborn Lives Program conducted surveys in six countries: Bolivia, Malawi, Mali, Bangladesh, Nepal and Pakistan in the year 2002 and in the year 2004. The study was conducted to determine whether newborns and their mothers who deliver at home in developing countries receive care within three days after birth and to find out if PNC can be increased after implementing an intervention (Sines, Syed, Wall, and Worly, 2007). The result of the study showed that in Bangladesh the proportion receiving care from health workers increased from 2 % to 32 %, in Bolivia from 14 %t to 30 %, in Mali from 4 % to 26 %, in Pakistan from 7 %to 22%, in Nepal from 3% to 17% and the lowest was Malawi from 3% to 4%, (Sines, Syed, Wall, and Worly, 2007). That means that after the intervention the coverage of PNC was remarkably increased in most of these countries.

In the West Bank (WB) and the GS, the insufficient care provided to mothers and newborns during the peri-natal period is an important health care problem (CDPHC, 2003). The ANC coverage is much higher than the PNC. As it was obvious in the Palestinian DHS report (2005); 96.5% of women received ANC while only 33.3% of mothers received PNC (PCBS, 2005). Furthermore, little data is known about the content of postpartum services (Nawar, Huntington, Kharboush, Ali, and Shaheen, 2003). Earlier data from the MOH "Health Status in Palestine" showed that in the GS through out the home visit program the PNC coverage in the year 2001 was higher than in 2000, but in the year 2004

it decreased to cover only 2.5% out of total live births. A noticeably increase was in the year 2005 where the coverage reached 4.1% of total live births (MOH, 2005). These results indicate that during the year 2000 to the year 2005 the PNC home visits were obviously varies between increasing and decreasing and that may be attributed to the unstable political situation in addition to that the home visit program was funded by a project where there was no sustainability after its end. In the WB the number of women received PNC was markedly increased from 18.5% to 27.4% of total live births (MOH, 2005).

A discrepancy was found among the women who received PNC in relation to number of visits according to MARAM study as 28.2% of them made one PNC visit while the remaining had made two or more visits, and only 2.5% of them made the first visit within the WHO recommended first 72 hrs. after delivery (MARAM, 2004).

At UNRWA, in this regard the coverage of PNC was consistently high especially in the last years. According to the Annual Report of the Department of Health the coverage rate represented 91.1% out of total births Agency wide with the highest rate of 95.6 % in Gaza Field during the year 2002 (UNRWA, 2002). During the year 2003 the coverage rate in Gaza Field was 96.0%, and in the WB Field it was 77.9% out of total live births (UNRWA, 2003-a). In the year 2004, 93.1% of the women received PNC at MCH clinics and 6.9% at home; that means the total coverage was 100% in Gaza Field. While during the year 2005 and 2006 the coverage rates were 98.4% and 98.7% out of total live births in Gaza Field respectively (UNRWA, 2004; UNRWA, 2005).

2.4 Components of PNC

According to international and national perspectives of PNC the following aspects should be covered:

2.4.1 The services that should be provided to mothers and the newborns:

The first days, weeks and months after a birth comprise a period of substantial reproductive health information and service needs for both mother and child. Whereas the services in this period are often described as the 'Cinderella' of the maternity services because it is mostly under resourced (Cullen, and Fraser, 2006). In addition these services should be comprehensive, culturally sensitive and responding to the needs of childbearing women and their families (WH0, 1998-b). Concerning home visit the American Medical Association reported that, the home visit for postnatal assessment and follow-up care is designed to deliver health, social support, and/or educational services directly to families in their homes including check on the mother's health, counseling on family planning and infant care, and giving another appointments for the infant and mother (American Medical Association, 2007).

These services are often not present in Africa even when the women deliver at home or in a health facility, especially in poor countries. Furthermore, if PNC services are available, it is often lack the essential elements and quality of care required for the best possible health of the mother and her newborn. (Warren, Daly, Toure, and Mongi, 2006). Besides, in the African countries few mothers receive a PNC contact, of them more than half gave birth in a health facility, where the crowds and the early discharge often hinder mothers from receiving proper PNC (Warren, Daly, Toure, and Mongi, 2006).

In Palestine, not all the four sectors (MOH, UNRWA, the NGOs and the private doctors) that provide maternal care services imply PNC services for the women and the newborns in their programs (MOH, 2006). At the MOH centers, PNC services are provided for the newborn as immunization, complete physical check up and screening tests while for the mother PNC is to be performed only through home visits for selected cases such as mothers with history of high-risk pregnancy and only throughout funded projects.

Data from MOH indicated that 83.9% of deliveries were considered normal, and the rate of cesarean deliveries was 16.1% in the year 2005 (MOH, 2006), and according to PCBS survey about 96.4% of births took place in health institutions while 3.0% occurred at homes (PCBS, 2005). In addition, more women (64.1%) use the governmental hospitals in the GS, while in the WB more women deliver at private hospitals (44.8%) and home deliveries were more common there (4.7%) compared to the GS (0.7%) (MOH, 2006). This means that the vast majority of deliveries took place in hospitals, especially in the GS, that causes overcrowdness and leads to early discharge of the women after delivery to the extend that some cases were discharged within just a few hours (Ali, and Nawar, 2000).

One of the UNRWA strategic approaches is to focus its interventions on maternal and child health. As well as improving maternal health is one of the priorities of its health program (UNRWA, 2006). In the GS and WB, PNC is provided in all UNRWA health centers. UNRWA's PNC services require that thorough medical investigation and examination be carried out both with respect to the mother and the newborn infant. These services are carried out either at UNRWA primary health care facilities or at home. Providing these services go through a team of MW, SSN, PN and MO, sometimes with a consultation of specialist by the obstetrician or the pediatrician for women or newborns (UNRWA, 2006).

At UNRWA according to the TI on provision of Maternal Health and Family Planning Services and the TI on provision of Child Health Care Services, the postnatal standard elements of care which should be provided for the mothers and for the newborn infants to assess their health condition are: For the mother, a post-natal record should be completed. It should include post natal history, summary of the pregnancy, last delivery and its outcome of the last delivery should be taken and the number of post-partum days. In addition, examination, counseling and investigation should be performed. While for the child: a new child health record should be opened with full history, complete physical examination, immunization and screening tests (UNRWA, 2003-b).

The women in Gaza as in some of the developing countries such as Jordan still think that PNC is mainly for immunization and care of their infants, and not for themselves according to MARAM study and according to a Jordanian study aimed to explore Jordanian women's perceptions of PNC services (MARAM, 2004; Khalaf, Abu-Moghli, Mahadeen, Callister, and Al-Hadidi, 2007). The same studies revealed that the women didn't know about the postnatal visits and they went to postnatal visits mostly for treatment when they have health concern, or for family planning and/or child care. In MARAM study, it is also found that the most frequently reported received aspects of PNC (prompted) were directed to child health such as newborn examination, immunization and measuring weight and height (above 90%) (MARAM, 2004).

2.4.2 Time and frequency of postnatal visits:

The WHO guidelines on PNC recommend postnatal visits within six to twelve hours after birth, three to six days, six weeks, and at six months (6-6-6-6 model) (WHO, 1998-b; Sines, Syed, Wall, and Worly, 2007). Also there is a consensus that the PNC should begins immediately after delivery, especially within the first 24 hours because the majority

of maternal and newborn deaths take place during the first few hours and days after delivery, then another contact within two to three days after birth (UNFPA, 2006-b; Warren, Daly, Toure, and Mongi, 2006). Moreover this care is needed to promote preventive behaviors and practices.

In some developed countries the PNC is not provided as routine care, it is patient centered and evidence based care which means that the woman should be entailed in a plan of PNC targeted to her needs and the needs of her newborn. For instant the guideline, Routine Postnatal Care of Women and their Babies of the United Kingdom, comprises that women should be fully involved with the planning of the content and timing of their care and that of their baby, and women should also understand the process of PNC. In addition the organization and content of care should be supported by the provision of evidence-based information offered in a form that is tailored to the individual need (NCC-PC, 2006).

In contrary, in Africa despite the fact that 18 million women currently do not give birth in a health facility and regardless of place of birth, mothers and newborns spend the first six weeks after delivery, at home (Warren, Daly, Toure, and Mongi, 2006). Moreover the health care providers in sub-Saharan Africa keep on advising mothers to come back to the

facility for a first postnatal check-up at six weeks after birth (Warren, Daly, Toure, and Mongi, 2006) which is too late to discover complications that need earlier intervention.

In many developing countries the shortage of professionals limits the possibilities to reach the minimum of care, that means that with limited resources, a contact with the health care system at least during the first two days and before the end of seven days post deliveries is difficult despite the fact that it would be most valuable (WHO, 1998-b).

At UNRWA as mentioned before in the TI, PNC services are provided within the first fourteen days of delivery for the mother and her newborn, but because of that a blood sample is to be taken from the newborn for phenylketonurea (PKU) testing and other screening tests, the services may provided earlier. Another visit is recommended only for selective cases such as cases with high blood pressure during pregnancy because measurement should be repeated at 42 days after delivery or for measuring fasting plasma glucose which should be performed at 6 weeks post-partum for women who have had gestational diabetes and within the first 2 weeks for women who gave birth to infants with birth weight equal or more than 4kgms. As well as for family planning services which should be provided if the woman chooses to use contraceptives spacing. In addition, home visits, for the women who delayed to notify about the outcome of their pregnancies or women with complicated deliveries, are to be conducted by a midwife within a week (UNRWA, 2003-b).

In this regard, early PNC services at health center as well as postnatal home visiting were recommended to be carried out within 6 days after delivery by Mousa and Madi, 2004 after studying the records of maternal mortality during the period from 1995 to 2002. Finding of their study showed that 61.9% of all deaths occurred during the post-partum period and many of the women were discharged early from hospital or with complication that was not properly managed (Mousa and Madi, 2004).

2.4.3 Place and providers of PNC services:

PNC services can be delivered at a health facility such as hospitals, health centers or clinics, through home visits by health workers or through a combination of care in facilities and at home (Warren, Daly, Toure, and Mongi, 2006). It should be placed close to or at home so that identification, referral, and treatment of complications can occur as early as possible (Sines, Syed, Wall, and Worly, 2007).

According to a report of the WHO, PNC care should be provided by the initial caregivers. Those are the attendants at the delivery, the midwife or physician, a nurse or nursing assistant, possibly others, such as traditional birth attendants (TBAs) when birth takes place at home (WHO, 1998-b). In the same report it was added that in case of a difficult delivery, or any problem of the newborn, an obstetrician and or pediatrician may have attended and may still involved when there are severe problems (WHO, 1998-b). When accessibility is poor or there is not enough utilization of services of the health care systems, PNC should be provided by community providers who can provide routine home visits (Sines, Syed, Wall, and Worly, 2007).

In developed countries, as England and Wales, PNC is provided by healthcare professionals who work within the acute and primary healthcare sectors and have direct

contact with postnatal women and their babies (NCC-PC, 2006). In these countries the care of healthy women and their babies was most likely to be provided by midwives, maternity support workers working across the acute and primary care sector, health visitors and general practitioners but also including the hospital obstetricians and pediatricians and each of these professional groups have a variety of clinical skills in order to ensure that the health of women and their babies is promoted, to appropriately referral in case of deviation from expected recovery, or to manage a particular health problem if they able to do that (NCC-PC, 2006).

In most developing countries, however, PNC may only occur if provided through home visits, because geographic, financial, and cultural barriers typically limit care outside the home (Sines, Syed, Wall, and Worly, 2007).

In some countries of Eastern Europe and Central Asia, nearly all deliveries were assisted by skilled attendants, and in developing countries about have of women deliver by skilled attendants (WHO, 1998-b). According to the Namibia National Demographic and Health Survey (NDHS), in 2000, the percentage of births in health facilities was 75% and the PNC coverage was 50% for what was performed by a doctor or trained midwife (Ngula, 2005). In Egypt, 69% of deliveries were assisted by medical personnel in 2003 (almost always a doctor) compared to only 46% of deliveries were assisted by medical personnel in the year 1995 (UNFPA, 2006-a). Much more earlier in Saudi Arabia the institutional deliveries reached 86% and about 90% of deliveries were attended by physicians or nurses, and PNC attendance was 88% mainly by physicians than nurses according to a study conducted to determine the coverage and quality of natal and PNC services (Baldo, Al-Mazrou, Aziz, Alagh, and Al-Shehri, 1991).

In Palestine as mentioned earlier, not all health sectors provide PNC services, at the MOH centers PNC home visits are provided by MW and at facilities the newborn PNC is to be performed by physician, PN, SSN and MW as needed. On the other hand at UNRWA health centers PNC services are provided by a team of MW, SSN, PN and MO the care is also provided at home by a trained MW (UNRWA, 2003-b).

In general, PNC must be a collaboration between parents, families, caregivers trained or traditional, health professionals, health planners, health care administrators, other related sectors, community groups, policy makers and politician and they all should have correct information about the constitution of best care that can be provided either at home or in health facilities (WHO, 1998; Sines, Syed, Wall, and Worly, 2007).

2.4.4 Guidelines, Protocols, Packages and Technical Instructions:

The Institute of Medicine defines health care guidelines as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances" (Institute of Medicine, 1992). "they may be issued by and used by any organization (governmental or private) to make the actions of its employees or divisions more predictable, and presumably of higher quality" (Wikipedia, 2007)

Over the past twenty years guidelines have been developed to overpass the gap between research and practice, in addition, there has been an intensive effort to base clinical decisions on research evidence (Burgers, Bailey, Klazinga, Bij, Grol, and Feder, 2001). This is important because good guidelines are quality improving strategies which bring together the best external evidence and other knowledge for decision making about a specific health problem, at the same time it is crucial to promote the principles of evidence-based care, including evidence-based decision-making (Bernis, Sherratt, abouZaher, and Lerberghe, 2003). Therefore, it is essential for every quality improvement initiative to set clinical protocols and standards based on evidence as well as health professionals should keep themselves informed and up dated and they should base their care on sound evidence and clinical reasoning (Bernis, Sherratt, abouZaher, and Lerberghe,

2003). In this regard, there is agreement on most key fundamentals of PNC to improve the health and survival of newborns and mothers, but a standardized, evidence based PNC protocol is not available up till now (Sines, Syed, Wall, and Worly, 2007).

The WHO Practical guideline in 1998 recommended that PNC for all newborns should include immediate and exclusive breastfeeding, warming of the infant, care of the umbilical cord, and timely identification of danger signs with referral and treatment (WHO, 1998-b). For mothers, recommended care includes monitoring and referral for complications such as excessive bleeding, pain, and infection; counseling on breast care and breastfeeding; and advice on nutrition, newborn care practices, and family planning (WHO, 1998-b).

At UNRWA according to the TI on provision of Maternal Health and Family Planning Services and the TI on provision of Child Health Care Services, the provision of PNC is as follows**:**

1. For the mother: the medical examination consists of: Blood pressure measurement temperature, breast examination, for all women who are coming for post-natal care, hemoglobin testing for women, who have had, anemia during pregnancy, ante- or post-partum hemorrhage, multiple births and women who delivered by caesarean section. Abdominal examination, lochia, episiotomy, if the woman had an episiotomy or a tear, the perineum should be examined. Fasting plasma glucose should be performed and Blood pressure measurement should be repeated at 6 weeks post-partum for women who have had gestational diabetes and within the first 2 weeks for women who gave birth to infants

with birth weight >=4,000 gms and who have had hypertension during pregnancy respectively. Then the woman should be referred to NCD clinic if the tests are abnormal. In addition a general assessment of the condition of the woman should be undertaken after the examination and taking the medical history, then counseling the mother on family planning and recording an appointment according to the woman choice (UNRWA, 2003-b).

2. For the infant: the infant should be examined in accordance to the TI on provision of Child Health Care Services with special emphasis on detection of congenital malformation, Jaundice, cyanosis or any other abnormality(s). Immunization should be given according to the schedule The mother should be asked about the condition of the umbilical cord, the method of infant feeding with special emphasis on exclusive breast feeding, the pattern of sleeping and any other problem she is facing with respect to infant care and another appointment should be given (UNRWA, 2003-b)(Annex, 5).

a USAID funded project aimed to improve the health status of Palestinian women and their children in fifteen non UNRWA clinics in the WB and the GS revealed that the physicians didn't have standard protocols to use or to follow in PNC (Ali, and Nawar, 2000).

2.4.5 Health education, consultation and information:

Health education and increased knowledge of mothers in relation to their health are a strategy that has been chosen in many countries in order to improve maternal and child health. This information should be culturally appropriate and should be provided in a form that is accessible to women, their partners and families who may have PNC (NICE, 2005).

In addition to health education, consultation is also very important in providing PNC services as it is "a key element in quality of care and an important part of both initial and follow-up visits and it should respond to clients' needs" (WHO, 2004).

Therefore knowing clients needs is very important in order to provide information tailored to that needs. At the same time while providing PNC services mother should be fully informed and understand the meaning of PNC which can be supported by providing the needed evidence-based information (NCC-PC, 2006).

This information could also be increased if given appropriately, as shown in the findings of a study conducted in Guatemala about reproductive health care in the postnatal period, when information was given about the infant health problem such as fever, umbilical cord infection changes in skin color and what to do in such case, a significant increase in the proportion of women who had been given this information was clearly noticed. In the experimental group the increase was from 9% to 23% and from 11% to 18% in the control group (Jacobs, Brambila, and Vernon, 2002). Furthermore results of the same study showed that mothers were having more information about danger signs regarding babies than about maternal danger signs and in the case of general emergency signs, only 19.7% of the women failed to mention at least one danger symptom.

Another example for increasing information by exerting more effort by the health workers through providing health education and counseling was shown by the study of "Assessing the Outcome Indicators of the Pilot Health Project" in the WB and the GS, for the pre-test and post- test. In the findings of the study the Community Health Workers (CHW) checked both the mother's health and the baby's health, and provided health education messages including information on breastfeeding to women more in the post test than in the pre-test surveys (Nawar, Huntington, Kharboush, Ali, and Shaheen, 2003). In the same

study, it was clear that, besides giving information, other activities were clearly more conducted in the post-test survey including examination of the baby's umbilical cord, taking the baby's temperature and measuring physical development, inquiring about exercise and personal hygiene, and performing chest, breast and abdominal examination of the mother.

In MARAM study, among the women who received PNC in the GS, 61.0% received counseling on family planning, and 71.3% of them received counseling about child health (MARAM, 2004). The same study revealed that 72.0% of the mothers had complete physical examination, 83.5% of the newborns were given vaccination, the percentage of baby check up was 84.1% and 81.7%was the percentage of weighed and measured babies (MARAM, 2004). In the same study, the result concerning postnatal health education revealed that a large proportion of mothers received health education, mainly on breast feeding (85.6%), umbilical stump care (85.2%), maternal nutrition (71.0%) and maternal hygiene (65.0%). Nevertheless fewer mothers reported receiving health education on other important issues such as maternal and neonatal danger signs (39.0% and 44.0% respectively). Bleeding (90%) and fever (88.1%) were the most well-known maternal postnatal danger signs, and regarding known neonatal danger signs prolonged jaundice (94.2%) and fever (90%) were the mostly frequently reported (MARAM, 2004) .

The study to improve the health status of Palestinian women and their children highlighted in its result the need to improve the skills and practices in areas of PNC as well as in counseling. And the same study revealed that the outreach services of postpartum were also not fully formed either by its quality or implementation (Ali, and Nawar, 2000). Other findings in the same study were lacking in communication skills, health education skills, identifying high risk cases and in counseling skills of the health care providers.

2.4.6 Training and competence of health care providers:

WHO reported that, "health care providers for PNC services must be well qualified, well trained and particularly sensitive to the needs of the woman and the baby during this transitional time" (WHO, 1998-b). Therefore 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 newborn (Tinker, A, 2005). On the other hand, the poor quality care reduces opportunities for health promotion and for the early detection and adequate management of problems and diseases (WHO, 1998-a). Besides, specific knowledge, skills and training are required for health care especially for effective timely referral and management of complications (Bernis, Sherratt, abouZaher, and Lerberghe, 2003) because if services of PNC care 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 and disability of mothers and newborns (WHO, 1998-b).

Despite this importance role of skilled health care providers, in developing and poor countries, there is still shortage of them to the extent that most newborns and mothers do not receive PNC services from a skilled health care provider during the most important first few days after delivery (Sines, Syed, Wall, and Worly, 2007). Therefore improving the education and training of health care providers and their skills plays an important role in any strategy to reduce maternal mortality, and can start even before other improvements of the health care system even both are required (Bernis, Sherratt, abouZaher, and Lerberghe, 2003)

Therefore education and training of health professional are needed to provide quality health services either in the work places or through professional associations; one of the reports for Safe Motherhood stressed the extension of the professional associations of health professionals as doctors, midwives, nurses, as they play an important role in working towards ensuring safe motherhood and newborn health (SOGC, 2005). Furthermore the same report made clear that professional associations play an important roll that can promote and advocate for high-quality care during pregnancy childbirth and in post natal period and contribute to initiatives related to education, research, quality assurance and evidence-based standards of practices.

2.4. 7 Communication and interpersonal relation, privacy and confidentiality:

Provider's attitudes significantly influence how clients view services and whether or not they should use them, and women's perceptions that their confidentiality may be breached, might be suitably addressed by carefully explaining the clinic policies and legal duties of confidentiality to all those looking for health care (Cook and Dickens, 2001). As it is very important to maintain and respect the clients' privacy but unfortunately privacy has received little attention in research on PNC, midwifery practice and maternity care (Burden 1998).

WHO supports improving provider interactions, with women, men and community as a key element of quality (WHO, 2003). The importance of an ethically high level of nursing practice is emphasized in the International Code of Ethics for Midwives (ICM) 1993 and nurses (ICN) 1973 (Leino-kilpi, et al, 2002). In the UK, the Association for Improvement in the Maternity Services has issued a charter for ethical research in maternity care, which emphasizes the importance of confidentiality in health care provision (Codes and Declarations, 1998; Leino-kilpi, et al, 2002).

Different studies have shown that improving the interpersonal and intercultural interactions between the health providers and women have an effect on women's knowledge, perceptions of quality of care and use of service (Ngula, 2005). Therefore, to provide care which is better than just curing to women and newborn, change in practices and increase of awareness of health providers both are needed (WHO, 2003; Ngula, 2005).

All health workers should be aware of the importance of good intercultural and interpersonal competencies in communications and counseling, in increasing the use of

care and that communication and health education functions are not separate or less important than their clinical functions (Ngula, 2005).

Good communication between healthcare professionals and the woman and her family as well, is necessary; "Women and their families should be treated with kindness, respect and dignity at all times with consideration given to privacy and where care is provided in maternity care unit, to creating a clean, warm and welcoming environment". (NCC-PC, 2006).

A study carried out in 2002 aimed to describe how mothers' privacy is maintained on post natal wards in five European countries: Finland, Spain, Greece, Germany and Scotland, revealed that, differences were present both between the different countries and between patients' and professionals' views. Mothers in Finland, Germany and Scotland felt their privacy was maintained better than mothers in Greece and Spain and the differences in staff perceptions were less clear-cut (Leino-kilpi, et al, 2002). The same study made clear that these differences were apparently based in part on cultural differences between the five countries concerned as well as the diversity in understanding of the concept of privacy was clear in the different countries (Leino-kilpi, et al, 2002). A study done by Nancy Ali and laila Nawar in the year 2000 in the West Bank and Gaza showed that, privacy was lacking during examination in most of the visited clinics (Ali, and Nawar, 2000).

2.5 The challenges in provision of PNC

It is known that there is a large gap between the developed and developing countries and between the low and high-income ones in how, where, when, and by whom to provide PNC services; therefore the challenges are also mostly differ.

Improving the quality of care that is often referred to as meeting the needs of clients through achievement of predetermined goals or standards is one of the most important challenges that face the provision of PNC in most countries (Sines, Syed, Wall, and Worly, 2007). As the essential elements of PNC for newborns and for women are already known and established; the big question "how" is still unclear in many countries, and research is still needed to answer the question of how and to make integration of “packages” of PNC into existing programs and health delivery systems at the district, national, or regional level (Sines, Syed, Wall, and Worly, 2007).

In the developed countries such as the UK the challenge is to provide more effective care by an individualized holistic approach based on the individual needs of the mother and her newborn instead of routine care (NCCP-CP, 2006). Fraser and Cullen (2006) reported their views about the postnatal management which should depend on an individualized holistic approach where priorities should be decided by both health professionals and mothers together so that research, resources and care responsibilities can be targeted more effectively (Cullen and Fraser, 2006).

In contrary the poor countries have its own challenges in delivery of health services such as scarcity of logistics and trained health workers and professionals, cultural barriers based on how to reach mothers and newborns that are traditionally in seclusion in their homes for the first several weeks after birth, how to increase utilization of basic PNC services by mothers and newborns, referral of post-partum women and newborns with health problems to health care facilities is also another challenge, in addition to the provision of quality home based postnatal care for mothers and newborns (Khadka, 2005).

PNC services for the mothers and their newborns are provided at all UNRWA health centers in the Gaza Strip but the challenge is still to ensure that the services provided are

complete, integrated and conform to UNRWA practice guidelines in order to reach high quality care.

2.6 Modern approaches, interventions and policies to improve PNC services

Some interventions and policies are implemented and others will be implemented in many countries to enhance post natal care services and to improve the health of the mothers and the newborns. The needs for such interventions are increasing in order to support the efforts to meet the Millennium Development Goals (MDGs) for maternal and child survival, especially in the early post natal period because this critical time has been overlooked by some policies and programs (Sines, Syed, Wall, and Worly, 2007).

WHO (1998) reported that many countries provide the PNC in separate entities by different caregivers, at different locations and times, but many examples showed that the integrated and organized care even when it will be provided by more than one health provider, is much more effective (WHO, 1998-b).

Recently many governments and NGOs are initiating new efforts and refining, refocusing, or scaling up existing programs to meet the MDGs (Sines, Syed, Wall,

and Worly, 2007). Therefore, and to create a more unified voice and facilitate the creation of a continuum of care, three separate newborn, maternal, and child health partnerships; the Healthy Newborn Partnership, the Partnership for Safe Motherhood and Newborn Health, and the Child Survival Partnership, have recently merged to form a global partnership, the Partnership for Maternal, Newborn, and Child Health (PMNCH). The goal of the PMNCH is to contribute to more efficient and effective use of resources and coordinated action (Sines, Syed, Wall, and Worly, 2007).

In general, PNC services may still and continue to be considered as having a little value. Health system in many countries especially in developing countries are not committed to PNC as ANC, whereas PNC is crucial for improving the life of both mothers and babies (Sines, Syed, Wall, and Worly, 2007). Therefore it is very important to illuminate to policymakers, program planners, health providers, communities, and families about the availability and importance of PNC. In countries where PNC is available most of these people are highly required to be committed to improve its quality. Setting proper policies, provision of services according to actual revised instructions which based on WHO recommendations and evidence based practice, development of tools for supervision and evaluation, providing training and considering other human resource issues and data collection and research together will help definitely in improving these services.

Chapter 3: Conceptual framework

3.1 Introduction

The conceptual framework is the concept map that guides the design and the implementation of the study and it is an efficient mechanism for illustration and summarizing the whole study variables as shown in the figure.

This chapter describes the factors that influence the PNC services which are the concerned variables of the study. The identification of these variables was based on field observation, researcher's experience and the literature review. These factors are related to health care providers; their experience training and knowledge, factors related to the clients; their perspective, awareness and cooperation, the availability of and adherence to guidelines and technical instructions factors, the supportive environment related factors and finally the communication, privacy and interpersonal relationship factors.

3.2 Components of the Conceptual Framework

3.2.1 The health care providers related factors; experience, training and knowledge:

No one can deny that one of the most important keys of providing quality post natal health care services is the health care providers who should have knowledge, be well trained and equipped with the needed skills. In this case, health providers are Medical Officers Midwives and Senior Staff Nurses. WHO reported that; health care providers for post natal care services must be well qualified, well trained and particularly sensitive to the needs of the woman and the baby (WHO, 1998-b).

In fact, improving training of health care providers is as well important as the improving of the health care system (Bernis, Sherratt, abouZaher, and Lerberghe, 2003), in addition, training of health providers should be updated, and provided in regular bases and as a continuous process to refresh and improve their actual skills and knowledge and provide them with the information needed to upgrade their methods on offering better services. Training and education should also focus on improving communication between health care professionals and the women or the families that they come into contact with (RCM, 2004).

Because of the importance of knowledge, experience and training of providers they have been included in the conceptual framework.

3.2.2 The clients' related factors; perspective, awareness and cooperation:

Women with increased awareness of rights are empowered to demand quality services that meet their needs, and able to raise their voices to be heard in the planning, monitoring and evaluation of those services and at the individual level, women as users of services who are more informed about their reproductive rights should have improved communications with health providers and are in a position to be strong enough to decide about the way they are treated by health services (WHO, 2003).

Client awareness about the availability of post natal care services should be strongly emphasized in particularly for herself and not only for her newborn as it has been already known in our health services' culture. From experience it is noticeable that many women think that the health care services are ended when they gave birth and the only one who needs the services is the newborn. Lack of information and awareness affects women's potential and abilities to make their own decisions about looking for healthcare as well as it limits their ability to use their reproductive rights (Ngula, 2005).

The women's point of view about the services they received, how they perceive them, is a very important factor as it gives an idea about the degree of satisfaction of the women with the care, their desire to continue utilizing the services and their intention to advise their relatives to use the same services in the same place as well as it affect their cooperation during utilization of the services. In addition to that the proper utilization of PNC services could be affected by women' age, parity and education.

3.2.3 The Technical Instructions related factors; availability and adherence:

The Institute of Medicine defines health care guidelines as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances" (Institute of Medicine, 1992). It is an important standard tool for quality and quality is defined by WHO as "proper performance, in accordance with standards, of interventions that are known to be safe, that are affordable to the society in question, and that have the ability to produce an impact on mortality, morbidity, disability, and malnutrition".

At UNRWA post natal care services are provided according to the Technical Instruction on provision of Maternal Health and Family Planning Services No.HD/FH/2/2003 and the Technical Instructions on provision of Child Health Care Services No.HD/FH/2/2000 (UNRWA, 2006),

The present of Technical Instructions or Guidelines is a very important factor that affects the PNC services. It should be present at every health center in a known place that available to be used by the concerned staff at any time. Health providers should adhere to standards of practice for service delivery and provide services according to the technical instructions, including physical examination and investigation for the mother and the

newborn, information, counseling and advises needed in the post natal care period. Furthermore, health providers should follow the instructions when giving appointment to clients, on registration and follow up.

The use of the guideline enable the health care provider to follow written instructions and prevent mistakes that could result from failure to remember and offers a permanent opportunity to go through any time to remember any forgotten information , on the other hand it gives all the clients the right to have equal services.

At UNRWA the availability of Technical Instructions and the training of health care providers in using it, enable the providers in delivering quality health services.

3.2.4 Supportive environment related factors:

Supportive system includes supplies, equipment, suitable structure, wide and comfortable waiting places and rooms are all necessary supportive environment to provide quality health care services.

The health care providers can not be able to adhere to the Technical Instruction if the equipment, the supplies such as drugs and educational material are not available. Also the present of suitable and wide waiting rooms, prevent the over crowding and give the health provider to take the necessary time for delivering quality services and as well as the present of examination rooms allows for privacy and confidentiality.

3.2 5 Communication, privacy, confidentiality and interpersonal relationship related factors:

Understanding and being understood are essential elements of maternity care (RCM, 2004) and improving provider interactions, with women, men and community is supported by the WHO and other key partners and are considered as a key element of quality (WHO, 2003).

Furthermore, the existence of good communication allow the professional to provide information ,intervention and support in an acceptable and useful way to their clients and at the same time it will enable the women to take more responsibility on their own health (RCM, 2004). In addition, different studies have shown that improving provider's interpersonal and intercultural interactions with women can influence compliance on women's knowledge, perceptions of quality of care as well as the use of health care services (Ngula, 2005), but when such communications are absent women may perceive that they are being denied information (RCM, 2004).

Respect for confidentiality influence the improving of the quality of health care; when women have confidence that the confidentiality of their personal health information will be respected, they probably give the health care provider more information about their medical history (Murray, and Frenk, 1999), in addition, respect of privacy during examination is also one of the right of the client that should be taken into considerations as it is extremely valuable.

Finally, it is worth to mention that all the above components and their related factors work together in order to offer quality PNC services for the mothers and their newborns.

Chapter 5: Results and Discussion

In this chapter the results and findings of the study are described and the analyses of the data are presented and discussed. The results describe information on the characteristics and the distribution of the respondents of both questionnaires from the 10 health centers included in the study concerning the PNC services provided to mothers and their babies. In addition the analyses provide relationship between some variables in regards to PNC services. Some findings were also compared with other studies' findings.

5.1 Findings pertaining to clients

5.1.1 Socio-demographic characteristics:

The represented sample of the women included in this study was 261, who were distributed in regards to selected socio-demographic characteristics of the women and their husbands including, age, employment status, education and residency of the women, and husband's education and employment status as shown in Table (5.1).

Table 5.1: Socio-demographic characteristics of women and their husbands:

	characteristics	No.	%	Mean	MD	SD
1	**Age group**					
	25 Yrs and less	122	46.7	27.2	26.0	6.2
	From 26 to 35 Yrs	110	42.2			
	More than 35 Yrs	29	11.1			
	Total	**261**	**100.0**			
2	**Employment status of the woman**					
	Employed	29	11.1			
	Unemployed	232	88.9			
	Total	**261**	**100.0**			
3	**Women educational level**					
	Preparatory and less	65	25.2	11.6	12.0	3.1
	Secondary	116	45.0			
	Diploma	31	12.0			
	Bachelor	46	17.8			
	Total	**258**	**100.0**			
4	**Residency**					
	Inside camp	85	32.6			
	Outside camp	176	67.4			
	Total	**261**	**100.0**			
5	**Husband's educational level**					
	Preparatory and less	84	32.3	11.8	12.0	3.7
	Secondary	85	32.7			
	Diploma	29	11.2			
	Bachelor	62	23.8			
	Total	260	100.0			
6	**Employment status of the husband**					
	Employed	219	84.2			
	Unemployed	41	15.8			
	Total	260	100.0			

Age of the respondents

The mean age of the women participated in the study was 27.2 years with standard deviation (SD) 6.2 years and the median was 26.0 as shown in Table(5.1). This result is nearly similar to other studies where the majority of the participated women (84.7%) were aged 35 years or less (MARAM, 2004), and the mean age was similar to the mean age (27.1) in the study done in West Bank and Gaza (Nawar, Huntington, Kharboush, Ali, and

Shaheen, 2003). The highest age category was among women aged 25 years and less (46.7%), followed by women aged 26 to 35 years old (42.2%), (Figure 5.1).

According to a UNRWA study in 2005 the total fertility rate among the refugee population was as high as 4.6 in the Gaza Strip and 25% of the registered refugees were women of reproductive age (15-49 years) (UNRWA, 2006) and as shown in this study the vast majority (86.9%) of the respondents was aged 35 years old or less. These together give a large sign about the importance of PNC including providing family planning services to this group which may contributes in reducing the total fertility rate in the future.

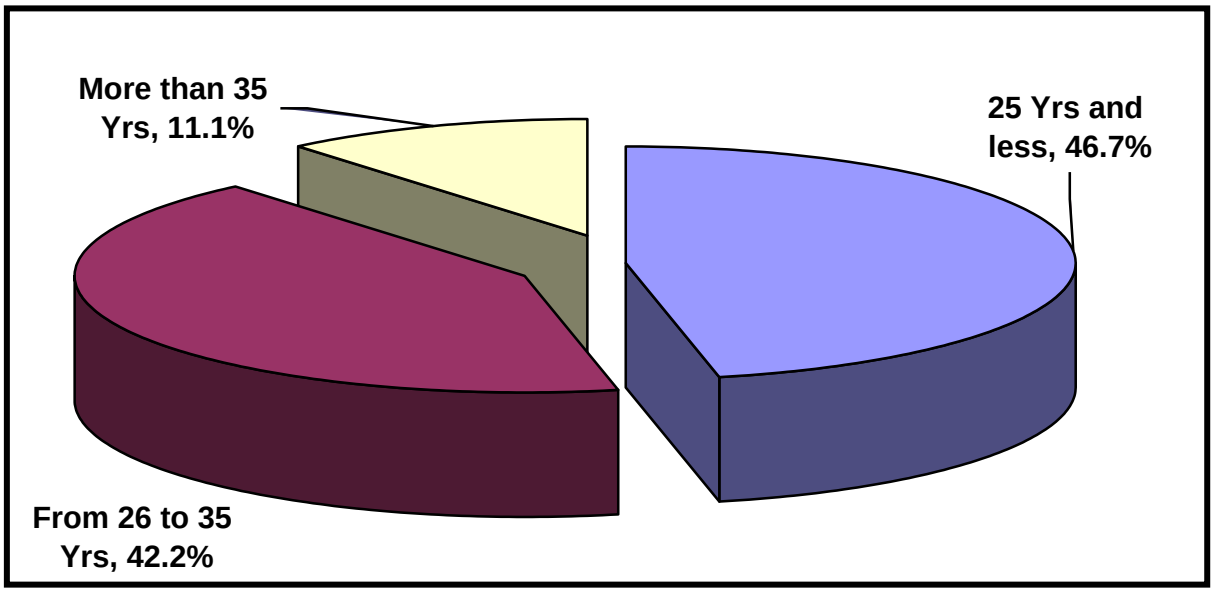

Figure 5.1 Distribution of respondents by age group

Employed status of the women and their husbands

As shown in Table (5.1) the majority of women (88.9%) at the time of data collection were housewives, yet, about 11.1% were employed which differs from MARAM study and the MOH findings where the percentage of employed women was 7.9% and 4.4% respectively (MARAM, 2004; MOH, 2005). This indicates that there is a trend of women towards

working; it could be because of increasing bad economical situation or it could be a sign of social development. The finding regarding husband's employment status shows that the percentage of employed husbands was higher than that of women and reached 84.2% of them, but it is worth to mention that many of them were working as policemen at the time of the study.

Residency

The distribution of participants regarding living area shows that 67.4% were living outside camps and 32.6% were living inside camps as depicted in Figure (5.2) which is explained by that the health centers included in the study such as Beit Hanoon, Rimal, Khan-Younis, Zaitoun and Maen health centers are located outside camps and serve people living outside and inside camps as well. In addition the health centers located inside camps serve people living outside camps as well as inside camps. This finding is similar to the finding of a study conducted in the Gaza Strip about family planning where 69% of the study populations were living outside camps and 31% inside camps (Abu Nahla, 2006).

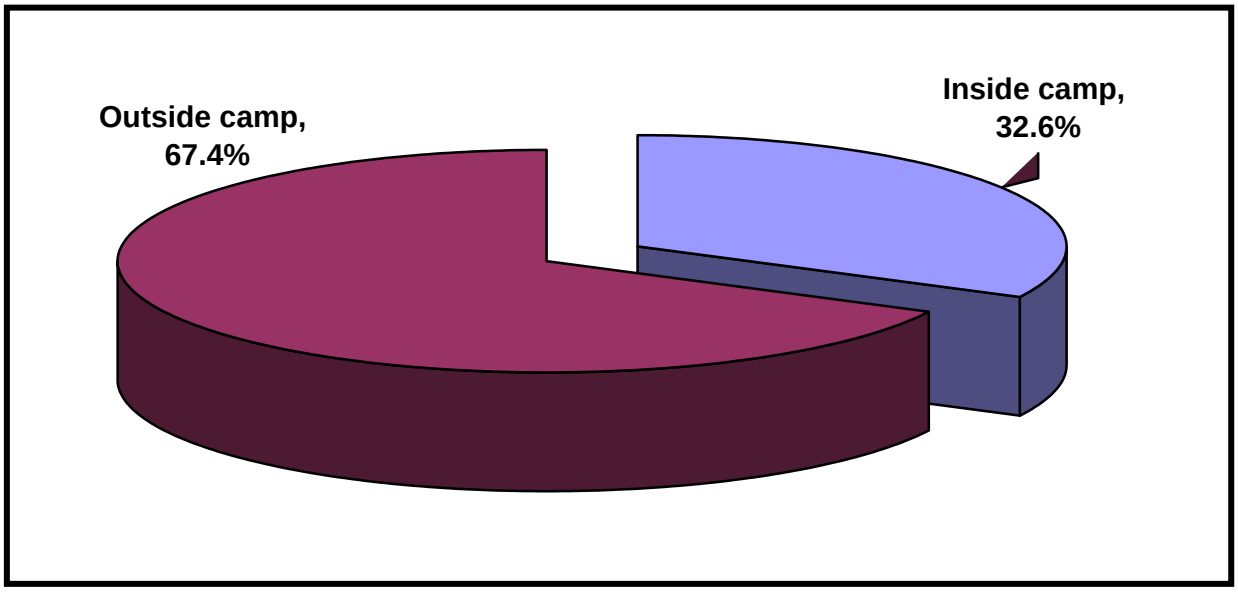

Figure 5.2 Distribution of women by place of residency

Educational level of the women and their husbands

The largest proportion of the participants and their husbands (70.2% and 65.0% respectively) completed either secondary school or preparatory school or less as illustrated in Table 5.1, around 29.8% and 35.0% of them respectively were educated at diploma or higher degree level but the percentage of women finished secondary school (45.0%) was higher than that of their husbands (32.7%) (Fig.5.3). The mean years of education was 11.5 for the women and 11.8 for their husbands with SD of 3.1 and 3.7 years respectively and the median was 12.0 years for both as shown in Table 5.1 and Fig. 5.3. These findings are nearly similar to findings in other studies with very few differences for example: the mean educational years of the women and their husbands were11.5 and 12.0 years respectively, the median was 12.0 years for both and the SD was 3.3 and 4.1 respectively (Abu Nahla, 2006), and the mean schooling years completed for the women, was 9.6 years and for their husbands it was 10.8 years (Nawar, Huntington, Kharboush, Ali, and Shaheen, 2003).

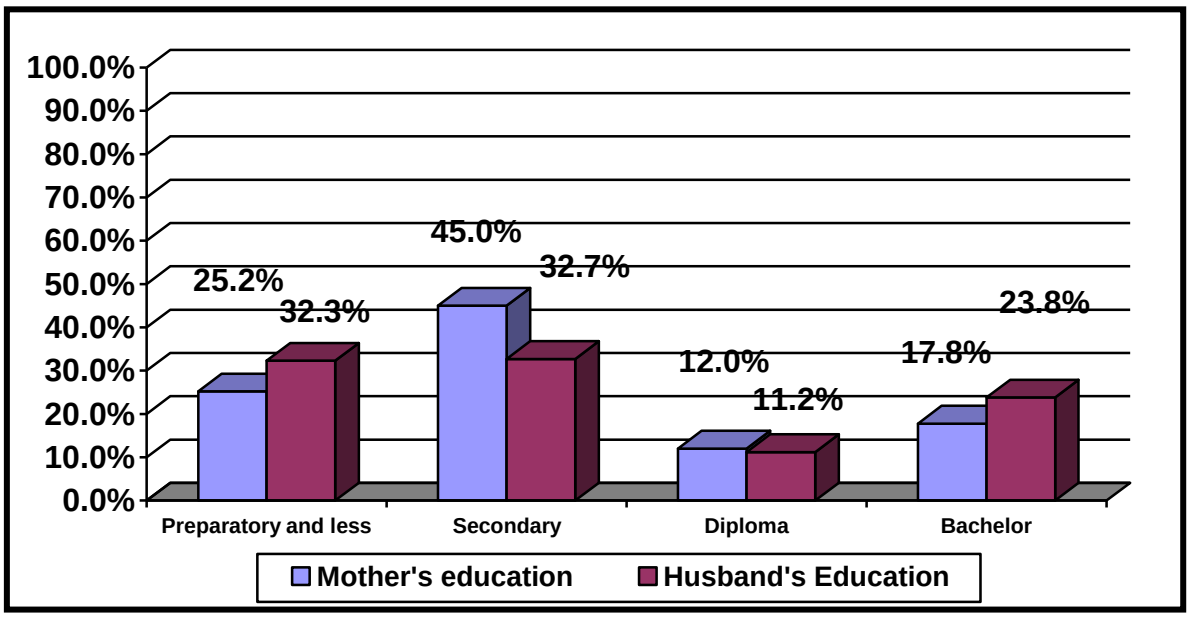

Figure (5.3) Distribution of mothers and their husband by educational level

A review of the literature suggests that in developing countries, the use of modern health care such as maternal health services can be influenced by the sociodemographic characteristics of women, the cultural context, and the accessibility of these services (Addai, 2000), while at UNRWA in GS where services are provided free of charge, the accessibility to the health centers is high and the coverage of PNC is very high nearly 98.8% of expected deliveries in the year 2006, the researcher found that there was no need to study the influence of these factors as determinants for utilization of PNC services.

Generally the results of socio-demographic characteristics in this study match the general characteristics of the Palestinian population in the GS. This gives some indications about the representatives of the selected sample.

5.1.2 Previous obstetric history

The previous obstetric history of the participants is illustrated in Table 5.2. Table (5.2) shows that the mean marital age of the respondents was 19.3 years old, the median was 18.0, with SD 3.7. The range was from 14 to 35 years old. About 51.7% were married at

age 18 years and less and about 48.3% were married by age of above 18 years old. According to UNRWA study done in the year 2005 the mean marital age was similar to the result of this study and was 19.1 years old, and also similar to this study was the median age of women at first marriage in Gaza according to PCBS which was 18.0 years (UNRWA, 2006, PCBS, 2005). This means that the early marriage that results in long reproductive period gives again an indication about the importance of PNC including counseling on family planning. As a result birth spacing will help in decreasing the total fertility rate as well as in giving the chance for the women to strengthen their physical condition and for the children to grow up in better and healthier family environment.

Table (5.2) Distribution of mothers received PNC by previous obstetric history and some related factors

	Variable	No.	%	M	MD	SD
1	**Marital Age**					
	18 Yrs and less	135	51.7	19.3	18.0	3.7
	More than 18 Yrs.	126	48.3			
	Total	**261**	**100.0**			
2	**Years of marriage**					
	5 Yrs and less	105	40.4	8.2	7.0	5.8
	6 to 10 Yrs	79	30.4			
	11 Yrs and above	76	29.2			
	Total	**260**	**100.0**			
3	**Number of parity**					
	2 times and less	87	33.3	3.9	4.0	2.4
	3 to 6 times	136	52.1			
	More than 6 times	38	14.6			
	Total	**261**	**100.0**			
4	**Number of Abortion**					
	Zero	176	67.7	0.5	0.0	1.0
	1 to 2 times	67	25.8			
	More than 2 times	17	6.5			
	Total	**260**	**100**			
5	**Gestational weeks in last pregnancy**					
	38 weeks and less	12	4.7	39.7	40.0	1.2
	38 weeks and more	226	95.3			
	Total	**258**	**100.0**			
6	**Referred to high risk pregnancy clinic**					
	Yes	110	42.1			
	No	151	57.9			
	Total	**261**	**100.0**			
7	**Reasons for referral**					
	Hypertension	29	26.3			
	Bleeding (current or previous history)	50	45.5			
	Others (Diabetes, Anemia,..)	31	28.2			
	Total	**110**	**100.0**			
8	**Received ANC care in the last pregnancy**					
	Yes	258	98.9			
	No	3	1.1			
	Total	**261**	**100.0**			

As shown in Table (5.2) the mean number of parity was 3.9 the median was 4.0 with SD 2.4 and the percentage of women having more than 6 children was14.6% and who have 2 children and less was 33.3%. This indicates that early family planning counseling and providing contraceptive methods during PNC visit is very essential especially for the last group.

As shown in Table (5.2) the percentage of the respondents (42.1%) referred to high risk pregnancy clinic with either moderate or high risk factors is slightly higher than that registered (38.3%) according to UNRWA scoring system (UNRWA, 2006), which may be related to selection criteria in this study. 42.1% of the women were referred to high risk pregnancy clinic, either due to bleeding in previous history or in current pregnancy (45.5%) or due to hypertension (26.3%) and these were the main two reasons for referral (Table 5.2). Findings of MARAM study showed that only one-quarter (26.5%) of the total sample was referred to high-risk pregnancy clinics which is lower than the finding of this study and could be due to differences in referral criteria or in sample selection, but among those who had been referred 25% was due to hypertension as it was the main reasons for referral (MARAM, 2004). Therefore, in general special attention and care are needed during pregnancy and delivery for the high risk group especially because as shown in the study the most of them were referred due to serious risk factors that could affect their morbidity and mortality. Furthermore, most of these risk factors are treatable if early detected and followed up by proper management whereby their complication can be also prevented.

As illustrated in Table (5.2) nearly all of the respondents (98.9%) received Ante Natal Care (ANC). Similar to MARAM study where 97% of mothers surveyed attended ANC services during their last pregnancy (MARAM, 2004). Also 98.8% of the home visited women for PNC received ANC which is exactly similar to the finding of this study (MOH, 2006), and 96.5% of surveyed women in the Palestinian Territory received antenatal (PCBS, 2005). These similarities in the results above with very high percentage of women receiving ANC give a clear indication that the awareness of the women about the importance of ANC is high and resulting in high utilization of these services as well. On the other hand it is an

indication that ANC is perceived as important services for, and provided in most of, the health providing sectors.

Table (5.3): Distribution of mothers received PNC by current obstetric history and some related factors

	Items	No.	%
1	**Mode of delivery**		
	Normal vaginal delivery	225	86.5
	Cesarean section	35	13.5
	Total	**260**	**100,0**
2	**Place of delivery**		
	Hospital	233	89.3
	Private clinics /Private health center	26	10.0
	Home / Others	2	0 .7
	Total	261	100.0
3	**Birth attendant**		
	physician	255	97.7
	Midwife	6	2.3
	Total	**261**	**100.0**
4	**Product of delivery(1 or 2 babies alive)**		
	One baby	255	97.7
	Twins	6	2.3
	Total	**261**	**100.0**
5	**Sex of newborn**		
	Male	127	47.6
	Female	140	52.4
	Total	**267**	**100.0**
6	**Weight of baby**		
	Less than 2500 gm.	20	7.5
	From 2500 to 3999 gm.	230	86.1
	4000 gm and above	17	6.4
	Total	**267**	**100.0**
7	**Current Nutrition status of baby**		
	Breastfeeding	204	79.4
	Artificial feeding	2	0.8
	Mixed	51	19.8
	Total	**257**	**100.0**
8	**Stay in place of delivery**		
	12 hours and less	204	78.2
	More than 12 hours	57	21.8
	Total	**261**	**100.0**
9	**Complication during or after delivery**		
	Yes	25	9.7
	No complications	232	90.3
	Total	**257**	**100.0**
10	**No. of days after delivery regarding this visit**		
	6 days and less	63	24.2
	From 7 to 14 days	183	70.4
	More than 14 days	14	5.4
	total	**260**	**100.0**

5.1.3 Current obstetric history:

Table (5.3) reveals that 13.5% of the respondents delivered by cesarean section which is higher than the percentage of women (10.8%) who were delivered by cesarean section among all reported deliveries in the Gaza Strip according to the annual report of UNRWA (UNRWA, 2006). This lower CS rate is may be due to under reporting as mentioned in the same report. Nearly similar to the finding of this study was the data from MOH which indicted that 84.7% of deliveries were considered normal and the rate of cesarean deliveries was 15.3% in the Gaza Strip (MOH, 2006). Much closer was the rate of the CS deliveries according to PCBS and MARAM study which were 12.8% and 12.7% respectively (PCBS, 2005; MARAM, 2004). This may raise the question about the under reporting in one hand and in the other about the proper indications of cesarean deliveries. This is especially important in order to avoid the preventable ones and prevent its complications.

Regarding place of delivery as shown in Table (5.3), about 99.3% of deliveries took place in health institutions where the vast majority of them (89.5%) took place in hospitals and only 0.7% at home or elsewhere including car delivery. This findings are exactly similar to the findings of the PCBS 2005, which revealed that in the Gaza Strip about 99.1% of the total deliveries took place in health institutions and 0.7% took place at homes while in West Bank home deliveries was 4.7% (PCBS, 2005). According to the results of MARAM study the vast majority of births (93.5%) took place in medical settings including hospitals, health centers, maternal-child health centers and private clinics (MARAM, 2004). According to the study of Saudi Arabia the institutional deliveries reached 86% (Baldo, Al-Mazrou, Aziz, Farag, Al-Shehri, 1991). In many African countries it is exactly the opposite where two thirds of women in Sub-Saharan Africa give birth at home (Warren,

Daly, Toure, and Mongi, 2006). A study in Northern Nigeria revealed that 85.3% of births took place at home (Galadanci, Ejembi, Iliyasu, Alagh, and Umar, 2007). Similarly, 85% of women giving birth at home in Mali and 70% of women giving birth at home in Rwanda and both received no PNC at all (Warren, Daly, Toure, and Mongi, 2006).

These results indicate that in the GS the rate of institutional deliveries is very high and better than many developing countries and reflect also the increase in health awareness of the Palestine people about the importance of institutional delivery. Therefore it is a great opportunity to the health providers to take care and monitor women and their newborns throughout their staying in hospitals to prevent and to manage promptly any early complication after delivery. In this regard it is also important to ensure proper stay for the women and well trained health providers in hospitals whereby providing of first and early PNC check up can be ensured.

Prior to the care after delivery is the assistance of women during delivery as it is an important factor that affects the birth outcome and the health of the mother and the newborn. It also plays an important role on the management of complications that may arise. Concerning assistance during delivery the data in Table 5.3 shows that all the deliveries (100.0%) were assisted by skilled medical personnel. This is similar to the findings of countries of Eastern Europe and Central Asia where nearly all the deliveries were assisted by skilled attendants (Nugula, 2005), but better than in developing countries where about have of women deliver by skilled attendants (Nugula, 2005). The study of MARAM (2004) revealed that about 97.0% of mothers surveyed were assisted in their deliveries by a doctor, a trained nurse or midwife (MARAM, 2004). About 90 % of deliveries were attended by physicians or nurses according to the study of Saudi Arabia (Baldo, Al-Mazrou, Aziz, Farag, and Al-Shehri, 1991). In Egypt, 69% of deliveries were

assisted by medical personnel in 2003 (UNFPA, 2006-a). This result is an indication for policy maker to plan for better equipped hospitals and well trained health providers and to expand the services to cover the population needs.

Concerning the weight of the newborn, as shown in Table 5.3 the percentage of the under weight and the over weight babies were 7.5% and 6.4% respectively. With a little bit differences to the results of PCBS which were 81.6% for normal weight of newborns and 8.3%% and 10.8%% for the under weight and the over weight babies respectively (PCBS, 2005). As the last two groups are considered to be at risk groups, more attention should be paid to them by providing PNC as early as possible to find out any abnormalities or complications and to provide early management, care and referral if needed.

The result of exclusive breastfeeding (79.4%) was high among the study population and has a clear indication that the most women were aware about the benefit of breast feeding and/or the bad economical situation and the increasing poverty do not allow buying artificial milk where breast milk is cheaper.

With respect to whether the women stayed the appropriate time needed in the health facility, where delivery took place, or not, the vast majority (78.2%) of the respondents stayed 12 hours or less. While 21.8% of them stayed more than 12 hours, and the range was from less than 1 hour to 96 hours (when complications or CS deliveries women stayed longer). The median was 3 hours which is a great indication that more than two thirds of delivered women were discharged early from the health facility (table 5.3). This finding is similar to what written in the literature that in hospitals of GS and WB women discharged early after delivery, in some cases within just few hours (Ali, and Nawar, 2000). It is most probably because of the overcrowding at public facilities which gives again an indication for policy makers to rethink this problem specially to prevent complications of delivery.

About 9.7% of the participants experienced complications which mean these women were in need for special attention and care during and post delivery until the time of the PNC visit and for the time after that.

Table (5.3) illustrates also the number of days after delivery regarding the first visit. At the time of the study it was found that 24.2% of the respondents received the care at 6 days or less, 70.4% came at 7 to 14 days and 4.4% came at more than 14 days. As there is no established evidence-based protocol to identify the best time and number of PNC check up visits by a health care provider as there is with ANC (Sines, Syed, Wall, and Worly, 2007), the WHO guidelines on PNC recommend postnatal visits within six to12 hours after birth, three to six days, six weeks, and at six months (6-6-6-6 model) (WHO, 1998; Sines, Syed, Wall, and Worly, 2007).

Nevertheless, this finding of this study is better than the findings in many countries whereas the health care providers across Sub-Saharan Africa keep on advising mothers to come back to the facility for a first post natal check-up at six weeks after birth. 90% of mothers did not receive any PNC within the first six weeks in Ethiopia, (Warren, Daly, Toure, and Mongi, 2006). Also it is better than many developing countries where the uptake of six week post partum visit varies from high level in some countries as in Saudi Arabia (88%), to very low level as in Yemen (6%), in Lebanon it was reported as 39% (Kabakian, Khasholin, and Campbell, 2005). In Egypt only 42.6% of women reported having received postnatal care but most of them (70%) within 2 days of delivery in the year 2003 (UNFPA, 2006-a). This result indicates high compliance with the UNRWA Tl in providing PNC within the first 14 days after delivery, whereas less than the fourth (24.2%) of the respondents received the care within the 6 days after delivery as

recommended by the WHO. Therefore timing of the first visit should be reconsidered to be within the first 6 days of delivery instead of within 14 days.

Table (5.4): Distribution of mothers by aspects of maternal care (examination and investigation) received

Service Received		No.	%
Blood Pressure measurement			
	Yes	253	97.3
	No	7	2.7
Total		**260**	**100.0**
Temperature measurement			
	Yes	168	64.4
	No	93	35.6
Total		**261**	**100.0**
Breast Examination			
	Yes	130	49.8
	No	131	50.2
Total		**261**	**100.0**
Abdominal Examination			
	Yes	181	70.2
	No	77	29.9
Total		**258**	**100.0**
care on episiotomy / scar (among who had)			
	Yes	47	65.3
	No	25	35.7
Total		**72**	**100.0**
H.B % testing for (anemic, Post Partum Hemorrhage, twins,, CS)			
	Yes	101	64.8
	No	58	37.2
Total		**156**	**100.0**
Blood sugar Testing for mother delivered baby weight equal to or more than 4kg			
	Yes	16	94.1
	No	1	5.9
Total		**17**	**100.0**
Iron tablet received			
	Yes	219	84.6
	No	40	15.4
Total		**259**	**100.0**
Referred to hospital (if needed)			
Need referral	Yes	16	6.5
Don't need	No	237	93.5
Total		**253**	**100.0**

5.1.4 Postnatal care provided to mothers:

Table 5.4 illustrates the examinations and investigations received by the respondents where blood pressure examination and blood sugar testing for mothers delivered baby with weight equal to or more than 4kg were the two most frequently received services (97.3%, 94.1% respectively), followed by iron tablets received as a prophylactic measure during nursing (84.6%).

Despite the importance of other services such as care on episiotomy or scar of cesarean section among who had (65.2%), HB% testing (64.8%), temperature measurement (64.4%) and breast examination (49.8%), the provision of these services was not to all the women as shown in table 5.4. Comparing with MARAM study 2004, in Gaza, hemoglobin testing was reported by 95%, blood pressure measurement 100% and abdominal examination 39.6% and examining episiotomy 39.6% while all these results were less in West Bank (MARAM , 2004). The same study also revealed that PNC was more frequently received at UNRWA facilities than governmental ones in both the Gaza Strip and the West Bank.

These findings mean that many women didn't receive some of the essential needed services. And it is worth to mention that the adherence to TI was good in some areas and not as needed in others. This could be attributed to lack of training on TI or lack of supervision or both, as well as it could be due to overload or shortage of health providers. Therefore more training on TI, more supervision and increasing of number health providers of PNC may be also needed in order to adhere more to TI and to provide quality services.

Table (5.5): Distribution of newborns who received postnatal care by aspects of care (examination and investigation) provided

Service received	No.	%
Physical examination by Medical Officer(MO)		
Yes	265	98.1
No	5	1.9
Total	**267**	**100.0**
Weight measurement		
Yes	260	97.3
No	7	2.7
Total	**267**	**100.0**
Length measurement		
Yes	261	97.7
No	6	2.3
Total	**267**	**100.0**
Head circumference measurement		
Yes	258	99.6
No	1	0.4
Total	**259**	**100.0**
Immunization provided		
Yes	249	96.9
No	6*	2.3
NA*	2**	0.8
Total	**257**	**100.0**
Care on umbilical area provided		
Yes	153	60.7
No	66	26.2
NA**	33***	13.1
Total	**252**	**100.0**
Referred to hospital(if needed)		
Needed and referred Yes	8	3.1
Not needed and not referred No	250	96.9
Total	**258**	**100.0**

N* because the six cases were referred to hospital
NA* because the two cases were previously immunized
NA*** because of curing of the umbilical area

5.1.5 Postnatal care received (examination and investigation) regarding newborn:

PNC services provide a great opportunity to benefit the mother and the newborn through many activities that can be offered to both. Table 5.5 summarizes the results of the examination and investigation done to the newborn. These services should be completed to every newborn according to TI (Annex, 5). As shown in Table (5.5) regarding the percentages of newborns received physical examination by Medical Officer, measurement of weight, length and head circumference were very high to reach above 97%. The percentage of immunization of the newborns was 96.9% and not 100% because 6 newborns were not immunized as they were referred to hospital and the other 2 were immunized in a previous visit. Regarding dressing on umbilical area 60.7% of the newborns received this service and 26.2% didn't while 13.1% of them did not need the service because of curing of the area (Table 5.5).

This result is better than that of MARAM study when comparing the findings. As MARAM study revealed that 83.5% of the newborns were given vaccination, the percentages of baby check up and weight measurement were 84.1% and 81.7% respectively (MARAM, 2004). The most frequently reported received aspects of postnatal care were directed to child health such as baby checking, immunization and measuring weight and height (above 90%) (MARAM, 2004).

The finding has a clear indication that there was nearly complete adherence of the providers to the TI regarding examination and investigation of the newborns, also it reflects the commitment of the Palestinians towards their babies especially for immunization, which became as culture for these people. Sustainability and continuous improving the quality of services are required.

Table 5.6 Distribution of mothers by aspect of information and care provided

Information / advice received	No.	%
Mother's nutrition		
Yes	203	78.7
No	55	21.3
Total	**258**	**100.0**
Newborn's Nutrition		
Yes	216	83.1
No	44	16.9
Total	**260**	**100.0**
Rest and sleep		
Yes	152	58.9
No	106	41.1
Total	**258**	**100.0**
Personal Hygiene		
Yes	176	68.0
No	83	32.0
Total	**259**	**100.0**
Care of umbilical area		
Yes	198	77.6
No	57	22.4
Total	**255**	**100.0**
Simple exercises		
Yes	97	37.9
No	159	62.1
Total	**256**	**100.0**
Exclusive breast feeding		
Yes	228	87.4
No	33	12.6
Total	261	100.0
Family planning		
Yes	245	94.2
No	15	5.8
Total	260	100.0
Importance of Immunization		
Yes	200	77.8
No	57	22.2
Total	**257**	**100.0**
Iron tablet intake		
Yes	214	83.6
No	42	16.4
Total	**256**	**100.0**

5.1.6 Information and care provided to mothers:

In general and according to the finding in Table (5.6) there is still a gap between the different kinds of the provided information; not all the women received the information, yet they need them. Moreover the time in this period is the best to provide mothers with needed information. The most frequent information provided was counseling on family planning (94.2%), followed by information and advices provided about exclusive breast feeding and intake of iron tablets and newborn nutrition (above 84.0%). Less information and advices were provided about mother's nutrition, care of umbilical area and importance of the immunization (above 77.0%). The least information provided were about personal hygiene (68.0%), rest and sleep (58.9%) followed by simple exercises (37.9%).

But still the result of this study is better than the results of MARAM (2004) which revealed that about 61.0% of the women received counseling on family planning and the majority of mothers received health education on breastfeeding (85.6%) and umbilical stump care (85.2%) followed by maternal nutrition (71.0%) then maternal hygiene (65.0%) (MARAM, 2004). Furthermore, survey data from the West Bank revealed that a small number of women use family planning methods during post natal period (CDPHC, 2003).

Despite the importance and the essential need of many of this information, not all the women received them even the opportunity for that is very high in this period of time. So, health providers 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 how to deal with them. Adding to that this care will help in preventing and early discovering of complications and managing those which already happened.

Table (5.7) Distribution of mothers by their knowledge of main maternal danger signs

Danger signs	No.	%
Excessive vaginal bleeding		
Yes *unprompted	78	29.9
Yes *prompted	34	13.0
No	149	57.1
Total	**261**	**100.0**
High Fever		
Yes unprompted	73	28.0
Yes prompted	46	17.6
No	142	54.4
Total	**261**	**100.0**
Vaginal discharge with bad smell		
Yes unprompted	50	19.2
Yes prompted	51	19.5
No	160	61.3
Total	**261**	**100.0**
Abscess formation in the breast		
Yes unprompted	41	15.7
Yes prompted	56	21.5
No	164	62.8
Total	**261**	**100.0**
Severely swollen face and hands		
Yes unprompted	35	13.5
Yes prompted	45	17.3
No	180	69.2
Total	**260**	**100.0**

***unprompted:** not prompted by the interviewer
***prompted:** prompted by the interviewer

5.1.7 Mothers knowledge of main maternal danger signs:

Table (5.7) illustrates that the mostly frequently reported known maternal danger signs (unprompted and prompted) were excessive vaginal bleeding (42.9%) and fever (45.6%). On the other hand all the remaining maternal danger signs were reported as less known by the respondents either prompted or unprompted as shown in (Table 5.7) and (Annex, 8).

More than 50% of the women reported having lack of knowledge about some maternal danger signs as shown in (Table 5.7) and (Annex, 8).

The results of a study conducted in Guatemala showed that mothers were more aware of danger signs for babies than for themselves and in the case of general emergency signs, only 19.7% of the women failed to mention at least one danger symptom (Jacobs, Brambila, and Vernon, 2002). While in of MARAM study bleeding (90%) and fever (88.1%) were the most well-known maternal postnatal danger signs (prompted) (MARAM, 2004). These differences will be explained latter.

In general the results have a great indication that the women knowledge about maternal danger sign is very low which needs more concentration on health education and information in this regard especially because most of the women were discharged early from the place of delivery and they may don't notify early to the health center, so recognizing of danger signs is needed in that early period in order to response promptly to any if happened. Training workshops could be helpful in upgrading the provider's knowledge, empower them and to increase their skills and knowledge. This will also enable them to better provision and conveying of the needed information.

Table (5.8) Distribution of mothers by their knowledge of main Newborn danger signs in the postnatal period

Danger signs	No.	%
Sever or prolonged Jaundice		
Yes unprompted	58	22.8
Yes prompted	51	20.1
No	145	57.1
Total	**254**	**100.0**
Cyanosis		
Yes unprompted	48	18.9
Yes prompted	41	16.1
No	165	65.0
Total	**254**	**100.0**
High fever		
Yes unprompted	57	22.4
Yes prompted	33	13.0
No	164	64.6
Total	**254**	**100.0**
Difficult suckling		
Yes unprompted	48	19.1
Yes prompted	38	15.1
No	165	65.7
Total	**251**	**100.0**
Shortness or difficult breathing		
Yes unprompted	41	16.3
Yes prompted	37	14.7
No	174	69.0
Total	**252**	**100.0**

5.1. 8 Mothers' knowledge of main newborn danger signs:

Table (5.8) indicates that the mostly frequently reported known neonatal danger signs (unprompted and prompted) were prolonged jaundice (42.9%) and fever (35.4%) followed by difficult suckling (34.2%) and cyanosis (35.0%) as shown in Table (5.8). About >50% of the women reported having lack of knowledge about some of neonatal danger signs as shown in (Table 5.8) and (Annex, 9).

The result of this study differs in the percentages but similar in the kinds of the most frequently well-known maternal signs from the study of MARAM, which revealed that the mostly frequently reported known newborn danger signs were about prolonged jaundice (94.2%) and fever (90%) (MARAM, 2004). These differences in the reported knowledge about danger signs could be attributed to the different utilized research designs; for example MARAM study was conducted at the national level, household level (WB&GS), while this study was conducted in health facilities. Moreover health reports of MOH for the year 2005 include deterioration of some of health status indicators as a result of the current situation (MOH, 2005). Additionally, the findings could be related to the way by which the mothers were interviewed.

In general women knowledge about maternal and neonatal danger signs is little and needs much improvement therefore more effort could be exerted on providing health education in this regard. Moreover training of health providers is also needed. Providing mothers with health education material about maternal and newborn danger signs could be also helpful.

Table (5.9) Distribution of mothers received PNC according to visits and appointment system

Variable	No.	%
Coming according to previous appointment		
Yes	251	96.5
No	9	3.5
Total	**260**	**100.0**
Frequency of visits		
First	255	99.2
Second	1	0.4
Third	1	0.4
Total	**257**	**100.0**
Mother's knowledge about number of times PNC visits		
One	140	56.9
More than one	65	26.4
Don't Know	41	16.7
Total	**246**	**100.0**
Home visit received		
Yes	12	4.6
No	232	95.1
Total	**244**	**100.0**
Follow up appointment given for newborn		
Yes	257	98.5
No	4	1.5
Total	**261**	**100.0**
Follow up appointment for mother		
Yes	160	61.5
No	100	39.5
Total	**260**	**100.0**
Reasons for follow up appointment for mother: (if given)		
Test for Blood sugar	9	6.2
Measuring Blood pressure	24	16.4
Follow up(routine)	0	0.0
Family Planning	113	77.4
Total	**146**	**100.0**

5.1.9 Mothers received PNC according to visits and appointment system:

As shown in Table (5.9) the vast majority of the respondents (96.5%) visited PNC unit according to previous appointment. This finding is better than the finding of the study conducted in Lebanon which revealed that 86.0 % of the women who attended post partum visit were given an appointment (Kabakian, Khasholin, and Campbell, 2005). Therefore it is worth pointing that the appointment system is functioning very well in the PNC unit. This is an indication to get benefit of it in order to organize the work and to decrease waiting time and overcrowdness; especially when the appointment is given not only by date but also by time.

Table (5.9) also shows that this visit was the first one after delivery for the vast majority (99.2%) of the respondents. By answering the question about the number of times of PNC visits, the researcher observed that the respondents were uncertain and most of them gave any number just for answering. This indicates a lack of awareness and knowledge of the women about the frequency of visits which means that there is a need to provide women with such information in particularly in ANC and also in PNC sessions.

Regarding respondents received home visit the finding in Table (5.9) illustrates that only 4.6% of them were home visited. This is most probably because PNC services are mostly provided at the health centers by giving an appointment immediately after notification of the delivery while home visit is to be carried out (according to screening of cases) only for selected cases namely who beyond the expected date of delivery or women with high risk pregnancy.

By reviewing the literature, in most developing countries, however, PNC may only occur if provided through home visits, because geographic, financial, and cultural barriers limit care outside the home (Sines, Syed, Wall, and Worly, 2007). According to DHS data in

Ethiopia, 90 % of mothers did not receive any PNC within the first six weeks. In Eritrea, 92% of women giving birth at home received no PNC within the first six weeks. Similarly, 85% of women giving birth at home in Mali and 70% of women giving birth at home in Rwanda received no PNC at all. (Warren, Daly, Toure, and Mongi, 2006). Even when women delivered at health facilities the early discharge makes home visit essential for supporting the woman to take better care of herself and her baby and allow involvement of the family in care and health related decisions.

Unfortunately home visits don't cover what really should be done and sometimes it done only to notify the mother to come to the health center. Therefore home visit program could be better monitored and followed up.

Regarding follow up appointment 98.5% of the respondents reported given a follow up appointment for their newborns, much less was that given for mothers (61.5%). In this regard it is worth to mention that the appointment for the newborn is given according to the known growth monitoring and immunization schedule, while the follow up appointment for mothers is only to be given for a reason as illustrated in (Table 5.9). This reveals that the most frequent appointment were given for family planning, for blood pressure measurement or testing blood sugar but none of the respondent was given an appointment (0%) for routine follow up of PNC as a check up visit at 42 days. In developing countries the uptake of six week post partum visit varies from high level in some countries Saudi Arabia 88%, to very low level in Yemen 6%, in Lebanon it is reported as 39% without organized system of home visits or supported community program (Kabakian, Khasholin, and Campbell, 2005).

This result indicates that a routine follow up appointment at 6 weeks after delivery was not adopted by UNRWA whilst it is recommended by the WHO. Even that there is still a great

opportunity to provide the women another appointment especially because as shown in the study 39.5% of them didn't have it. This second visit is necessary to provide family planning services, to encourage breast feeding, to follow up anemic cases and to provide iron tablets and to recognize any complication from the normal as this time is the end of the puerperium. Therefore, it is important to mention that first visit is better to be within the first six days and another check up visit for the women is needed at the end of the six week after delivery.

Table*(5.10) Mother's perspective about communication, interpersonal relationship and privacy

variable	No.	%
Relationship with health provider		
Good	253	96.9
Moderate	8	3.1
Total	**261**	**100.0**
Welcoming of the mother		
Good	250	95.8
Moderate	11	4.2
Total	**261**	**100.0**
Respect for complaint		
Good	247	94.6
Moderate	14	5.4
Total	**261**	**100.0**
Respect for confidentiality		
Good	242	92.7
Moderate	19	7.3
Total	**261**	**100.0**
Concerning for Privacy		
Good	240	92.3
Moderate	20	7.7
Total	**260**	**100.0**
Answering of mother's questions		
Good	241	94.1
Moderate	15	5.9
Total	**256**	**100.0**

* In this Table the scale is composed of 3 level good, moderate and bad; in all of the components bad was 0.0%

5.1.10 Mothers' perspective about communication interpersonal relationship and privacy:

In Table (5.10) it seems that the respondent's has good relationship with the providers. Also they felt highly welcome and respected. The vast majority of them felt that their confidentiality and privacy was good maintained.

These findings are much better than that in the study which conducted by Ali and Nawar in the year 2000 in the WB and the GS which showed that, the privacy was lacking during examination in most of the visited clinics (Ali, and Nawar, 2000). In contrary, a study conducted in five European countries showed that mothers in Finland, Germany and Scotland felt their privacy was clearly maintained better than mothers in Greece and Spain and also the differences in staff perceptions of privacy were less clear-cut (Leino-kilpi, et al., 2002).

Annex (10) illustrates the participant point of view about the time of staying from arrival until receiving all the services and about the waiting time before receiving these services. Regarding that 60.5%, 65.1% of the respondents respectively found these times suitable. While 36.8%, 26.8% respectively found it long as illustrated in Annex (10), which means that many of the respondents with their newborns had to wait for a long time in order to get the services and many of them had to wait for a long time until receiving all the services despite that the vast majority of them had an appointment. Therefore root causes should be sought and discussed in order to find true solutions for long waiting time specially the women come not alone but with their newborns which need more calm environment. Furthermore appointment should be given upon agreement and not only by date but also by time. Providers should know how to gain commitment from the women about this appointment, too.

Table (5.11) Distribution of mothers by their perspective of the level of services

Items	No.	%
Receiving satisfying services		
Yes	239	91.6
To some extent	20	7.7
No	2	0.8
Total	**261**	**100.0**
Advice friends to receive the same services		
Yes	237	90.8
To some extent	23	8.8
No	1	0.4
Total	**261**	**100.0**
Intention to continue receiving services in this health center		
Yes	252	96.6
To some extent	9	3.4
No	0	0.0
Total	**261**	**100.0**

5.1.11 Mothers' Perspective about the level of services:

As shown in Table (5.11) the vast majority (91.6%) of the respondents was satisfied of the services they received and 96.6% reported intending to continue receiving the services at the same health center and 90.8% reported intending to advice friends to receive the same services at the same health center, too.

These results are encouraging, but the question is still raised whether the mother really aware about the services they have to receive or when even little done to them, they become satisfied! This may be an indication for a further study.

Table (5.12) Comparison between health information and counseling received and Governorate, and its relationship with current age and parity

Independent variable	Categorization	N	Mean		Sum of Squares	df	Mean Square	F	Sig.
Governorate	North Gaza	44	16.4773	Between Groups	105.779	4	26.445	3.597	**0.007**
	Gaza	64	18.2344	Within Groups	1683.370	229	7.351		
	Mid Zone	43	17.5581	Total	1789.150	233			
	Khan Younis	61	17.4754						
	Rafah	22	18.6364						
	Total	**234**	**17.6197**						
Age	25 Yrs and less	113	17.3982	Between Groups	15.071	2	7.535	0.981	**0.376**
	From 26 to 35 Yrs	98	17.9184	Within Groups	1774.079	231	7.680		
	More than 35 Yrs	23	17.4348	Total	1789.150	233			
	Total	**234**	**17.6197**						
Parity	2 times and less	77	17.2727	Between Groups	14.263	2	7.132	0.928	**0.397**
	From 3 to 6 times	127	17.7638	Within Groups	1774.886	231	7.683		
	More than 6 times	30	17.9000	Total	1789.150	233			
	Total	**234**	**17.6197**						

5.1.12 Relationship of information and counseling received and Governorate, and its relationship with current age and parity:

One Way ANOVA test was used to examine relationship between some dependent and independent variables related to the first questionnaire analyses of this study.

As illustrated in Table (5.12), regarding the governorates, there were statistical significant differences between the different governorates with respect to health information and counseling received (P-value 0.007). The highest mean were for Rafah and Gaza Governorates (18.6, 18.2 respectively) and the lowest mean was for North Gaza (16.5).

There were no statistical significant differences between current age and parity with respect to health information and counseling received (P value = 0.376, P value = 0.376 respectively) (Table 5.12). This result was may be due to the transfer of Jabalia health center (located in North Gaza) to another building which has unsuitable working conditions and as a result the health providers and the services were negatively affected. But also training and proper supervision are still desired. Raising awareness of women in this area is required, too. Benefit from best practice will help in improving the quality of care.

Table (5.13) Comparison between knowledge of mothers about maternal danger signs by governorate, current age and parity

Independent variable	Categorization	N	Mean		Sum of Squares	df	Mean Square	F	Sig.
Governorate	North	53	15.8491	Between Groups	1630.562	4	407.64	9.27	**0.001**
	Gaza	71	17.9014	Within Groups	10944.90	249	43.955		
	Mid Zone	44	15.5682	Total	12575.46	253			
	Khan Younis	63	13.4127						
	Rafah	23	22.5217						
	Total	**254**	**16.3740**						
Age	25 Yrs and less	118	15.2966	Between Groups	275.068	2	137.53	2.806	**0.062**
	From 26 to 35 Yrs	107	17.5047	Within Groups	12300.401	251	49.006		
	More than 35 Yrs	29	16.5862	Total	12575.469	253			
	Total	**254**	**16.3740**						
Parity	2 times and less	85	15.2471	Between Groups	182.210	2	91.105	1.845	**0.160**

	From 3 to 6 times	131	16.7557	Within Groups	12393.258	251	49.376		
	More than 6 times	38	17.5789	Total	12575.469	253			
	Total	**254**	**16.3740**						

5.1.13 Comparison between knowledge of mothers about maternal danger signs by governorate, current age and parity:

As shown in Table (5.13), concerning the governorates, there were statistical significant differences between the different governorates with respect to knowledge of mothers about maternal danger signs (P-value 0.001). Results showed that the highest mean was for Rafah governorate (22.5) and the lowest means was for Khan Younis (13.4). There were no statistical significant differences between current age and parity with respect to knowledge of mothers about maternal danger signs (P value 0.062, P value 0.160 respectively). These results lead to that, the increasing of awareness of mothers, more training and supervision and the identifying of best practice to be applied in other health centers are all needed to improve the quality of care in these health centers in each governorate accordingly.

Table (5.14) Comparison between knowledge of mothers about newborn danger signs by governorate, current age and parity

Independent variable	Categorization	N	Mean		Sum of Squares	df	Mean Square	F	Sig.
Governorate	North Gaza	48	12.708	Between Groups	945.080	4	236.270	5.571	**0.001**
	Gaza	70	15.485	Within Groups	10004.37	242	41.340		
	Mid Zone	40	14.275	Total	10949.45	246			
	Khan Younis	64	13.125						
	Rafah	25	19.400						
	Total	**247**	**14.534**						
Age	25 Yrs and less	117	14.307	Between Groups	76.042	2	38.021	0.953	**0.427**
	From 26 to 35 Yrs	102	15.107	Within Groups	10873.41	244	44.563		
	More than 35 Yrs	28	13.3929	Total	10949.45	246			
	Total	**247**	**14.534**						

Parity	2 times and less	83	14.228	Between Groups	76.095	2	38.048	0.854	**0.427**
	From 3 to 6 times	129	15.015	Within Groups	10873.36	244	44.563		
	More than 6 times	35	13.485	Total	10949.45	246			
	Total	**247**	**14.534**						

5.1.14 Comparison between knowledge of mothers about newborn danger signs by governorate, current age and parity:

As shown in Table (5.14), there were statistical significant differences between the different governorates with respect to knowledge of mothers about newborn danger signs (P value = 0.001). Results showed that the highest mean was for Rafah governorate (19.4) and the lowest means was again for North Gaza (12.7). There were no statistical significant differences between current age and parity with respect to knowledge of mothers about newborn danger signs (P value = 0.427, P value = 0.427 respectively).

These results point at that increasing supervision is needed in some health centers while identifying best practices in others may help to upgrade the quality of services by adoption and following up. More training of the health providers is also recommended especially in North Gaza.

5.2 Findings pertaining to providers

5.2.1 Characteristics providers:

Table (5.15) summarizes the Characteristics of the respondents of health providers in this study.

Table (5.15) Distribution of providers by occupation, education, experience and training courses

Variable	No	%
Occupation		
Midwives	20	36.3
Staff Nurse	20	36.5
Medical Officer	15	27.2
Total	**55**	**100.0**
Education		
Diploma	25	44.6
Bachelor degree or High Education	31	55.4
Total	**56**	**100.0**
Years of experience		
10 years and less	17	30.9
More than 10 years	38	69.1
Total	**55**	**100.0**
Years of experience at UNRWA		
10 years and less	28	50.9
More than 10 years	27	49.1
Total	**55**	**100.0**
Training courses received in MCH		
Yes	44	78.6
No	12	21.4
Total	**56**	**10.0**

As it is shown in Table (5.15), about 36.3% of the respondents were midwives, 36.5% were staff nurses and 27.2% were medical officers, 44.6% of them have had either Diploma and 55.4% of them have Bachelor degree or High Education (Master degree). This means that at UNRWA HCs in the Gaza Strip PNC is provided by skilled health professionals similar to developed countries. In England and Wales, PNC is provided by healthcare professionals who work within the acute and primary healthcare sectors (NCC-PC, 2006), while in Saudi Arabia PNC attendance was 88 % mainly by physicians than nurses (Baldo, Al-Mazrou, Aziz, Alagh, and Al-Shehri, 1991). In Namibia PNC coverage was 50% by a doctor or trained midwife (Ngula, 2005). In developing and poor countries

most newborns and mothers do not receive postnatal care services from a skilled health care provider (Sines, Syed, Wall, and Worly, 2007).

Approximately half (49.1%) of the providers in this study reported having more than 10 years experience at UNRWA but still 21.4% hadn't attended PNC or MCH training courses, yet. These findings mean one in every 5 providers still in need for training courses. Therefore training for that group is highly recommended.

Table (5.16) Distribution of providers by pattern of delivery of PNC provided to the MCH unit section

Variable	No.	%
PNC services delivered daily		
Yes	25	44.6
No	31	55.4
Total	**56**	**100.0**
PNC services delivered any time		
Yes	44	78.6
No	12	21.4
Total	**56**	**10.0**
Availability of appointment system		
Yes	56	100.0
No	0	0.0
Total	**56**	**10.0**
Availability of home visits		
Yes	56	100.0
No	0	0.0
Total	**56**	**10.0**
Target group of home visits		
All mothers	21	38.9
Mothers with Risk Pregnancy	33	61.1
Total	**54**	**100.0**

5.2.2 Pattern of delivery of PNC provided to the MCH unit section:

As illustrated in Table (5.16), appointment system and home visits were available in all health centers (reported by 100% of the respondents) but 44.6% of respondents reported

delivering the services on daily basis. On the other hand 78.6% of them reported delivering services any time (when the mother comes). From the researcher observation; the delivery of the services depends on the size of the health centers, small health centers with less number of staff and rooms provide PNC services only 2 to 3 days a week. This finding gives an indication that there is a great opportunity to proper use of the appointment system in order to get more organized work and to control the clients flow and lessen the crowd in the HCs.

Table (5.17) Distribution of providers by their perspective basic supplies and equipment, physical facilities and infrastructure

Variable	No.	%
Filing and registration of the newborn/ mother		
Yes	56	100.0
No	0	0.0
Total	**56**	**100.0**
Availability of equipment and tools for services		
Yes	51	91.9
No	5	8.9
Total	**56**	**100.0**
Most laboratory investigation needed done inside the clinic		
Yes	52	96.3
No	2	3.7
Total	**54**	**100.0**
Availability of special place for examination and counseling		
Yes	40	71.4
No	16	28.6
Total	**56**	**100.0**
Waiting rooms wide and suitable		
Yes	26	46.4
No	30	53.6
Total	**56**	**100.0**
Availability health education material		
Yes	55	98.2
No	1	1.8
Total	**56**	**100.0**

5.2.3 Availability of basic supplies and equipment, physical facilities and infrastructure:

The findings that reflect the availabilities of supportive materials, equipment, tools and places needed to provide PNC services are summarized in Table (5. 17). It appears that the availabilities of filing and registration system, equipment and tools, laboratory investigations and health education material were very high (above 96%). These findings were better than the findings of MARAM study where basic functional equipment were found in more than 90% of the surveyed facilities including UNRWA (MARAM, 2004). In the same study UNRWA HCs were equipped with laboratories services by 82.4% which was better than the governmental facilities (62.1%) in the Gaza Strip

On the other hand, as shown in this Table, special places for examination and counseling were less available to the extend that more than one quarter (28.6%) of the respondents reported not having special places for examination and counseling in their health centers. This means that in some health centers, examination of mothers and vaccination of newborns occur in unsuitable rooms or sometimes the examination of mothers for PNC and women for ANC may occur in the same room as well. In addition to that 53.6% of the respondents, that is more than the half of them, reported having not adequately spaced and suitable waiting rooms in the health centers where they were working at the time of the study. It means that some health centers do suffer from overcrowdness because of narrow unsuitable waiting rooms. This findings point at that the infrastructure of some health centers such as waiting and examination rooms are in need for great support to correspond the ever increasing demand of UNRWA services including PNC.

Table (5.18) Distribution of providers by their Knowledge about PNC -TI

Variable	No.	%
Availability of guideline or TI		
Yes	56	100.0
No	0	0.0
Total	**56**	**10.0**
Location of TI		
In drawer	18	32.7
Senior Medical Officer desk	25	45.5
In the cupboard	8	14.5
Others	4	7.3
Total	**55**	**100**
Routine no. of PNC visits According to TI		
One	23	43.4
Two	17	32.1
More than 2	13	24.5
Total	**53**	**100.0**
Another appointment for PNC should given to mother		
Yes	23	41.1
According to need	33	58.9
Total	**56**	**100.0**
Services provided according to TI regularly		
Yes Always	43	76.8
Sometimes	13	23.2
Total	**56**	**100.0**
Reasons for not always implementing the TI		
Difficult to implement the TI	4	30.8
A lot of patient	9	63.2
Total	**13**	**100.0**
No. of PNC visits according personal opinion		
many	1	1.8
Suitable	43	76.8
Few	12	21.4
Total	**56**	**100.0**

5.2.4 Providers' Knowledge about PNC TI:

As shown in Table (5.18) all the respondents (100%) reported knowing the presence of TI, but they answered differently regarding its location, approximately 45.5% of them reported that the TI was to be found in the Senior Medical Officer desk, 32.7% of them reported that the TI was in the drawer. This gives an indication that the TI was not directly in the hands of the health providers to be used according to need. Concerning providing the services according to the TI regulrly, about 76.8% of the respondents reported providing PNC services according to TI always and regularly. Of them 23.2% reported that they only sometimes did that, and the reasons for that were as shown in the same table either due to over load (a lot of clients) or because they found that the TI was difficult to be implemented (Table 5.18). In MARAM study the use of protocol of PNC among the facilities surveyed was higher in the West Bank (69%) than in the GS (43.8%) (MARAM, 2004), but in other study the physicians didn't have standard protocols to use or to follow in PNC (Ali, and Nawar, 2000).

Another appointment for PNC should be given to all mothers according to the opinion of 41.1% of the respondents while 58.9% of them prefered to follow the TI and to give another appointment only according to need of the woman condition.

In general, providers should be familiar with TI, its contents and place, in addition, more attention should be paid to provide the services according to it in good quality of care for the sake of the clients. In this regard training of providers on TI and proper monitoring of their work are needed especially to the providers who found difficulties in providing services according to the TI as well as to newly recruited staff members.

Table (5.19) Distribution of providers by aspect of PNC services provided to mothers (examination and investigation)

Variable	No.	%
Blood Pressure measurement		
Yes	55	98.2
No	1	1.8
Total	**56**	**100.0**
Breast Examination		
Yes	50	90.9
No	5	9.1
Total	**55**	**100.0**
Temperature measurement		
Yes	48	85.7
No	8	14.3
Total	**56**	**100.0**
Abdominal Examination		
Yes	50	89.3
No	6	10.7
Total	**56**	**100.0**
Episiotomy checking (if present)		
Yes	42	76.4
No	13	23.6
Total	**55**	**100.0**
Dressing on the wound of caesarean section (if present)		
Yes	46	82.1
No	10	17.9
Total	**56**	**100.0**
Abnormal vaginal discharge checking		
Yes	40	74.1
No	14	25.9
Total	**54**	**100.0**

5.2.5 Services provided to mothers (examination and investigation):

The findings in the Table (5.19) indicate that the study subjects have a good compliance with the TI in the most areas specially regarding measuring blood pressure (98.2%) examining woman's breast (90.9%), measuring temperature (85.7%) examining the abdomen (89.3%) (Table 5.19). Only 74.1% of the study subjects reported asking about vaginal discharge in spite of its importance especially to prevent or discover problems such as puerperal sepsis or pelvic inflammatory disease. 100% of them reported testing of fasting blood sugar and 98.2% reported measuring of blood pressure at the day 42 after delivery (Annex, 11). About 91.1% of the respondents reported giving iron tablet for 3 months after delivery (Annex, 12). In contrary, only the half of the respondents (50.9%) reported doing follow up of anemic cases and only 67.9% of them reported requiring HB% test after one month post delivery for anemic mothers(Annex, 12).

This poor follow up of anemic mothers post delivery is considered to be one of the weakest points regarding compliance to TI; as it is well known that anemia among nursing mothers is a public health problem in the GS (UNRWA, 2006). This was proved by a study conducted by UNRWA in the year 2004 where the prevalence of anemia among nursing mothers was 45.7 % (UNRWA, 2006).

This means that much more attention should be paid to anemia starting in pregnancy and even before if possible, by good management including providing iron tablets and folic acid tablets, health education, follow up of cases and testing HB% monthly for all anemic nursing mothers until recovery according to the TI. As well as providing iron tablets for three consecutive months as a prophylactic measure for all none anemic nursing mothers. All of this needs to be performed under close supervision and follow up.

Table (5.20) Distribution of providers by aspects of services provided to newborn (examination and investigation)

Variable	No.	%
Physical examinations by medical officer		
Yes	56	100.0
No	0	0.0
Total	**56**	**100.0**
weight , length, Head circumference		
Yes	56	100.0
No	0	0.0
Total	**56**	**100.0**
care on umbilical area		
Yes	50	90.9
No	5	9.1
Total	**55**	**100.0**
Immunization provided		
Yes	55	98.2
No	1	1.8
Total	**56**	**100.0**
Screening for PKU (phenylketonurea)		
Yes	55	98.2
No	1	1.8
Total	**56**	**100.0**

5.2.6 Services provided to newborn (examination and investigation):

As shown in Table (5.20) all the aspects regarding newborn examinations and care reported provided in more than 98.0%. Exception was being care on umbilical area (90.9%). This result was much better than the result in the study done by Ali and Nawar 2000, which revealed that the health care providers were lacking in health education and counseling skills and the physicians didn't have standard protocols to use or to follow in PNC (Ali, and Nawar, 2000). These high percentages of findings in our study give an indication that the health care providers have a very good compliance with the technical instructions regarding the services that should be provided to the newborns. So, sustainability is needed.

Table (5.21) Distribution of providers by aspects of information and counseling provided during PNC

Variable	No.	%
Information about PNC provided during ante natal care(ANC)		
Yes	50	89.3
No	6	10.7
Total	**56**	**100.0**
Rest and sleep for baby and mother		
Yes	46	82.1
No	10	17.9
Total	**55**	**100.0**
Mother nutrition		
Yes	53	96.4
No	2	3.6
Total	**55**	**100.0**
Personal hygiene of mother		
Yes	48	85.7
No	8	14.3
Total	**56**	**100.0**
Care of umbilical area		
Yes	55	98.2
No	1	1.8
Total	**56**	**100.0**
Family planning		
Yes	54	96.4
No	2	3.6
Total	**56**	**100.0**
Investigation needed for mother		
Yes	56	100.0
No	0	0.0
Total	**56**	**100.0**
Breast care		
Yes	56	100.0
No	0	0.0
Total	**56**	**100.0**
Exclusive breast feeding		
Yes	52	96.3
No	2	3.7
Total	**54**	**100.0**
Personal hygiene of the newborn		
Yes	51	91.1
No	5	8.9
Total	**56**	**100.0**
The way of iron tablets intake		
Yes	56	100.0
No	0	0.0
Total	**56**	**100.0**

5.2.7 Information and counseling provided during PNC:

Table (5.21) reflects that the vast majority of the study subjects (89.3%) reported giving information to mothers about PNC during ANC. Providers reported counseling the mothers about the most important components of mother and newborn care during the postnatal period such as mother nutrition, family planning, breast care, exclusive breast feeding and care of the umbilical area was in more than 98% (Table 5.21). Rest and sleep for baby and mother and personal hygiene were reported less provided. In other study, most specialized counseling services of PNC were available in more than 80% of facilities in West Bank and Gaza Strip, less was in family planning (65.3%), personal hygiene (70.3%), and immunization (73.9%) (MARAM, 2004). Therefore increasing women awareness need continuous counseling and health education and improving counseling skills and knowledge of the providers together will help much in achieving our goal of providing quality services.

Table (5.22) Distribution of providers by their perspective about interpersonal relationship, communication and level of provided services

Variable	No.	%
Interpersonal relationship		
V. good	65	100.0
Good	0	0.0
Bad	0	0.0
Total	**56**	**100.0**
Respect and response positively to mother complaint		
V. good	55	98.2
Good	1	1.8
Bad	0	0.0
Total	**56**	**100.0**
Level of provided services		
V. good	48	85.7
Good	8	14.3
Bad	0	0.0
Total	**56**	**100.0**

5.2.8 Providers perspective about interpersonal relationship, communication and level of provided services:

High quality health services should be provided to mothers throughout the continuum of care in which women and health providers are partners in care, therefore the health providers' interpersonal skills is considered to be one of the key determinants of quality (WHO, 1998-a). As shown in table (5.22) the point of view of the providers about their interpersonal relationship with the clients was very good. Their perception about respect and response to mother complaint was positive. From their perspective they provided very good level of services. In contrast, lacking in communication skills of the health care providers was one of the finding of the study of Ali and Nawar (Ali, and Nawar, 2000). This result gives an indication that the health providers are ready to have very good relationship with the women as partners.

5.3 Comparison between providers and women by selected maternal and neonatal aspects

Table (5.23) Comparison between providers and women by selected aspects of maternal examination and investigation

Service delivered /received	% of Health providers reported providing the services	% of women reported receiving the services
Temperature measurement	**85.7**	**64.4**
Breast examination	**90.9**	**49.8**
Abdominal examination	**89.3**	**70.2**
Dressing on episiotomy(among who had)	**76.4**	**65.3**
Hb% testing for mother with (Anemia, CS, Postpartum hemorrhage and Twins)	**100**	**64.8**
Blood pressure measurement	**98.2**	**97.3**
Sugar testing for mother delivered baby 4 Kg or more.	**100**	**94.1**
Iron tablets received /provided	**91.1**	**84.6**

5.3.1 Comparison between providers and women by selected aspects of maternal examination and investigation:

In Table (5.23), it appears that the percentages of the health providers reported providing the services were higher than that of the women for the same services. The differences between both groups were quite clear in most aspects especially in temperature measurement, breast examination and HB% testing (Table 5.23). Exceptions were being for blood pressure measurement (98.2% of providers, 97.3% of women) and sugar testing (100%, 94.1% respectively) in which there were no significant differences in both groups. These results could be an indication that the providers tried to show that they provide perfect services whereas (as the mothers reported) that was not proved by mothers. Therefore more supervision, monitoring and follow up of care providers are needed regularly and in daily basis.

Table (5.24) Comparison between Providers and women by selected aspects of health information and advice provided /received

Health information / advice	% of Health providers reported providing the services	% of women reported receiving the services
Mother nutrition	**96.4**	**78.7**
Exclusive breast feeding	**96.3**	**87.4**
Family Planning	**96.4**	**94.2**
Iron tablet intake	**100%**	**83.6**
Personal hygiene of mother	**85.7**	**68.0**
Care of umbilical stump	**98.2**	**77.6**
Rest & sleep	**82.1**	**58.9**

5.3.2 Comparison between providers and women in health information and advice provided /received:

The Table (5.24) demonstrates that in this comparison family planning services reported provided and received nearly equally by both groups. In contrast, the variation is clear between both groups in all the other remaining services (Table 5.24). A big gap was obvious in information and advices given/provided, about rest and sleep and also about personal hygiene of mother. That means that some of the women didn't receive services they needed and the providers negligence was clear in providing some of the care despite its importance. Therefore, managers are required to know the reasons behind that; one of them could be lack of motivation of staff, in this case managers are required to know what motivate their staff and respond accordingly. Again it could be lack of supervision and follow up of the care providers therefore both are needed to be done regularly and in daily basis. Moreover training may be needed to increase knowledge and skills of the health providers.

Table (5.25) Comparison between Providers and women by selected aspects of newborns PNC provided /received

Service delivered /received	% of Health providers reported providing the services	% of women reported receiving the services
Physical examination by medical officer	**100**	**98.1**
Measurement of: Weight	**100**	**97.3**
Length	**100**	**97.7**
Head circumference	**100**	**99.9**
Care on umbilical area	**90.9**	**60.7***
Immunization	**98.2**	**96.9**

*** 13.1% of the rest didn't t need this care because of curing of the umbilical area**

5.3.3 Comparison between Providers and women by selected aspects of newborns PNC provided /received:

As shown in Table (5.25) there are nearly no considerable differences between both the health providers and the women in all aspects regarding the newborn which gives an indication that the providers have most properly high compliance to the TI in this regard and also gives an indication if compared with table 5.23 and table 5.24 that the health providers give more attention to newborn more than to mothers. Concerning that, health care providers while given this opportunity to have both the mother and her newborn should take it to provide the needed information and care to both. This is very important as mother always neglect herself health and think more in her baby's health, on the other hand women also were be neglected by the family as the concern is always focused on the baby . Therefore, health providers should be more sensitive to the need of the mothers and provide the proper and quality care, encourage, empower and promote them towards their good health and well being.

Chapter 6 Conclusions and Recommendations

This chapter explains the study conclusions that are drawn from the study and the recommendations made to improve on the level of providing quality postnatal services in the study area.

6.1 Main conclusions

The aim of this study was to assess postnatal care services provided to mothers and their newborns at the UNRWA health centers in the Gaza Strip. It was also done in order to

asses the various activities that are provided to mothers and newborns, to ascertain the extent of the compliance of the providers with the technical instructions and to highlight the weak and strong areas of the provision of care. Two self constructed questionnaires were used; one for mothers and the other for the health providers. A multi-stage sampling method was used for the mothers' sample resulting in a high response rate of 96.7%, while all the PNC health providers who provided the services in the selected health centers, at the time of the study, were included with 96.6% response rate.

The study showed that the main components of PNC services regarding the mothers and their newborns were more or less provided to the most of them. These services included physical examination, investigations, immunization, health information and counseling especially about breastfeeding, mother's and newborn's nutrition and hygiene, iron tablet intake and family planning.

The findings of the study also showed that the TI were available (100%) in all health centers and located in known places. In addition, the study revealed that the adherence to the TI was high in certain areas but not as needed in others.

Despite the fact that 76.8% of the health providers reported providing services according to TI regularly, 23.2% reported that the big number of clients and the difficult implementation of the TI were the main reasons hindering them to provide the services regularly.

The study revealed that the appointment system is functioning very well. The study showed also that 96.5% of the mothers visited PNC unit according to previous appointment, yet, from the women (94.8%) who came for first visit PNC within the first 14 days of delivery only 24.4% came within the first 6 days (as recommended by the WHO). In this regard, it is worth mentioning that the high percentage (78.2%) of the early (12

hours or less) discharge of the women from the place of delivery is a strong indication for the prompt provision of early postnatal care. This is very important for the mothers and their newborns in order to provide early management of complications and prevent morbidities, disabilities and mortalities. This is essential because one of every 10 women experienced complications as shown in the study findings. This allows the researcher to conclude that it is an opportunity to control the time of PNC visits through applying of the good functioning of-and the high compliance with- the existing appointment system.

The study showed that the most frequently reported aspects received of postnatal care (examinations and investigations) were directed to newborn health such as physical checking, immunization and measuring weight, height and head circumference (above 97%). This is considered as a strong area and showed a highly adherence to the TI. In contrast, regarding the mother, the study revealed that investigations and examinations were varied from more than 92% for: blood pressure examination, blood sugar testing and iron tablets received to less than 64% for: abdominal examination, HB% testing, temperature measurement and breast examination. Concerning that, only the half of the health providers respondents (50.9%) reported doing follow up of anemia cases and only 67.9% of them reported requiring HB% test after one month post delivery for the same cases. This should not be neglected by any means, as the prevalence of anemia among nursing mothers is a public health problem and was as 45.7% at UNRWA Fields of Operation in 2004 (UNRWA, 2006).

Concerning the health information and advices received, results of this study revealed that a great proportion of mothers had received health education mainly on family planning (94.2%), exclusive breastfeeding (87.4%) and the intake of iron tablets (83.6%). However, fewer mothers reported receiving health education on other important issues such as

personal hygiene (68.0%) rest and sleep (58.9%) and simple exercises (37.9%). This signifies that there is still a gap between the different kinds of information received by the respondents where many women did not receive some of the essential needed services. The adherence to the TI was weak in those areas. This could be attributed to overload, shortage of health providers and/or lack of supervision. As well as it could be due to lack of training on TI, whereas the study showed that 21.4% of the health providers have not received training courses in MCH yet. Therefore, more effort should be exerted to find out the underlying real causes in order to improve the compliance with the TI.

The results of this study have a great indication that the women's knowledge about maternal and newborn danger signs was low as nearly more than 50% of the women reported having lack of knowledge about some maternal and newborn danger signs which needs more concentration on health education in this regard.

In addition, the study revealed that there were quite differences between most of what the women had received and what the providers had reported about the services provided regarding the mothers. Whereas there were clear similarities by doing the same comparison regarding the newborns which allow the researcher to conclude and prove again that the PNC services were directed more to newborns than to mothers.

According to the study results, it is also worth to mention, that despite the presence of the most basic supplies and equipment such as lab. investigation and health education material, the lack of special places (28.6%) for examination and counseling and the narrow and unsuitable waiting rooms (53.6%) (As had reported by the providers) were still big problems in some health centers. This may result in preventing the privacy of care, at the same time it may help increasing the waiting time that some of the women (36.8%) had

reported as long. So, in order to provide quality services the quality of physical facilities and infrastructure as one of key determinants of quality should be improved.

As it shown in the study, there were statistical significant differences between the different governorates with respect to knowledge of mothers about maternal and neonatal danger signs and with respect to health information and counseling received as well. On the other hand, there were no statistical significant differences between current age and parity with respect to knowledge of mothers about maternal or neonatal danger sign or to health information and counseling received. These results indicate more supervision and training on counseling skills as well as increasing women awareness through health education is needed.

This study also revealed that the health providers and the women have good relationship and they keep respect to each others and the women were satisfied with the services they received.

6.2 Recommendations

Postnatal care services provided to mothers and their newborns at UNRWA health centers in Gaza cover mainly the most components of PNC and the compliance with the TI was good in certain areas and not as needed in others. However, further efforts are needed to strengthen the weak points, to bridge the gaps and to encourage compliance with the TI in order to improve the quality of PNC services. The researcher suggests recommendation that could improve the services through considering the finding of the study as follows:

- Because postnatal care services are integrated part of mother and child health care services, policy makers and program managers are required to pay more attention to this important component and continuously support it. This is very important because PNC services are still perceived not as important as the ANC services.
- This support can be manifested by regular revision and updating of the TI (as the last revision was five years ago), by setting indicators which help in tracking and evaluating these services.
- The number of routine PNC visits might be increased to match with the WHO recommended visits schedule (ideally, 6 hrs, 6 days, 6 weeks, 6 months). At this stage, 2 visits instead of one could be a practical solution.
- The mothers' component of the PNC services require more attention and the gaps revealed in this study should be addressed (breast examination, abdominal examination, hemoglobin examination, following up of anemic cases).
- Upgrading health provider's skills and knowledge and increasing their commitment, their interpersonal skills and their compliance to the TI is a continuous process that could be at least partially achieved through providing practical training.

- Developing more effective supervisory systems are most likely to improve the revealed performance gaps in postnatal services.
- Mothers' knowledge of danger signs should be a focus and concentrated health education messages should be provided.
- Postnatal care services related infra-structure should be supported such as ensuring the availability of appropriate halls, convenient examination rooms and adequate privacy.
- Counseling services pertaining to mothers need to be strengthened particularly personal hygiene, rest and sleep and physical exercise.
- The revealed communication gaps between providers and clients perspectives about the provided services should be addressed possibly by appropriate counseling and proper informing.

Further research areas:

- A study about women knowledge, attitudes and practices regarding the PNC at the household services is needed.
- A study about the community perceptions about postnatal care including men and influential family members is needed.
- A study at the national level including other health providers such as MOH, NGOs is needed.
- A study to evaluate the quality of postnatal care through direct observation or other tools.

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