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Knowledge, Attitude, and Practice among Mothers Attending Governmental Primary Health Care Clinics Regarding Maternal Reproductive Health

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Dedication

To my great father and mother, I present this message and this success, may God protect and preserve them, to my grandfather and grandmother, may God prolong their lives, to my brothers and sisters, the beloved of my heart, to all who supported me all the way, to the Nasser Medical Complex, to all my colleagues and colleagues, to all my friends, to all who have encouraged me all the time, to all the Palestinian mothers who deserve care.

Sabreen Jarad

Declaration

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

Signed:

Sabreen Khalil Jarad

…./…./….

Acknowledgement

First of all, praise to Allah, the lord of the world, and peace and blessings of Allah be upon our prophet Muhammad, all thanks for Allah who granted me the capability to accomplish this thesis.

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Abstract

Reproductive health services are important for safe pregnancy and childbirth. The study aimed to assess mothers' knowledge, attitude and practice about reproductive health services in governmental primary health care centers in the Gaza Strip. The study utilized descriptive, cross-sectional design. The sample of the study was convenient sample, consisted of 372 mothers attending primary health care centers during postpartum follow up from seven primary health care centers from all Gaza Governorates. The researcher developed constructed, self-administered questionnaire to measure knowledge, attitude, and practice about reproductive health. The questionnaire was tested for reliability by pilot study on 30 participants. The results showed that 34.1% of mothers aged 20 – 25 years, 51.9% had secondary school education, 50.5% had 3 – 5 pregnancies. Concerning preconception care, 60% have moderate knowledge (m= 1.80), 70% have positive attitude (m= 2.13) and 41% seek preconception care practice (m= 1.77). Concerning antenatal care, 80.6% have high level of antenatal practice (m= 2.42), 74.3% have positive attitudes (m= 2.23) and 72% showed low antenatal knowledge (m2.26). Concerning postpartum care, scores of knowledge, attitudes and practices were 75.3%, 74% and 72% respectively. There were statistically insignificant differences in knowledge, attitude, and practice of reproductive health related to mothers' age, work, income, number of pregnancies, and number of deliveries. Mothers who had history of previous abortions had higher knowledge and attitude about preconception care, and postpartum care, while there were insignificant differences in practice of reproductive health. Mothers from the north governorate showed lower knowledge, attitude, and practice at preconception, during pregnancy, and postpartum compared to other governorates. Mothers with university education showed higher knowledge, attitudes, and practice at preconception, during pregnancy, and postpartum. The study concluded that mother have low level of practice regarding preconception care, moderate knowledge regarding antenatal care and moderate practice for postnatal care. Mothers with previous abortions had higher knowledge and attitude about reproductive care. Educated mothers showed higher knowledge, attitudes, and practice of reproductive health components.

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List of Abbreviations

ANC	Antenatal Care
FP	Family Planning
GS	Gaza Strip
IDA	Iron Deficiency Anemia
KAP	Knowledge, Attitudes, and Practice
MCH	Mother and Child Health
MH	Maternal Health
MM	Maternal Mortality
MoH	Ministry of Health
NGOs	Non-Governmental Organizations
PCBS	Palestinian Central Bureau of Statistics
PCC	Preconception Care
PHC	Primary Health Care
PHCCs	Primary Health Care Centers
PP	Postpartum Period
PPC	Postpartum Care
RH	Reproductive Health
SPSS	Statistical Package for Social Sciences
STIs	Sexual Transmitted Infections
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNRWA	United Nations Relief and Works Agency for the Palestinian Refugees in the Near East
WB	West Bank
WHO	World Health Organization

Chapter One

1.1 Introduction

Woman's reproductive health (RH) is a key component to maternal and newborn health. RH is defined as the state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes (World Health Organization - WHO, 2018).

Maternal health also refers to women's health during pregnancy, childbirth and the postpartum period. This concept comes consistence with the Islamic law related to RH that called for the preservation of the five necessities; the soul, mind, offspring, money and religion. For both the mother and the child in the first place as well as the safety of barriers and diseases that prevent well-being (Shatby, 2016).

Reproductive health care is an essential part of primary health care (PHC) for women. In addition, RH has been determined through levels of social and economic development, lifestyles, status of women in their society and the quality and availability of health care (WHO, 2015).

Maternal health is one of the most significant health challenges globally. More than 300 million women in the developing world suffer from significant maternal morbidity (Alkema et al., 2016). In addition, maternal mortality (MM) is one of the most important health problems prevalent in developing countries and among the most prominent and leading causes of death for women globally (Say et al., 2014). According to reports of WHO, about 300,000 women died during and following pregnancy and childbirth, the vast majority of these deaths (94%) occurred in low-resource settings, and most could have been prevented (WHO, 2019).

To improve RH practices, it is important to increase women's awareness and understanding about their health through counseling with doctors and midwives at PHCCs. Furthermore, increase visits to PHCCs will lead to increase knowledge and attitudes towards maternal RH, and that would improve their practicing of RH behaviors (Timmermans et al., 2012). In addition, women's participation in antenatal care (ANC) can improve health literacy and understanding of RH content. Moreover, ANC improves mothers' knowledge about how to prevent complications during pregnancy and birth, prepare for childbirth, and care for the newborn (Lowri et al., 2017).

In Palestine, the health of women and society began to provide health services through a group of small clinics started in 1994, and then crystallized the Ministry of Health (MoH) integrated project to build PHC. The PHC aims to provide comprehensive and integrated medical and health services at a high level, both preventively and therapeutically, aiming to raise the level of health in the community within the framework of a healthy environment where everyone lives. The PHC provides many services for women including the health of women and children, preconception care, antenatal care, postnatal care, family planning services, and other services (MoH, 2018).

This study was carried out to assess and highlight level of KAP related to maternal RH among mothers in the Gaza Strip (GS). The results of the study will identify strong and weak points in RH services, which will help decision-makers in their plans towards strengthening the RH programs provided in GS.

1.2 Research problem

During childbearing age, women could be at risk for possible complications during pregnancy and childbirth that require immediate medical attention (WHO, 2017). It is obvious to say that complications related to pregnancy and childbirth lead to increased

maternal morbidity and mortality and most maternal deaths occur in low-income countries. Palestine is one of these poor countries. Increase women knowledge and access to RH care services will lead to improve practices of RH, which in turn will have positive consequences, and control or decrease the serious complications for both mothers and newborn.

WHO reported that poverty, lack of information, lack of services and cultural practices are factors that prevent women from accessing antenatal and postnatal care services (WHO, 2015). Globally, about 830 women die from complications related to pregnancy or childbirth every day, most of them occur in resource-poor settings, and most of them could be prevented (Alkema et al., 2016).

In GS, many mothers face health risks that may threaten their lives during pregnancy and childbirth and suffer from complications requiring immediate medical care, resulting from errors and lack of knowledge, skills and practice in some RH issues. To reduce these risks, health services must be available to all women. In addition, emphasis of education about the importance of RH is the right of every woman (MoH, 2016).

In GS, with long years of siege and inadequate resources and supplies, it is important to focus on increasing mothers' awareness about RH to avoid complications that may encounter during pregnancy and childbirth. To the best of my knowledge, we do not have accurate information about mothers' knowledge, attitudes, and practices related to RH, therefore, this study would enable us to gain insight about this issue in order to help stakeholders to take appropriate actions towards empowering mothers and strengthen their knowledge and practices about RH.

1.3 Justification of the study

Reproductive health is an internationally recognized right, and many mothers do not know these rights or the access to RH services. There are many different obstacles to women's exercise of these rights, including legal and social aspects that dominate societies and traditions that affect health services. Increased awareness of identifying appropriate practices leads to the preservation of RH practices (United Nations Population Fund - UNFPA, 2014).

There are limited Arabic studies in national and regional countries regarding the issues of RH to some extent. Besides that, most of these studies came from foreign institutions and donor countries as temporary projects. Therefore, we need to devote women's concepts, awareness and education to reproductive health and family planning in a healthy way (DeJong et al., 2005).

Women's reproductive health is influenced by a variety of factors. Different factors have been found to be related with the utilization of antenatal care (ANC). However, to increase ANC visits, mothers should know the importance of ANC visit, which is possible only through education. Women's health seeking behavior is highly influenced by their educational status, and women's education can provide the knowledge to demand and seek proper health care (Shrestha, 2018).

According to the researcher's knowledge, there are no local studies conducted to assess level of knowledge, attitudes, and practice related to RH in GS, therefore, this study will be the first of its kind that tackled different issues of RH from the mothers' perspective. Furthermore, the results of the study may reveal some of the shortcomings and gaps in the provision of care for mothers before, during pregnancy and after childbirth and thus

motivate the key persons in the MoH to introduce some improvements in the comprehensive maternal health care services in health facilities.

1.4 Aim of the study

The aim of the study is to assess the knowledge, attitudes and practice of mothers about reproductive health services in governmental primary health care centers in the Gaza Strip.

1.5 Objectives of the study

- To assess the mothers' knowledge, attitudes, and practices regarding reproductive health at preconception, during pregnancy, and postpartum phase.
- To determine the differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to sociodemographic factors (age, place of residency, work, level of education, income, number of pregnancies, number of deliveries, and history of abortion).
- To suggest recommendations to improve mothers' knowledge, attitudes, and practices regarding reproductive health in Gaza Strip.

1.6 Research questions

- What is the level of mothers' knowledge, attitudes, and practices regarding reproductive health at preconception, during pregnancy, and postpartum phase?
- Are there statistically significant differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to age?
- Are there statistically significant differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to place of residency?

- Are there statistically significant differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to work?
- Are there statistically significant differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to level of education?
- Are there statistically significant differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to income?
- Are there statistically significant differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to number of pregnancies?
- Are there statistically significant differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to number of deliveries?
- Are there statistically significant differences in mothers' knowledge, attitudes, and practices regarding reproductive health at the three phases (preconception, pregnancy and postpartum) related to history of abortion?
- What are the recommendations to improve mothers' knowledge, attitudes, and practices regarding reproductive health in Gaza Strip?

1.7 Definition of terms

Reproductive health

Reproductive health is defined as state of complete physical, mental and social safety and not merely absence of disease or disability in all matters relating to reproductive organs, functions and processes (WHO, 2018).

The researcher defines reproductive health operationally as the women's ability to practice healthy behaviors for themselves and for their fetus or newborn, and that could be measured by the total scores obtained on the reproductive health scale.

Knowledge

Is a familiarity, awareness, or understanding of mothers' services available in reproductive health and of responsible, satisfactory and safer sex life, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering or learning such as counseling on breastfeeding and nutrition, maternal and child health checks (Oxford Dictionary, 2010).

The researcher defines knowledge operationally as the total scores obtained on the knowledge part from the reproductive health scale at the three phases; preconception, during pregnancy, and postpartum phase.

Attitudes

An individual's state of mind regarding value and is accelerated by a responsive expression by expressing honesty or dissatisfaction with mothers' access to reproductive health services, which has been reported as positive or negative (Richard, 2016).

The researcher defines attitudes operationally as the total scores obtained on the attitude part from the reproductive health scale at the three phases; preconception, during pregnancy, and postpartum phase.

Practice

The researcher defines practice operationally as the skills and interventions performed by the mothers regarding their reproductive health, that will be measured by the scores obtained on the practice part of questionnaire used in this study.

The researcher defines practice operationally as the total scores obtained on the practice part from the reproductive health scale at the three phases; preconception, during pregnancy, and postpartum phase.

Maternal reproductive health

Maternal reproductive health is the health of women during pregnancy, childbirth, and the postpartum period. It encompasses the health care dimensions of family planning, preconception, prenatal, and postnatal care in order to ensure a positive and fulfilling experience in most cases and reduce maternal morbidity and mortality in other cases (WHO, 2016).

Maternal assessment of antenatal and pregnancy care

The researcher identified the assessment of mothers for prenatal care and during pregnancy as the opinion of the mother towards the structure, process and results of care provided before and during pregnancy, measured by the overall result of the views, beliefs, and practice of mothers and their correct application of this care (WHO, 2016).

Preconception care

Preconception care (PCC) is the provision of biomedical, behavioral and social health interventions to women and couples before conception occurs. It aims at improving their health status and reducing behaviors and individual and environmental factors that contribute to poor maternal and child health outcomes (WHO, 2013).

The researcher defines preconception care operationally as the process of counseling with healthcare providers before being pregnant in order to be well-prepared for pregnancy and childbirth.

Antenatal care

It is the care provided by skilled health-care professionals to pregnant women in order to ensure the best health conditions for both the mother and her baby during pregnancy (WHO, 2016).

The researcher defines antenatal care operationally as the care that pregnant women receive during pregnancy, which is measured by the number of visits and interventions such as BP measurement, hemoglobin, weight, fetal heart, and progress of pregnancy.

The postnatal period

It is defined as the first six weeks after birth. It is critical to the health and survival of the mother and her newborn. The most vulnerable time for both is during the hours and days after birth. Lack of care in this time period may result in death or disability as well as missed opportunities to promote healthy behaviors, affecting women, newborns, and children (WHO, 2015).

The researcher defines postpartum period operationally as the care provided to the mother and her newborn by healthcare providers during the first six weeks after delivery.

Criteria for measurements of variables

Weighted percent	Interpretation
20% - 36%	Very low
>36% - 52%	Low
>52% - 68%	Moderate
>68% - 84%	Above moderate
>84% - 100%	High

Source: (تميمي، 2004)

1.8 Context of the Study

1.8.1 Sociodemographic context

Palestine occupies an area of 27,000 square kilometers (Km^2). It is expanding from Ras Al-Nakoura in the north to Rafah in the south. The Palestinian territories is divided into three areas separated geographically; the West Bank (WB) 5.655 Km^2, GS 365 Km^2 and East Jerusalem. GS is a narrow zone of land surrounded by Egypt from the south, the Mediterranean Sea from the west, and by the occupied territories in 1948 from the east and north. More than two-thirds of the total populations in GS are refugees. GS consists of five provinces: North of Gaza, Gaza, Mid-zone, Khanyounis, and Rafah (Palestinian Central Bureau of Statistics - PCBS, 2018).

Based on reports of the PCBS, in July 2019, the estimated total Palestinian population is 13 million, of them about 5 million live in Palestine (2.53 million males and 2.45 million females), of them 3,008 in WB and over 2 million in GS with male to female ration 103.4 : 100. The population density (capita/km^2) is 778 in Palestine (506 in WB and 4,986 in GS) (PCBS, 2019). Natural increase rate accounts for 2.8 (2.5 in WB and 3.3 in GS), life expectancy for males 72.1 years and for females 75.2 years, average household size 5.0

(4.6 in WB and 5.5 in GS) (PCBS, 2018). Crude birth rate is estimated at 30.2 live birth/1000 population (27.7 in WB and 33.9 in GS), while crude death rate estimated at 3.7 death/1000 population (3.9 in WB and 3.5 in GS). In addition, fertility rate estimated at 4.4 baby/woman (4.3 in WB and 4.5 in GS) (PCBS, 2019).

1.8.2 Economic context

The Palestinian economy is under high pressure to create decent and productive jobs, reduce poverty and provide economic security on an equal basis for all social groups in a rapidly growing and urbanizing population. Economic status in the Palestinian territories is very low. Gross domestic product is estimated about 9.3%, and the workforce participation 43.6, unemployment is very high and reached a rate of 26.9% for males (15.5% in WB and 34.4% in GS) and for females 44.7% (29.8% in WB and 65.2% in GS) (PCBS, 2018). Due to blockade of the strip, a significant increase in poverty rates occurred in GS from 38.8% in 2011 to 53% by the end of 2017 (United Nations Office for the Coordination of Humanitarian Affairs – UNOCHA, 2018).

1.8.3 Palestinian health care system

The Palestinian health care system consists of five major providers: MoH which is the main health service provider, United Nation Relief and Work Agency for the Refugees of Palestine (UNRWA), Non-governmental organizations (NGOs), military medical services, and for-profit private sector. MoH is operating 27 hospitals (14 in WB and 13 in GS) and 743 PHC facilities (583 in WB and 160 in GS). Another main component UNRWA is operating 65 PHC facilities (MoH, 2018).

1.8.4 Primary Health Care Centers

The primary health care services in Palestine has an important and distinctive role in public health. The network of PHCCs spread in all the governorates, expanded from 454 centers

in 1994 to 732 centers in 2018. The number of PHCCs in the GS is 158 centers, MoH controls 54 of them and 22 centers are controlled by UNRWA (MoH, 2018).

1.8.5 Mother and child health (MCH) services

In 2018, the number of new pregnant women returning to PHCCs was 56,935 women in the GS, of whom 30.3% are registered at MoH centers. Pregnant women under 16 years of age accounted for 1.1% of the total pregnant women in GS, and the average antenatal visits was 5.9 visit for every pregnant woman (MoH, 2018).

According to annual health reports of MoH, about 5,278 pregnant women were referred to high-risk pregnancy clinics, which accounted for 44.2% of all pregnant women enrolled in various maternal and child health clinics at MoH, and for the UNRWA health centers, the percentage reached 21% of the total new pregnant women (MoH, 2018).

The number of women receiving post-natal care reached 52,849 in the governmental PHCCs and UNRWA, as well as providing services for child health and vaccinations in PHCCs in the GS (MoH, 2018).

Chapter Two

Conceptual Framework and Literature Review

2.1 Conceptual framework

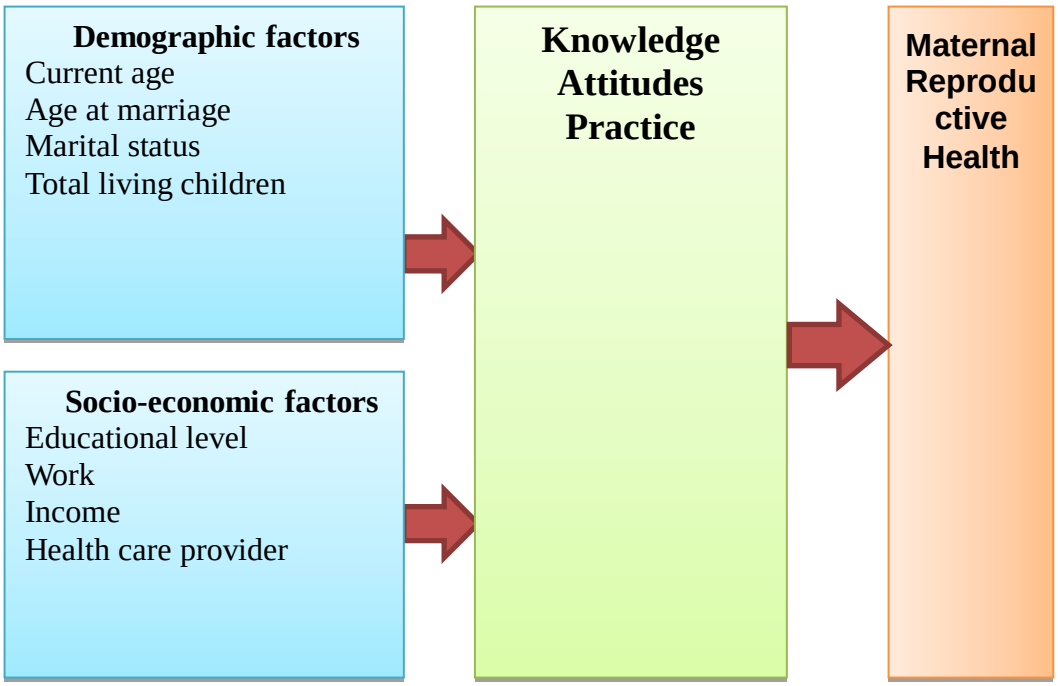

Figure (2.1): Diagram of conceptual framework (self-developed)

The above diagram represents the conceptual framework of the study. The diagram guides the researcher in designing and the implementation of the study and summarizing the study variables.

Independent variable: the independent variable includes demographic and socio-economic factors. These factors impose their effects on the level of KAP of mothers regarding RH. It is assumed that older women, with experience with previous pregnancies and deliveries will have higher awareness and understanding of their RH.

In addition, mothers with higher level of education are supposed to be more knowledgeable, and that will be reflected in positive attitudes and practices regarding their

RH. Moreover, it is supposed that income affects KAP, and that mothers who have higher family income will have higher KAP about RH.

The mediating variable: The mediating variable includes three factors (knowledge, attitudes, practice). These factors shape the status of RH among mothers.

The researcher assumes that the three factors are inter-related; knowledge is a pre-requisite to skills, and to practice healthy behaviors skillfully, the mother needs adequate knowledge about RH. In addition, attitude play an important role in directing the practice, as positive attitude will energize the mothers towards gaining knowledge and practicing healthy behaviors towards their RH.

Dependent variable: The maternal reproductive health represents the dependent variable. As demonstrated in the diagram, the demographic and socioeconomic factors play an important role in determining the level of KAP, and having adequate knowledge, accompanied by positive attitudes will be reflected in good practices, which in turn will be reflected in good maternal RH.

Therefore, the researcher assumes that having higher levels of KAP will be inflected on the desired outcome (maternal reproductive health), and that will be for the benefit of both the mother and her baby.

2.2 Literature review

2.2.1 Background

Islam, which is the principle religion of the majority of the Palestinians, has influenced its people socially and traditionally and shaped their practices. According to Islamic rules, people should engage in sexual activity only within marriage; any sexual practice outside this legal framework is not allowed, is considered to be adultery and will be penalized, which plays a role in shaping some sexual behaviour (El-Kak, 2013).

Women's health has gone through a major transition in the past decades. It is now time to rethink how maternal health (MH) is defined in order to encompass challenges to the health of all women, as well as their transformative potential as productive members of society (Langer et al., 2015). MH care includes both family planning care, pre-conception and postnatal care. It also provides education opportunities for health promotion. In addition, medical interventions and health education for mothers at all stages of childbearing, aiming to reduce the risk factors affecting future pregnancies (WHO, 2010).

Women's ability to access and use MCH services is extremely important as they are strongly influenced by the values and opinions of husbands and mothers in law, midwives and other family and community members. When mothers lack autonomy to make decisions through complex processes and various factors, such as gender inequality and economic marginalization, this leads to a deterioration of MH and some misconduct that leads to increased morbidity and risk to the MH (Ganle et al., 2015).

Promoting MH reduces mothers' exposure to risk and mortality through the use and understanding of family planning, especially with regard to contraceptive methods, societal norms related to women's fertility, reproduction, standards of family size and model family

composition, as well as appropriate timing of pregnancy according to the desire of the couple and the ability of mothers to conceive and give birth (Spagnoletti et al., 2018).

Women are exposed to many risk factors during pregnancy. These factors can lead to death, and are caused by several causes related to birth, ranging from severe bleeding to obstructed labor. To overcome these problems, access to health facilities and appropriate effective interventions should be taken (UNFPA, 2018). In addition, women and mothers can be empowered by increasing awareness and understanding of their health while practicing RH through follow-up in PHCCs with doctors and midwives to ascertain their health and their fetal health. Furthermore, increase visits to PHCCs will lead to increase awareness, knowledge and practice related to maternal RH (Timmermans et al., 2012).

2.2.2 Preconception care

Preconception counseling is an important aspect of the care of reproductive-aged women (Arluck and Mayhew, 2018). There are many voices that highlight the necessity of preconception care (PCC) as a preventive approach to achieve safe pregnancy in order to enhance the health of mothers and infants. Also, it is important to obtain PCC for the couple because awareness and knowledge of the couple about their health are important factors for behavioral changes of care before pregnancy (WHO, 2012). PCC can increase the health and well-being of women and couples and improve pregnancy outcomes and the health of the baby. However, there is no global consensus on the place of PCC as part of a comprehensive strategy to prevent maternal and child mortality and morbidity. Moreover, there should be a set of promotional, preventive and curative interventions that can be provided in the context of PCC, and the possibility of providing these interventions through existing public health programs in low- and middle-income countries (WHO, 2012).

The main components of PCC are classified under four categories of interventions: maternal assessment (e.g. family history, behaviors, obstetric history, general physical exam), vaccinations (e.g. rubella, varicella, and hepatitis B), screening (e.g. Human Immune Virus, Sexual Transmitted Disease, genetic disorders), and counseling (e.g. folic acid consumption, smoking and alcohol cessation, weight management) (Atrash et al., 2006).

Knowledge about RH, obstetric danger signs, and birth preparedness among women attending PCC sessions enhance the impact of basic knowledge of risk signs on prenatal practices (Kabakyenga et al., 2011). Participation of parents during the perinatal period is an important strategy for improving maternal health. The effectiveness of the prenatal health intervention program on awareness, attitudes and practice by investigating parents about participation in perinatal care are required (Firouzan et al., 2018).

A descriptive study carried out in Iraq consisted of 150 married women who had at least one pregnancy, aimed to assess KAP of married women about PCC. The study found that there was an association between the level of knowledge and practice. The results revealed that the highest percentage (76.7%) of mothers had fair knowledge. The majority of the study sample (68%) did not seek PCC. Regarding attitude, 84.7% of the women had good attitude about PCC (Ahmed and Jamil, 2017).

The main goal of PCC is to provide health promotion, screening, and interventions for women of reproductive age to reduce risk factors that might affect future pregnancies (Johnson et al., 2006). Furthermore, the correct date of pregnancy is important to prevent unnecessary events and allow accurate treatment of preterm labor, so folic acid supplementation is recommended for all women as soon as possible and preferably before pregnancy to reduce neural tube defects. As well as detection and treatment of iron-

deficiency anemia can reduce of the risks of preterm labor, late intrauterine growth and perinatal depression (Akkerman et al., 2012; Barua et al., 2014).

Pregnancy and childbearing at younger age less than 19 years old and older age more than 45 years old, entails health problems for the mother and her baby, and that raise the need to provide PCC as part of RH services. A cross-sectional study carried out by Kasim et al. (2016) aimed to determine the level of KAP regarding PCC among women attending ANC appointments. A self-administered questionnaire was administered to 135 respondents from 18 to 45 years of age. The results showed that 98.5% of the respondents had good attitudes, 45.2% had good practices, and 51.9% had good knowledge of PCC. The study concluded that the women have fair knowledge, good attitude towards PCC, and poor PCC practices. Moreover, a cross-sectional, hospital-based study carried out in Sudan by Ahmed et al. (2015) aimed to examine KAP of PCC among Sudanese women with rheumatic heart disease in reproductive age. The sample of the study consisted of 100 women. Women awareness regarding PCC was seen in only 11% of the women interviewed, nearly one third had positive attitudes towards PCC, and the majority of the women either partial know or have no knowledge about the impact of pregnancy on their disease and almost half of the women (49%) intended to seek PCC next time. The study concluded that PCC and the availability of well-designed multidisciplinary care are still poor and challenge in Sudan, but despite having poor knowledge, compliance for seeking PCC is high among Sudanese women.

PCC is pivotal to improve pregnancy and birth outcome. It is vital for the future health of mother, her child and her family. A cross-sectional study carried out in Ethiopia by Kassa and Yohannes (2018) aimed to assess knowledge of PCC and associated factors in post-natal women at public health institution in South Ethiopia. The study included 580 women who gave birth in public health institutions. The results showed that 20% of the women

never attended formal education, 56% attended primary education, and 64.7% of participants were urban residents. The results also showed that 20% of postnatal women at public health institution had a good level of knowledge on PCC. Women who have secondary and above education level, urban residence, and have at least one ANC contact had significantly higher level of knowledge on PCC. The finding also showed that having at least one ANC contact, urban residence and having secondary and above education are predictors of knowledge on PCC. The study raised the need to work towards improving the knowledge of mothers towards preconception care as well as routine provision of preconception care in the health care system.

In GS, PCC is provided at UNRWA health centers aiming to improve women's health and pregnancy outcomes, as the couple receives advice when they plan pregnancy and advice is provided using modern family planning methods to avoid frequent, early or late pregnancy (UNRWA, 2018). Preventing the occurrence of problems to mothers and babies depend on an operational continuum of care with accessible, high-quality care before and during pregnancy, childbirth, and the postnatal period. It also depends on the support available to help pregnant women reach services, particularly when complications occur (WHO, 2016).

2.2.3 Antenatal care

Antenatal care is seen as a strategy to improve pregnancy outcomes. ANC can be defined as the care that skilled healthcare professionals provide to pregnant women in order to ensure the best health conditions for both the mother and her baby during pregnancy. ANC components includes risk identification, prevention and management of pregnancy-related or concurrent diseases, health education and health promotion (WHO, 2016).

Pregnancy is one of the most important periods in a woman's life, family, and society, and women need full and comprehensive care during pregnancy and childbirth. ANC is a

special care for women during pregnancy provided through public health services aiming to prevent health problems for both the mother and her fetus, and ensure that it is healthy newborn baby (Gebremeskel et al., 2015).

The WHO issued a new series of recommendations to improve the quality of ANC to reduce the risks of stillbirths and complications of pregnancy and give women a positive experience in pregnancy. By focusing on a positive pregnancy experience, these new guidelines seek to ensure not only a healthy pregnancy for the mother and child, but also an effective transition to positive birth, childbirth and ultimately to a positive maternity experience (WHO, 2016).

Health education for women during the prenatal period is of great importance to mothers, where advice, education, reassurance, support, and treatment of simple pregnancy problems are provided, and effective examination is provided during pregnancy and the detection of practices carried out by women during pregnancy, through educational activities to ensure high quality and customer satisfaction (Al-Ateeq and Al-Rusaiess, 2015). Moreover, the WHO called for improving the capabilities of ANC interventions (WHO, 2005). According to the UNFPA (2017), every two minutes a woman dies due to pregnancy and childbirth, and 20 to 30 other women suffer from serious complications or long-term consequences, and most of these deaths and injuries are caused by lack of information on RH for women. Therefore, we can reduce the risks to mothers through increasing maternal knowledge and health skills.

The WHO also recommended that pregnant women in developing countries receive ANC services during the first three months of pregnancy and special programs for maternal care during pregnancy were formed. The ANC program was designed in Aruba in the first decades of the twentieth century, and was first directed to women in difficult living and

social conditions, aiming to improve maternal outcomes and prenatal care. ANC started in the twentieth century as a strategy to prevent and ensure early treatment of pregnancy complications through systematic divisions, by educating women on positive behaviors, assessing gestational age, examining fetal development and early detection of maternal and child abnormalities (Al-Ateeq and Al-Rusaiess, 2015).

ANC increases a woman's knowledge of health by improving her ability to receive prenatal care. It has been reported that, women's participation in ANC in low-income countries can improve health literacy and understanding of RH content (Lori et al., 2017). Moreover, attending group education plays an important role in understanding when care is available, preparing for childbirth, awareness of suspected complications, and intent to use modern methods of family planning after childbirth. ANC provides an opportunity to increase the quality of care and improve maternal and newborn outcomes. ANC has the potential to increase healthy behaviors, enhance respectable maternity care and stimulate demand for services. In addition, ANC improves woman's health knowledge about how to prevent complications during pregnancy and birth, prepare for childbirth, and care for the newborn (Lori et al., 2017).

Kazemi and Hajian (2018) conducted a study on pregnant women found that adopting healthy behaviors led to improving health and pregnancy outcomes, as well as improving the quality of life for both mothers and children. ANC is important for improving maternal health and reducing exposure to complications of pregnancy and childbirth that threaten a woman's life (Agus and Horiuchi, 2012). Women who abstain from ANC are more likely to experience physical problems during pregnancy (Musa et al., 2019). Poor care is often exacerbated by lack of basic equipment and low performance of health care providers. Satti et al., (2012) reported that more than half of maternal deaths could be avoided by appropriate ANC in which the health care professionals provide correct maternal care,

training and supervision of prenatal care. Providing ANC is a great opportunity to inform and educate pregnant women on important health issues including health promotion, screening and diagnosis (WHO, 2017). Moreover, ANC was considered as an important platform for communicating with, and supporting women, families, and societies at a critical time in a woman's life (Rurangirwa et al., 2018).

Furthermore, the increased utilization of ANC services by women increases the chances of better management and pregnancy outcomes, and reduces the more common complications (such as infection, high blood pressure disorders caused by pregnancy and severe bleeding) associated with maternal morbidity and mortality in low-income countries. Therefore, ANC is an essential component of the matrix of preparation for childbirth and preparation for complications that include all responsibilities, procedures, practices and skills necessary to ensure the safety and well-being of pregnant women and fetus throughout pregnancy, childbirth, and the postpartum period (Rurangirwa et al., 2018).

A study carried out by Rosario et al. (2019) aimed to identify demographic and social factors influencing ANC and health facility delivery among women in Angola, and to understand their impact on birth outcomes. The results showed that 98.5% of pregnancy outcomes resulted in live births, 96.8% attended ANC, and 82.5% had four or more visits. ANC attendance was a determinant of birth outcomes (stillbirth). Older women, with lower education, living at a greater distance of a health facility and in rural areas, were less likely to use MHC. Having had previous pregnancies resulting in live births, also decreased the likelihood of health care utilization by pregnant women. A cross-sectional study conducted in Libya by Ibrahim et al. (2014) aimed to assess the KAP of pregnant women toward ANC in PHCCs in Libya. The sample of the study consisted of 300 pregnant women. The results showed that the highest percentage (85.3%) of pregnant women had a high knowledge score regarding ANC, and 96.0% of them showed a positive attitude; the

highest percentage (76.4%) of pregnant women also had good practice scores. The level of overall knowledge had a significant direct correlation with the practices towards ANC, whereas it had an insignificant correlation with the attitude.

Lilungulu et al. (2016) carried out a cross-sectional community based descriptive study, aimed to assess KAP towards women seeking ANC from their previous pregnancy in Tanzania. The study sample included 500 women. The results showed that 59.8% of study participants were from the age group of 19 to 25 years, 95.4% had primary education, and 68.2% were housewives. In addition, 20.2% of respondents have more than three children and categorized as multipara, 20.8% had history of home delivery, and 51.4% had hospital delivery and 23.4% had delivery at a health center. Regarding of the reproduction history, 15.6% had experienced episode of eclampsia, 47% had a history of perineal tear, 0.2% had history of one stillbirth before, while 37.2% of the respondents had history of postpartum hemorrhage. Only 12.4% of the women reported that they came for antenatal visit during the first trimester and others had the late visit, and 12.0% of women had one visit of antenatal clinic, 54.0% had two visits, 18.6% had three visits, and 12.4% had four visits. The study concluded that, ANC services, awareness and the use of supplements therapy are promising in the pregnant women. To achieve maximum ANC services and practices among pregnant women with high and low risk groups, there is a need to integrate public and private sector concerning ANC services in order to improve their maternal health and eventually improve the health status of newborn child.

ANC is the clinical assessment of the mother and her fetus, during the period of pregnancy used for getting the best possible result for the mother and child. Early observation and ongoing care during pregnancy provided more favorable births compared to no prenatal observation. It is a key entry point for pregnant women to receive multiple range of health services such as nutritional maintenance, prevention or treatment of anemia, prevention,

detection and treatment of some disease such as malaria, tuberculosis, and STIs (Berhe et al., 2014).

A quantitative, cross-sectional study carried out in Pakistan by Akhtar et al. (2018) aimed to assess the KAP of pregnant women regarding ANC in the community of Hussain Abad Lahore. The sample of the study consisted of 133 pregnant women aged between 20 – 45 years old. The results showed that 21.4% of participants agreed that they have seek ANC regularly during pregnancy, while 71.1% of participants disagreed. In addition, 83.1% of participants believe that ANC is worthy to monitor the well-being of the mother and her fetus. The results also showed that 64.7% of pregnant women expressed knowledge about ANC 69.6% expressed positive attitude, and 61% of participants have positive practices towards ANC. There was significant association between qualification and knowledge, attitudes, and practices about ANC.

Moreover, a hospital-based, descriptive, case control study carried out in India by Ahirwar (2018) aimed to assess the knowledge of ANC among pregnant women attending outpatient clinic, and to measure correlation between knowledge and ANC. The sample of the study consisted of 600 pregnant women. The results showed that 58.7% of study participants were in 20-25 age group and 72.4% were urban. The results also showed that 86.16% of participants had correct knowledge that a pregnant woman should visit a doctor after first missed period, 72.66% of participants had correct knowledge that fetal movement is first felt between 4^{th} and 5^{th} month of pregnancy, and 62.65% of participants had correct knowledge that fetal wellbeing is known by regular antenatal checkup. In addition, 64.18% of participants had knowledge about warning signs during pregnancy and 92.5% knew that they should report to a doctor in case of vaginal bleeding during pregnancy. The results indicated that 78.33% of participants had knowledge regarding essential examinations during ANC, 97.50% of study participants had correct knowledge

regarding tetanus immunization. Moreover, 82.5% had correct knowledge that adequate diet during pregnancy is essential for growth and development of fetus, 93.33% had knowledge that extra iron is needed during pregnancy to prevent anemia, while only 50.66% of participants had knowledge that folic acid is needed during pregnancy to prevent anemia and birth deformities. The results also indicated significant association between place of residency and booking status as 71.26 % of urban participants were booked for ANC visits compared to 60.6% of rural participants. There was also significant association between booking status and education as graduate and postgraduate participants were 100% booked and 50.8% of illiterate participants were booked, and those educated up to primary school among them 60.4% were booked but 39.6% were unbooked. Also, there was significant association between the knowledge about fetal wellbeing, tetanus toxoid immunization, need for adequate diet, and necessity of folic acid during pregnancy with booking status of participants. The results also reflected that 78.33% of participants had positive attitude towards ANC and early registration. Concerning practice, 70.4% of participants took adequate ANC, 93.33% took iron and folic acid tablets.

Poor dietary practice and low adherence to iron tablets among pregnant women are major contributors for high burden of anemia. Thus, the level of maternal awareness and attitude towards dietary and other prevention practices of anemia are of great importance especially for pregnant women. In this regard, Oumer and Hussein (2019) carried out a cross-sectional study to assess the KAP of pregnant mother towards the prevention of iron deficiency anemia (IDA) in Ethiopia. The sample of the study consisted of 128 mothers with mean age 26.3 years. The results showed that 50.8% of pregnant women married at age between 16-20 years, 50.8% gave their first birth at age of 18-22 years, and 80.5% of the respondents did not suffer from health-related problem during the first birth. The results also showed that 88.3% of respondents have ever heard about IDA, 31.3% of

respondents correctly defined the main cause of anemia as iron deficiency, while 14.1% of respondents identified some common symptoms of IDA namely general body weakness, dizziness or fainting, poor appetite and shortness of breathing as main sign and symptom of anemia. On knowledge related to prevention of anemia, 58.6% of respondents knew how anemia can be prevented, 31.3% of respondents knew that anemia can be prevented by healthy and balanced nutrition. Generally, 61% of respondents had a good knowledge on prevention methods of IDA, while 39% of respondents had low knowledge score towards prevention of IDA. Overall, 61% of respondents had a good knowledge on prevention methods of IDA, 52.3% had favorable attitude towards prevention of IDA, while 58.6% had poor adherence to prevention practice of IDA.

Education during pregnancy is an essential component of ANC that prepares and facilitates the women's skills and confidence required for positive experiences throughout pregnancy, birth and the postnatal period. In this regard, Aji et al. (2019) carried out a cross-sectional study to evaluate pregnant women's experiences of education during the antenatal period in Ethiopia. The sample of the study consisted of 110 pregnant women attending two major MCH clinics in Darussalam. The results showed that the majority of participants possess good health knowledge and live a healthy lifestyle. They have a positive perception about their babies and postnatal care. However, participants possess average knowledge about practical health techniques. In addition, the majority of women were satisfied with the antenatal education provided in the MCH clinics. Breastfeeding, which required both practical knowledge and skills, was the most interesting antenatal education topic.

In Palestine, MoH has set its policy, strategy and work plan to enhance and maintain high-quality health services. To achieve that, an approach must be adopted that includes raising the level of health facilities, including enhancing the competencies and skills of workers and providing the needed equipment. In GS, ANC is provided to pregnant women through

48 maternal health clinics, of them, 26 governmental clinics and 22 UNRWA clinics. The average number of ANC visits estimated at 5.9 visits per pregnant woman at governmental PHCCs, and 7.3 visits per every pregnant woman at UNRWA clinics (MOH, 2018).

2.2.4 Postpartum care

The postpartum period (PP) is an important and dangerous time for both the mother and the baby because this period is one of the most important stages that need serious care for mothers, and it is a critical stage in the lives of mothers and newborn babies as most maternal deaths occur after birth (WHO, 2014). The most vulnerable time is the first hours and days after birth, therefore lack of care during this period may lead to death or disability as well as loss of opportunities to promote healthy behaviors and affect women and newborns (Warren et al., 2006).

According to WHO (2016), postpartum care (PPC) is defined as the care given to the mother and her newborn immediately after the birth of the placenta and continue for the next six weeks after birth. The majority of maternal and newborn deaths occur during childbirth and PP. Improving maternal and newborn health through appropriate PPC services is the best way to reduce maternal and neonatal mortality. Utilization of PPC is affected by several factors. In this regard, a study carried out by Wudinehet et al. (2018) showed that maternal education, monthly income, pregnancy outcomes, and the place of birth were closely related to the use of PPC services. To enhance access to the PPC services and reduce maternal and neonatal mortality, women must receive appropriate education. Moreover, all pregnant women must give birth in health facilities. In addition, Workineh and Hailu (2014) reported that PPC is important, as this care prevents and reduces maternal and child morbidity and mortality, and despite its importance, this period is more neglected in developing countries. Accordingly, the WHO recommendation

emphasized that mothers and newborns should receive PPC during the first 24 hours after birth and at least three additional visits of PPC. The care should last for 6 weeks after birth in which mothers are taken care of and receiving health care advice (WHO, 2015).

Moreover, the WHO has updated the global guidelines on PPC for mothers and newborn babies through the technical consultation process. Also WHO presented several recommendations that highlight changes and best recommended practices that aim to assist policy makers, program managers, educators and health care providers, and participants in PPC, may all help in ending preventable death, improving health outcomes, strengthening health and community systems, addressing gender and equity issues, and emphasizing maternity care for women in order to improve the quality of PPC (WHO, 2014).

Several factors expose mothers to death after childbirth. Poor monitoring and follow up put the mother's life at risk, including preterm birth, asphyxia and severe infections. These factors contribute to two-thirds of neonatal deaths if no skilled health care provider attends them. Therefore, appropriate PPC is extremely important especially in the first hours and days after birth, as it prevents the vast majority of maternal and child mortality (Workineh and Hailu, 2014).

Breastfeeding has several benefits for both the infants and mothers. However, despite strong evidences in support of breastfeeding, its prevalence has remained low worldwide. In this regard, a cross-sectional, descriptive study was carried out in India aimed to assess the knowledge and attitude towards breastfeeding and infant feeding practices among Indian postnatal mothers. The results showed that 88.5% of the mothers were breast feeders. However, 27% of the mothers were exclusive breast feeders and only 36.9% initiated breastfeeding within an hour after delivery. The mothers expressed good knowledge and neutral attitudes toward breastfeeding. Mothers who were currently

breastfeeding had more positive attitudes than non-breastfeed mothers. The results also showed that the level of practicing exclusive breastfeeding was low (Vijayalakshmi et al., 2015). Another cross-sectional study carried out in China to examine the mothers' knowledge and attitudes toward breastfeeding and highlight barriers to exclusive breastfeeding in Chinese postpartum mothers. The study included 324 postnatal mothers. The results showed that most of the mothers showed neutral knowledge and neutral attitude on breastfeeding. The results also showed that mothers who had poor knowledge were less likely to initiate breastfeeding within an hour after birth (Hamze et al., 2019). Similar results obtained in a study carried out in Japan, which reflected that overall knowledge and attitudes towards breastfeeding were neutral and more positive towards the use of infant formula (Inoue et al., 2013). Another cross-sectional study conducted in United Arab Emirates aimed to assess breastfeeding knowledge, attitudes, and practices among women residing in Abu Dhabi, and identify associated factors. The sample of the study consisted of 344 women. The results showed that exclusive breastfeeding for 6 months was reported by only 16.9% of study participants, 28.7% of the participants were breastfeeding and planning to continue after the child was ≥24 months. Factors associated with exclusive breastfeeding included mothers with female children and better breastfeeding knowledge scores. Factors associated with less likelihood of exclusively breastfeeding included working mothers, living with relatives, no past exclusive breastfeeding experience, and offering readymade liquid formula in the hospital. The most common reason for stopping breastfeeding was insufficient breast milk production, and the most common work-related reason was inadequate maternity leave.

A descriptive, cross-section study carried out carried out by Abota and Atenafu (2018) aimed to assess PPC services utilization and its associated factors among married women in Ethiopia. The study included 765 women. The results showed that 51.24% of married

women attended PPC. Out of them 77.8% attended PPC mainly to immunize their baby. The results also showed that 86.3% of respondents mentioned lack of information as a main reason for not following PPC, and the majority mentioned that they were appointed to come after 45 days for FP. In comparison with housewives, farmer women were less likely to attend for PPC. Also, married women who followed ANC were more likely to attend PPC in comparison with those who did not attend ANC at all. Another study carried out by Yadav et al., (2016) to determine the KAP of mothers regarding care of the newborn after delivery at a tertiary teaching hospital in Nepal. The study included 65 mothers. The results showed that age of mothers ranged from 16 to 40 years, 63% were primiparous and 18.4% were illiterate. The results also showed that 95% of mothers knew about immunization, but few mothers had acquired knowledge regarding cord care, signs of illness in newborn and newborn feeding during antenatal checkups. Maternal knowledge about newborn danger signs was low. Breastfeeding practice was not satisfactory, and maternal knowledge on newborn hygiene care was unsatisfactory.

In Jordan, a qualitative study included 13 postpartum mothers conducted to explore and analyze the postnatal cultural health beliefs, knowledge and practices of rural Jordanian mothers. The results showed that rural Jordanian mothers depended on the cultural health beliefs and knowledge to perform the PPC practices. Thus, the rural Jordanian mothers are in need of supportive health educational services to increase their level of health knowledge and enhance the recommended health practices (Abuidhail, 2014).

The education of women is extremely important. Feroz et al., (2017) reported that low education of women would have negative effects on maternal health. In Palestine, the MoH carries out educational programs for mothers after birth, either in hospitals or PHCCs or through home visits. The MoH, in cooperation with United Nations International Children's Emergency Fund (UNICEF), implemented home visits programs after childbirth

that target women who are registered with high risk pregnancy, who had complications during pregnancy or after childbirth, or who have medical problems (MoH, 2018).

In GS, PPC services are provided by MoH and UNRWA health centers, aiming to reduce morbidity and maternal and neonatal deaths. The number of women receiving PPC service reached 52,849, of them 25.6% receive services through MoH PHCCs. PPC services include performing a comprehensive medical examination for the mother and the newborn, and providing advice on family planning (FP), breastfeeding and newborn care (MoH, 2018).

2.2.5 Family planning

Family planning (FP) services are defined as comprehensive educational, medical or social activities that allow the identification of individuals, the number, and spacing of their children (Lassi et al., 2014). FP is a plan to determine when having children and using birth control to delay pregnancy, including other techniques to implement these plans. Dean et al. (2014) in their study, recommended that education and awareness of women would increase their interest in RH, spacing between pregnancies (from 18 to 24 months), and that will reduce MM, preterm deliveries, stillbirths, low birth weight and early neonatal deaths, and promoting FP is closely linked to reliable and effective contraceptive methods.

Although there is a great variation in women's reproductive pathways, the majority have a limited understanding of FP, especially regarding contraceptives. Also, societal norms regarding women's fertility and reproduction support the women's desire to become pregnant soon after marriage. Moreover, the process of obtaining and using health care services about FP is strongly influenced by the values and opinions of husbands and mothers in law. In addition, health care services can be undermined by women's lack of

independence in decision-making due to the complex processes of gender inequality, economic marginalization, and social power (Ganle, 2015).

In GS, FP services are provided mainly at MoH PHCCs and UNRWA health centers. (17 MoH and 22 UNRWA), and the number of new beneficiaries of FP services in the GS reached 18,188 women (5,715 at MoH and 12,473 at UNRWA (MoH, 2018).

2.2.6 The role of nurses and midwives in maternal health care

Nurses and midwives play an important role in any health system, and in the scope of practice and working conditions. Nursing care includes self and cooperative care for individuals of all ages, families, groups and societies, patients and healthy people in all circumstances and conditions. The main roles also include defending patients, promoting a safe environment, conducting research, participating in the formulation of health policies, management of patient care and health systems, and education of others (Crisp et al., 2018).

In maternal health care settings, midwives focus on the individualized care approach and play a major role during the care of women during pregnancy, childbirth and postpartum, (WHO, 2005).

Midwives are an important key to achieving reduction of maternal and neonatal mortality and morbidity. With more educated, competent midwives working in MH settings, a huge difference can be made in the lives of mothers, and children. It is essential that midwives receive proper training and support to enable more cost-effective and better-quality maternal healthcare. The multi-faceted roles of the midwife include caring for women, treating complications, providing newborn care, providing PPC advice and health education, recognizing and addressing problems in women and newborns before, during and after childbirth. In addition, midwives offer general health information, including RH

care, assisting mothers to breastfeed successfully, referring mothers and newborns for higher-level care when complications arise during and after pregnancy and childbirth. Moreover, midwives provide additional health services in communities such as immunizations and treatment of common illnesses (Tabish, 2012). In addition, midwives are in a unique position to provide nutrition advice to pregnant women due to their usual contact with the women via antenatal appointments. Moreover, health promotion and education are considered among the most important activities that midwives perform with pregnant women as advocates for health and wellbeing (Arrish et al., 2017). However, studies in the United Kingdom (Lee et al., 2012) and Sweden (Wennberg et al., 2014) reported that midwives struggle to provide dietary advice, especially in the context of health promotion.

2.2.7 Knowledge, attitudes, and practices related to reproductive health

In the new era of globalization, adolescents are exposed to unlimited information from numerous resources. Television, movies, magazines, and internet play a vital role in providing information on every topic, particularly RH. However, in many instances, the information provided is not accurate or culturally competent (Alquaiz et al., 2012).

In most of the Middle East and North Africa countries, sexual and RH is socially and culturally sensitive issue. As a result, RH information and services do not reach the majority of adolescents and adults, leading to misconceptions, confusion, and lack of awareness among this vulnerable group (Gaferi et al., 2018). In addition, RH is a crucial aspect of general health, and it is a reflection of health during adolescence and adulthood. The period of adolescence in females is a period of physical and psychological preparation for safe motherhood. As direct reproducers, adolescent girls' health influences not only their own health but also the health of the future generation (Gaferi et al., 2018). Therefore,

accurate and adequate RH knowledge at early age is crucial for proper practices and behavior regarding RH for the future mothers (Aktar et al., 2014).

A cross-sectional study carried out by Yameen (2005), aimed at evaluating the effect of health promotion education program on RH knowledge, attitudes and practices among reproductive age women in rural Palestinian community in GS and northern and southern regions of the WB. The study was conducted at two phases. The first phase was carried out prior to the intervention of the health promotion educational program and the second was carried out after the intervention program. Data was collected through personal interview with the targeted groups and included 1,347 women (743 first phase and 604-second phase). The results of the study indicated high percentage of early marriage in the rural areas as mean age at marriage was 18.8 years. The results also showed a very low level of education as 93% of the study participants in both phases did not exceed the secondary stage of education. Moreover, the results showed a very low level of knowledge with respect to PPC and it seems that the health promotion educational program did not improve knowledge in this field. Attitudes were highly positive and improvements in practices were also noted with the exception of practices concerning routine checkup of the newborn. Low level of knowledge (below 50%) concerning the concept of family planning was observed among both groups, and higher levels of positive attitudes with respect to use of family planning methods were observed among the first phase group (75.9%) compared to the second phase group (72.2%). Low level of improvement was observed in knowledge about STIs, low knowledge levels were observed with respect to PPC. The results also indicated improvements in practices concerning FP. The study concluded that although some improvements were observed in the post intervention phase compared to the pre intervention phase of the educational program, the results clearly indicated the need for further studies concerning priorities in health education programs.

A quantitative comparative study carried out in China by Liu et al. (2014) aimed to assess knowledge about RH among women in reproductive age. The results showed that 9.7 to 35.8% of the study participants had no knowledge of at least one RH skill (RH skills for pregnancy tests, contraceptives, the cleaning of genital tracts, maternal nutrition during pregnancy, miscarriage prevention, early education about the fetus, and safe sex), and the frequency of using FP services was low.

An institution-based, cross-sectional, quantitative study conducted in Ethiopia by Yemaneh et al. (2017) aimed to assess the knowledge, attitude and practice of Mizan-Tepi university students towards RH services in Ethiopia. The study included 375 participants. The results showed that 20% of study participants were knowledgeable about RH service, 46.6% know about component of RH, 12.5% knew about FP and STI, and 92.5% knew about ways of pregnancy prevention. Furthermore, the results showed that 42.1% had favorable attitude towards RH services, and 35.2% had practices of RH services. The study concluded that most of the study participants were not knowledgeable about RH service and had poor attitude towards RH.

A quantitative descriptive, cross-sectional study carried out in Saudi Arabia by Gaferi et al. (2018) aimed to assess knowledge, hygiene practices during menses, and attitudes of female adolescents in Riyadh female secondary schools regarding RH aspects. The sample of the study consisted of 350 secondary school female students. Two tools were used for data collection: a self-administered questionnaire and an Attitudinal Assessment Scale. The results showed that 66.3% of the participants had inaccurate knowledge regarding RH, about 95.4% had correct menstruation hygiene practice. The majority (88.3%) of participants had positive attitudes regarding RH. The participants reported that mothers are a vital source of information regarding RH. The study concluded that female adolescents had unsatisfactory knowledge, inadequate hygiene practices, and positive attitudes toward

RH. The study recommended the need to improve adolescents' knowledge regarding RH issues and involve their parents and teachers to provide appropriate education related to RH issues.

Hadzimehmedovic et al. (2017) carried out a prospective study aimed to investigate the RH, knowledge and attitudes about contraception, STIs among the youth in Bosnia and Herzegovina. The sample of the study consisted of 6000 participants, aged 19 – 24 years. The results showed that contraception was used by 67.6% at first intercourse, and by 70.4% at the last intercourse. The participants had inadequate knowledge (51.6%) about contraceptive methods. Up to 51.7% of females had never had a pelvic examination, and Pap test was done by 37.2%. The participants obtained information about contraception and STIs from peers (50.7%) and parents (9.7%). Only 28% of females had a positive attitude towards oral hormonal contraceptives. The study concluded that more efforts should be put into the improvement of knowledge on contraception, STIs, and healthcare protection.

Chapter Three

Methodology

This chapter presents issues related methodology procedures used to conduct the study. The chapter commences with study design, study population, sample and sampling method, study setting, period of the study, and eligibility criteria for selection of study participants. Moreover, this chapter presents the instruments of the study, ethical consideration and procedures of data collection and data analysis.

3.1 Study design

The design of this study is a quantitative, descriptive, cross-sectional. This type of design is useful for describing variables of the study as they naturally occur without interference from the researcher. Cross sectional studies are generally carried out on a population at a point of time or over a short period. Also, it examines the association between variables; and characterized as economic, quick and managed easily (Polit and Beck, 2012).

3.2 Study population

The target group of this study consisted of women who attended pre-pregnancy, pregnancy and postpartum care services in government primary health care centers in all governorates of the Gaza Strip.

3.3 Sample size and sampling process

The researcher obtained data about the number of women attended the antenatal clinics at governmental PHCCs for the last three years as the following: 2016 (9,920 women), 2017 (11,900 women), and 2018 (12,500 women). The total number was 34,320 divided by 3 to get the average number for the three years. The average total number of women was

11,440. Using the survey system (to calculate the sample size), the sample was 372 women (Annex 2). Therefore, the biggest PHCC that provide antenatal care services in each governorate was selected (one from each governorate and 3 from Gaza governorate as Gaza governorate is the biggest one with higher population), thus 7 PHCCs were included in the study. Equal number of participants from each clinic (53 participants from each PHCC). Convenient sample method was used to select participants from the women who had at least one delivery and attend RH care services and met inclusion criteria. The researcher visited each PHCC three times for selection of participants and filling the questionnaires. The participated women were selected from three places: Pre-pregnancy services, during pregnancy, and postpartum care.

Table (3.1): Sample size and distribution according to PHCC

Governorate	Name of PHCC	Approximate No of population	No of sample
North Gaza	Jabalia Martyrs PHCC	1640	53
Gaza	Al Rimal Martyrs PHCC	1650	54
	Al Daraj PHCC	1630	53
	Al Zytoon PHCC	1630	53
Middle	Deir Al-Balah Martyrs PHCC	1620	53
Khanyounis	Khanyounis Martyrs PHCC	1640	53
Rafah	Rafah Martyrs PHCC	1630	53
Total		**11440**	**372**

3.4 Setting of the study

The study was conducted in seven governmental PHCCs in all governorates of the GS (Rafah Martyrs, Khanyounis Martyrs, Deir Al-Balah Martyrs, and from Gaza there are three main clinics, Al Rimal Martyrs, Al Daraj, Al Zytoon, and Jabalia Martyrs PHCC) to measure the KAP of mothers attending RH clinics before pregnancy, during pregnancy and after childbirth.

3.5 Period of the study

The study was commenced during the period from August 2019 to March 2020.

3.6 Eligibility Criteria

3.6.1 Inclusion criteria

- Women in the reproductive age group (16 - 49 years).
- Women who follow up and visit governmental PHCCs in the GS that provide RH services (pre-pregnancy, during pregnancy and after delivery).
- Women who were willing to participate in the study by signing the consent form, every woman who is competent and able to talk and communicate to answer the questionnaire.

3.6.2 Exclusion criteria

- Illiterate women

3.7 Instrument of the study

Constructed self-administered questionnaire was used in this study. After reviewing previous literature, the researcher developed the questionnaire. The questionnaire was

designed to measure the knowledge, attitude and practice of mothers related to their RH in three phases (preconception, during pregnancy, and postpartum). (Annex 4, 5)

Response on items of the questionnaire as a-3 points Likert scale.

Strongly disagree (1), agree (2), and strongly agree (3).

3.7.1 Questionnaire description

The first part: Sociodemographic characteristics of study participants.

The second part: Preconception phase.

Knowledge: consisted of 10 items.

Attitudes: consisted of 6 items.

Practice: consisted of 9 items.

The third part: During pregnancy.

Knowledge: consisted of 9 items.

Attitudes: consisted of 8 items.

Practice: consisted of 12 items.

The fourth part: postpartum phase.

Knowledge: consisted of 9 items.

Attitudes: consisted of 10 items.

Practice: consisted of 15 items.

Measurement criteria

3.8 Pilot study

Pilot study has been conducted on 30 participants in order to test reliability of the questionnaire, and to examine the clarity of questionnaire items. Because the questionnaire items had good reliability as shown in tables (3.2, 3.3, and 3.4), so no changes were made on the items of the questionnaire, and the 30 questionnaires (participants) were included in the actual sample of the study.

3.8.1 Face and content validity

The researcher distributed the questionnaire to a group of experts (Annex 1) in the field of MCH and research methodology in order to evaluate the content of the questionnaire, adequacy of the questionnaire items to measure knowledge, attitudes and practices of women about RH. Their comments were considered in modifying the items of the questionnaire.

3.8.2 Reliability

Reliability is concerned with how consistently the measurement technique measures the concept of interest, a measure is considered reliable if it gives the same results each time the situation is measured (Polit and Beck, 2012). The researcher used Cronbache alpha method to examine the reliability of the questionnaire as presented in table (3.2).

Table (3.2): Reliability of KAP questionnaire (Preconception)

No.	Domain	No. of items	Alpha coefficient
1	Knowledge	10	0.799
2	Attitude	6	0.826
3	Practice	9	0.761
Total score		**25**	**0.878**

As shown in table (3.2), the value of alpha for all the domains was above 0.70, and the total score was 0.878 which means that the questionnaire has good reliability.

Table (3.3): Reliability of KAP questionnaire (During pregnancy)

No.	Domain	No. of items	Alpha coefficient
1	Knowledge	9	0.832
2	Attitude	8	0.927
3	Practice	12	0.721
Total score		**29**	**0.823**

As shown in table (3.3), the value of alpha for all the domains was above 0.70, and the total score was 0.823 which means that the questionnaire has good reliability.

Table (3.4): Reliability of KAP questionnaire (Post-partum)

No.	Domain	No. of items	Alpha coefficient
1	Knowledge	9	0.894
2	Attitude	10	0.916
3	Practice	15	0.799
Total score		**34**	**0.884**

As shown in table (3.4), the value of alpha for all the domains was above 0.70, and the total score was 0.884 which means that the questionnaire has good reliability.

3.9 Data collection

The researcher visited the seven PHCCs that included in the study and had a meeting with the head nurse and nurses who are working in antenatal and postnatal clinics to inform them about the purpose of the research so they can help in facilitating the process of data collection.

The researcher explained the purpose of the research to eligible participants and gave them instructions about the questionnaire before filling the questionnaire in Arabic language so they can understand the contents of the questionnaire.

Each questionnaire has a consent form (annex 4) in the first page that asks the participants to participate in the study voluntary. Time allocated for each questionnaire was about 20 minutes.

3.10 Data entry and statistical analysis

The data were analyzed by using the SPSS program version 22 by help of a statistician. The phases of data analysis included: coding the questionnaires, data entry, and data cleaning. Statistical analysis included descriptive results including frequencies, means, percentage, and inferential results including, One-way ANOVA, Mann-Whitney test, and (t) test.

3.11 Ethical consideration

Before conducting the study, the researcher obtained agreement to carry out the study from Al- Quds University. Approval letter was obtained from Helsinki Committee in GS (Annex 6). Then approval letter was obtained from MOH to conduct this study (Annex 7). In addition, consent form (Annex 3) and explanatory form about the study attached to each questionnaire including the purpose of the study, confidentiality of information and some instructions to fill the questionnaire.

Chapter Four

Results of the Study

This chapter presents the results and discussion of statistical analysis of data. Description of demographic characteristics of participants was illustrated as well as the results of different variables were identified as inferential results. The results were discussed in relation to available literature and previous studies.

4.1 Sociodemographic characteristics of study participants

Table (4.1): Distribution of study participants by age and place of residency

Variables		**N**	**Percent**
Age	16 - 20 years	5.8	15.6
	> 20 – 25 years	127	34.1
	> 25 – 30 years	117	31.5
	> 30 years	70	18.8
	Total	372	100.0
	Mean age = 26.029 SD = 5.274		
Place of residency	Rafah	53	14.2
	Khanyounis	53	14.2
	Middle	53	14.2
	Gaza	160	43.2
	North	53	14.2
	Total	372	100.0

*NIS= New Israeli Shekel

Table (4.1) showed that more than one-third 127 (34.1%) of study participants are from the age group > 20 – 25 years and 117 (31.5%) from the age group > 25 – 30 years. Majority of study participants are from Gaza governorate accounted for 160 (43%) and from the other governorates 53 (14.2%) women participated in the study.

Table (4.2): Distribution of study participants by education, work, and income

Variables		N	Percent
Level of education	Prep school	48	12.9
	Secondary school	193	51.9
	University	131	35.2
	Total	372	100.0
Work	Working	13	3.5
	Housewife	359	96.5
	Total	372	100.0
Monthly income	≤1000 NIS*	265	71.2
	>1000 NIS	107	28.8
	Total	372	100.0
	Mean income = 860.504		

* NIS= New Israeli Shekel

Table (4.2) showed that 193 (51.9%) of study participants had secondary school education, 131 (35.2%) had university education, and 48 (12.9%) had prep school education. In addition, the results showed that 359 (96.5%) of the study participants are housewives and 13 (3.5%) are working, 265 (71.2%) have a monthly income of 1000 NIS and less 107 (28.8%) have a monthly income more than 1000 NIS.

Table (4.3): Distribution of study participants by obstetric and health history

Variables		N	Percent
Number of pregnancies	Two times	115	30.9
	3 – 5 times	188	50.5
	6 times and more	69	18.6
	Total	372	100.0
Number of deliveries	Primiparous	138	37.1
	2 – 4 times	195	52.4
	5 times and more	39	10.5
	Total	372	100.0
Previous abortions	Yes	125	33.6
	No	247	66.4
	Total	372	100.0

As shown in table (4.3), 188 (50.5%) of study participants have 3 – 5 pregnancies, 115 (30.9%) have two pregnancies, 195 (52.4%) had 2 – 4 deliveries and 138 (37.1%) had one delivery. In addition, 125 (33.6%) had previous abortions, 9 (2.4%) had chronic disease, of them, 5 (55.5%) have asthma, 3 (33.3%) have hypertension, and 1 (11.2%) have Diabetes mellitus.

4.2 Knowledge, attitudes, and practice about reproductive health

4.2.1 Preconception phase

Table (4.4): Knowledge of study participants about preconception care

Item	Strongly agree	Agree	Disagree	Mean	SD	Mean %	Rank
It is essential for the mother to eat balanced meals before pregnancy.	34.9	55.6	9.4	2.25	0.615	75.0	1
Consumption of folic acid before pregnancy decreases the risk of fetal anomalies.	36.3	53.2	10.5	2.25	0.634	75.0	1
Pregnancy is risky if the mother was obese.	16.1	58.3	25.5	1.90	0.639	63.3	3
Decrease the distance between pregnancies cause anemia for the mother.	18.0	47.3	34.7	1.83	0.707	61.0	4
Pregnancy is risky if mother's weight (BMI) is low.	11.0	52.7	36.3	1.74	0.640	58.0	5
Pregnancy is risky if mother's age less than 18 years.	9.4	51.9	38.7	1.70	0.629	56.6	6
Pregnancy is risky if mother's age more than 35 years.	9.7	49.7	40.6	1.69	0.638	56.3	7
Decrease the distance between pregnancies leads to postpartum hemorrhage.	8.6	45.4	46.0	1.62	0.638	54.0	8
Pregnancy is risky in case of twin's pregnancy.	8.3	42.5	49.2	1.59	0.639	53.0	9
Decrease the distance between pregnancies leads to congenital anomalies.	7.0	34.1	58.9	1.48	0.624	49.3	10
Overall average				**1.80**	**0.376**	**60.0**	

BMI= Body Mass Index

Table (4.4) presented participants' knowledge about preconception care. The results showed that the highest score obtained in women's knowledge about the necessity of eating balanced meals with mean score 2.25 and mean percent 75%, and the knowledge that consumption of folic acid before pregnancy decrease the risk of fetal anomalies with mean score 2.25 and mean percent 75%. In contrary, the lowest score obtained in the knowledge about the risk of twins pregnancy with mean score 1.59 and mean percent 53%,

followed by the knowledge that decreasing the distance between pregnancies leads to congenital anomalies, with mean score 1.48 and mean percent 49.3%. In general, the results indicated moderate knowledge about preconception care with mean score 1.80 and mean percent 60%. This result raised the need to increase women's awareness about preconception consultation and seeking advice in order to be prepared for the next pregnancy and pass the pregnancy period safely.

Table (4.5): Attitudes of study participants about preconception care

Item	Strongly agree	Agree	Disagree	Mean	SD	Mean %	Rank
I believe that consultation with the preconception clinic is helpful to prepare myself for pregnancy physically and psychologically.	30.1	66.1	3.8	2.26	0.519	75.3	1
I believe that preconception healthcare has positive effects on pregnancy and delivery.	32.3	59.9	7.8	2.24	0.584	74.6	2
I believe that consultation with the preconception clinic decrease the chance of complications during pregnancy.	23.4	68.3	8.3	2.15	0.543	71.6	3
I believe that it is necessary to do medical investigations (such as BP, glucose level) before pregnancy.	24.2	59.4	16.4	2.07	0.633	69.0	4
I believe that it is necessary to check blood group before pregnancy.	23.7	58.6	17.7	2.05	0.641	68.3	5
I believe that it is necessary to check hemoglobin level before pregnancy.	23.1	56.7	20.2	2.02	0.658	67.3	6
Overall average				**2.13**	**0.454**	**71.0**	

Table (4.5) presented participants' attitude towards preconception care. The results showed that the highest score obtained in believing that consultation with the preconception clinic is helpful to self-prepare for pregnancy physically and psychologically with mean score 2.26 and mean percent 75.3%, followed by believing that preconception healthcare has positive effects on pregnancy and delivery, with mean score 2.24 and mean percent 74.6%.

In contrary, the lowest score was in the believe that it is necessary to check blood group before pregnancy with mean score 2.05 and mean percent 68.3%, followed by believe that it is necessary to check hemoglobin level before pregnancy, with mean score 2.02 and mean percent 67.3%. The overall mean attitude was 2.13 and mean percent was 71%, which indicated above moderate attitude towards preconception care.

Table (4.6): Practice of study participants about preconception care

Item	Strongly agree	Agree	Disagree	Mean	SD	Mean %	Rank
I take balanced meals regularly before getting pregnant.	36.6	41.4	22.0	2.14	0.752	71.3	1
I take folic acid tablets regularly before getting pregnant.	32.0	29.3	38.7	1.93	0.839	64.3	2
I visited the preconception clinic before getting pregnant.	18.5	50.8	30.7	1.87	0.691	62.3	3
I make exercise / sport activities before getting pregnant.	23.4	37.4	39.2	1.84	0.776	61.3	4
I checked my blood group before getting pregnant	20.7	39.5	39.8	1.80	0.754	60.0	5
I checked my hemoglobin level before getting pregnant.	17.7	36.3	46.0	1.71	0.747	57.0	6
I check my blood pressure before getting pregnant.	16.7	36.3	47.0	1.69	0.739	56.3	7
I check my blood glucose level before getting pregnant.	11.8	27.4	60.8	1.51	0.698	50.3	8
I made heart investigations before getting pregnant.	12.1	22.3	65.6	1.46	0.701	48.6	9
Overall average				**1.77**	**0.504**	**59.0**	

Table (4.6) presented practices about preconception care. The results showed that the highest score obtained in taking balanced meals regularly before getting pregnant with mean score 2.14 and mean percent 71.3%, followed by taking folic acid tablets regularly before getting pregnant with mean score 1.93 and mean percent 64.3%. While the lowest score obtained in making heart investigations before getting pregnant with mean score 1.46

and mean percent 48.6%, followed by checking blood glucose before getting pregnant with mean score 1.51 and mean percent 50.3%. In general, the results indicated moderate level of practices of preconception care with means score 1.77 and mean percent 59%.

4.2.2 Pregnancy phase

Table (4.7): Knowledge of study participants about antenatal care

Item	Strongly agree	Agree	Disagree	Mean	SD	Mean %	Rank
I know that antenatal clinics provide physical and lab. tests during pregnancy (blood analysis, urine analysis, albumen, blood glucose, weight, height).	41.9	57.5	0.5	2.41	0.504	80.3	1
I know that taking balanced meals is necessary for me and my fetus.	40.6	56.7	2.7	2.37	0.538	79.0	2
I know that regular visits to the antenatal clinic are necessary for the safety of me and my baby.	35.8	62.9	1.3	2.34	0.503	78.0	3
I know that antenatal clinics provide follow up care to the fetus during pregnancy.	32.5	65.6	1.9	2.30	0.500	76.6	4
I know about presence of antenatal clinics at PHCCs*	19.9	78.0	2.2	2.17	0.435	72.3	5
I know that antenatal clinics provide health services to pregnant women every day.	18.8	75.0	6.2	2.12	0.484	70.6	6
I know that vaginal bleeding is a risk factor of pregnancy.	24.2	64.0	11.8	2.12	0.588	70.6	6
I know that leakage of vaginal fluid is a risk factor of pregnancy.	19.1	58.9	22.0	1.97	0.641	65.6	8
I know that being pregnant with twins is considered risky pregnancy.	12.1	39.2	48.7	1.63	0.689	54.3	9
Overall average				**2.16**	**0.357**	**72.0**	

*PHCCs= Primary Health Care Centers

Table (4.7) showed that the highest score obtained in knowing that antenatal clinics provide physical and lab. tests during pregnancy (blood analysis, urine analysis, albumen, blood glucose, weight, height) with mean score 2.41 and mean score 80.3%, followed by

knowing that taking balanced meals is necessary for the mother and her fetus with mean score 2.37 and mean percent 79%. In contrary, the lowest score was in knowing that being pregnant with twins is considered risky pregnancy with a mean score 1.63 and mean percent 54.3%, followed by knowing that leakage of vaginal fluid is a risk factor of pregnancy with a mean score 1.97 and mean percent 65.6%. In general, the results indicated that mothers have above moderate knowledge about ANC with mean score 2.16 and mean percent 72%.

Table (4.8): Attitudes of study participants about antenatal care

Item	Strongly agree	Agree	Disagree	Mean	SD	Mean %	Rank
I believe that it is essential to take balanced meals during pregnancy for my health and ma fetus.	37.1	61.6	1.3	2.35	0.507	78.3	1
I believe that the health services provided at antenatal clinic are beneficial for me.	34.9	64.0	1.1	2.33	0.496	77.6	2
I believe that it is necessary to be committed to the appointments at antenatal clinic.	33.9	64.5	1.6	2.32	0.501	77.3	3
I believe that it is essential to check my blood pressure regularly during pregnancy.	32.0	62.4	5.6	2.26	0.554	75.3	4
I believe that the nurses and midwives at antenatal clinic are skillful to provide the needed care.	26.3	71.5	2.2	2.24	0.476	74.6	5
I believe that it is essential to check my blood glucose level during pregnancy.	29.6	63.2	7.3	2.22	0.565	74.0	6
I believe that it is essential to check my blood hemoglobin regularly during pregnancy.	23.1	61.6	15.3	2.07	0.615	69.0	7
I have been ready for this pregnancy physically and psychologically.	20.7	61.8	17.5	2.03	0.617	67.6	8
Overall average				**2.23**	**0.395**	**74.3**	

Table (4.8) showed that the highest score obtained in believing that it is essential to take balanced meals during pregnancy with mean score 2.35 and mean percent 78.3%, followed by believing that the health services provided at antenatal clinic are beneficial with mean

score 2.33 and mean percent 77.6%. In contrary, the lowest score was in being ready for this pregnancy physically and psychologically with mean score 2.03 and mean percent 67.6%, followed by believing that it is essential to check blood hemoglobin regularly during pregnancy with mean score 2.07 and mean percent 69%. In general, the results indicated that the mothers have above moderate attitudes towards ANC with mean score 2.23 and mean percent 74.3%.

Table (4.9): Practices of study participants about antenatal care

Item	Strongly agree	Agree	Disagree	Mean	SD	Mean %	Rank
I visit the antenatal clinic regularly according to appointments.	89.5	10.0	0.5	2.88	0.330	96.0	1
The nurse checks my height and weight during my visit.	89.5	9.4	1.1	2.88	0.352	96.0	1
I follow the instructions that the nurse / midwife provide to me at antenatal clinic.	84.9	14.2	0.9	2.84	0.387	94.6	3
The nurse checks my BP during my visit to antenatal clinic.	80.6	17.7	1.7	2.79	0.445	93.0	4
The nurse checks fetal movement during my visit.	66.9	30.1	3.0	2.63	0.538	87.6	5
I continue taking folic acid and iron during pregnancy.	69.1	22.6	8.3	2.60	0.637	86.6	6
I eat balanced meals during pregnancy.	59.9	36.3	3.8	2.56	0.567	85.3	7
The nurse checks my blood glucose during my visit .	49.7	43.0	7.3	2.42	0.624	80.6	8
The nurse checks my hemoglobin during my visit to the antenatal clinic.	49.5	36.5	14.0	2.35	0.714	78.3	9
The nurse checks my uterus height during my visit	33.6	33.3	33.1	2.00	0.817	66.6	10
I practice any type of exercise during pregnancy.	14.5	43.5	41.9	1.72	0.700	57.3	11
I take medication without prescription during pregnancy (Acamol, analgesics, antibiotics).	11.6	12.6	75.8	1.35	0.679	45.0	12
Overall average				**2.42**	**0.267**	**80.6**	

As shown in table (4.9), the highest score obtained in visiting the antenatal clinic regularly according to the designed appointments with mean score 2.88 and mean percent 96%, and checking mothers' height and weight during the visit to antenatal clinic with mean score 2.88 and mean percent 96%. In contrary, the lowest score obtained in taking medication without prescription during pregnancy with mean score 1.35 and mean percent 45%, followed by practicing any type of exercise during pregnancy with mean score 1.72 and mean percent 57.3%. In general, the mothers showed high level of practices of ANC with mean score 2.42 and mean percent 80.6%.

4.2.3 Postpartum phase

Table (4.10): Knowledge of study participants about postpartum care

Item	Strongly agree	Agree	Disagree	Mean	SD	Mean %	Rank
I know that I have to be committed to the vaccination program.	52.7	46.8	0.5	2.52	0.510	84.0	1
I know that PHCCs provide vaccination and follow up of the growth of my baby.	46.0	53.2	0.8	2.45	0.514	81.6	2
I know that following a balanced diet is essential for me and my baby.	41.4	55.9	2.7	2.38	0.540	79.3	3
I know that regular visits to postnatal clinic are essential for my health and my baby health.	35.2	63.7	1.1	2.34	0.497	78.0	4
I know that regular visits to postnatal clinic are essential to discover postpartum complications.	26.3	68.5	5.2	2.21	0.519	73.6	5
I know that postnatal clinics are present in PHCCs.	26.3	66.9	6.8	2.19	0.541	73.0	6
I know that continuity of vaginal bleeding (red blood) is a postpartum complication.	26.3	63.4	10.2	2.16	0.583	72.0	7
I know that elevated temp. is a postpartum complication.	25.0	62.4	12.6	2.12	0.601	70.6	8
I know that postpartum complications could occur up to 6 weeks after delivery.	19.4	60.5	20.2	1.99	0.629	66.3	9
Overall average				**2.26**	**0.399**	**75.3**	

Table (4.10) presented mothers' knowledge about postpartum care. The results showed that the highest score obtained in knowledge about commitment to vaccination program with mean score 2.52 and mean percent 84%, followed by knowing that PHCCs provide vaccination and follow up of the growth of the baby with mean score 2.45 and mean percent 81.6%. In contrary, the lowest score was in knowing that postpartum complications could occur up to 6 weeks after delivery with mean score 1.99 and mean percent 66.3%, followed by knowing that elevated body temperature is a postpartum complication with mean score 2.12 and mean percent 70.6%. In general, mothers showed above moderate knowledge about PPC services with mean score 2.26 and mean percent 75.3%.

Table (4.11): Attitudes of study participants about postpartum care

Item	Strongly agree	Agree	Disagree	Mean	SD	Mean %	Rank
I believe that natural breastfeeding is a healthy behavior for me and for my baby.	50.0	49.2	0.8	2.49	0.516	83.0	1
I believe that it is necessary to vaccinate my baby according to the vaccination program.	48.9	50.3	0.8	2.48	0.516	82.6	2
I believe that it is necessary to have balanced meals after delivery to maintain good health for me and my baby.	37.6	60.8	1.6	2.36	0.513	78.6	3
I believe that it is necessary to follow up at PHCC after delivery..	34.1	62.1	3.8	2.30	0.536	76.6	4
I am confident in the nurses and midwives' skills and abilities to provide the needed health care.	26.9	69.1	4.0	2.22	0.507	74.0	5
I believe that it is necessary to have breast exam to discover any problem that may disrupt natural breastfeeding.	27.2	65.8	7.0	2.20	0.549	73.3	6
I believe that it is necessary to have vaginal exam to ensure the safety of vagina and birth canal.	25.0	66.9	8.1	2.16	0.550	72.0	7
I believe that it is necessary to check my BP after delivery.	22.3	64.0	13.7	2.08	0.594	69.3	8
I believe that it is necessary to check my Hgb after delivery.	20.2	57.5	22.3	1.97	0.652	65.6	9
I believe it is necessary to check my blood sugar after delivery.	19.1	57.5	23.4	1.95	0.651	65.0	10
Overall average				**2.22**	**0.407**	**74.0**	

Table (4.11) showed that the highest score obtained in believing that natural breastfeeding is a healthy behavior for the mother and for her baby with mean score 2.49 and mean percent 83%, followed by mothers' believe that it is necessary to vaccinate their babies according to the vaccination program with mean score 2.48 and mean percent 74%. In contrary, the lowest score obtained in believing that it is necessary to check blood glucose after delivery with mean score 1.95 and mean percent 65%, followed by believing that it is necessary to check hemoglobin after delivery with mean score 1.97 and mean percent 65.6%. In general, the results indicated that mothers have above moderate attitudes towards PPC service with mean score 2.22 and mean score 74%.

Table (4.12): Practices of study participants about postpartum care

Item	Strongly Agree	Agree	Disagree	Mean	SD	Mean %	Rank
I commit to the vaccination program for my baby.	92.7	7.0	0.3	2.92	0.274	97.3	1
I wash vaginal area with soap and water many times during the day and after toilet.	88.2	11.3	0.5	2.87	0.345	95.6	2
The nurse / midwife check growth development of my baby (weight, height, head circumference).	86.3	11.0	2.7	2.83	0.437	94.3	3
I clean my breasts immediately before breastfeeding.	83.9	14.2	1.9	2.81	0.431	93.6	4
I take balanced meals after delivery.	77.7	19.4	3.0	2.74	0.498	91.3	5
I follow up at postnatal clinic regularly according to appointments.	75.5	17.7	6.8	2.68	0.591	89.3	6
The nurse / midwife check the temperature of my baby at postnatal clinic.	75.2	17.5	7.3	2.68	0.603	89.3	6
I make exercises / walking regularly after delivery to strengthen abdominal muscles	40.6	28.5	30.9	2.09	0.841	69.6	8
I check my blood pressure at postnatal clinic.	24.2	26.1	49.7	1.74	0.822	58.0	9
I check my hemoglobin at postnatal clinic.	19.4	29.0	51.6	1.67	0.779	55.6	10
I check my temperature at postnatal clinic.	14.8	27.4	57.8	1.56	0.736	52.0	11
I check my blood glucose at postnatal clinic.	14.5	26.6	58.9	1.55	0.733	51.6	12
The nurse / midwife performs vaginal exam at postnatal clinic.	11.3	21.5	67.2	1.44	0.688	48.0	13
The nurse / midwife performs breast exam for ulcers that may disrupt natural breastfeeding.	11.0	20.2	68.8	1.42	0.682	47.3	14
The nurse / midwife check the uterus level at postnatal clinic.	7.5	20.5	72.0	1.35	0.616	45.0	15
Overall average				**2.16**	**0.330**	**72.0**	

Table (4.12) showed that the highest score obtained in mothers' commitment to the vaccination program for their babies with mean score 2.92 and mean percent 97.3, followed by washing vaginal area with soap and water many times during the day and after toilet with mean score 2.87 and mean percent 95.6%. In contrary, the lowest score obtained in checking the uterus level at postnatal clinic with mean score 1.35 and mean percent 45%, followed by examining the breast at postnatal clinic with mean score 1.42 and mean percent 47.3%. In general, the results indicated above moderate practices of PPC with mean score 2.16 and mean percent 72%.

4.3 Differences in Knowledge, attitudes, and practice about reproductive health related to sociodemographic factors

4.3.1 Differences in Knowledge, attitudes, and practice related to age

Table (4.13): Differences in knowledge related to age

Phase	Age	N	Mean	SD	F	P value
Preconception	20 and less	58	1.715	0.377	1.978	0.117
	21-25	127	1.803	0.371		
	26-30	117	1.861	0.383		
	31 and more	70	1.812	0.366		
	Total	372	1.809	0.376		
During pregnancy	20 and less	58	2.147	0.350	0.465	0.707
	21-25	127	2.143	0.353		
	26-30	117	2.194	0.369		
	31 and more	70	2.163	0.355		
	Total	372	2.164	0.357		
Postpartum	20 and less	58	2.226	0.453	1.260	0.288
	21-25	127	2.250	0.362		
	26-30	117	2.322	0.424		
	31 and more	70	2.228	0.367		
	Total	372	2.265	0.399		

One-way ANOVA test

As shown in table (4.13), there were no statistically significant differences in knowledge at preconception phase (P= 0.117), during pregnancy (P= 0.707), and at postpartum phase (P= 0.288). This result indicated no significant differences in knowledge about RH care related to age of mothers.

Table (4.14): Differences in attitudes related to age

Phase	Age	N	Mean	SD	F	P value
Preconception	20 and less	58	2.155	0.440	1.731	0.160
	21-25	127	2.065	0.436		
	26-30	117	2.192	0.454		
	31 and more	70	2.161	0.490		
	Total	372	2.137	0.454		
During pregnancy	20 and less	58	2.245	0.413	0.275	0.844
	21-25	127	2.224	0.386		
	26-30	117	2.252	0.404		
	31 and more	70	2.201	0.386		
	Total	372	2.232	0.395		
Postpartum	20 and less	58	2.196	0.452	1.298	0.275
	21-25	127	2.196	0.396		
	26-30	117	2.287	0.412		
	31 and more	70	2.201	0.373		
	Total	372	2.225	0.407		

One-way ANOVA test

Table (4.14) showed that there were no statistically significant differences in attitudes at preconception phase (P= 0.160), during pregnancy (P= 0.844), and at postpartum phase (P= 0.275). This result indicated no significant differences in attitudes towards RH related to age of mothers.

Table (4.15): Differences in practice related to age

Phase	Age	N	Mean	SD	F	P value
Preconception	20 and less	58	1.808	0.567	0.572	0.634
	21-25	127	1.762	0.504		
	26-30	117	1.812	0.492		
	31 and more	70	1.722	0.475		
	Total	372	1.777	0.504		
During pregnancy	20 and less	58	2.432	0.254	0.196	0.899
	21-25	127	2.412	0.286		
	26-30	117	2.435	0.256		
	31 and more	70	2.416	0.266		
	Total	372	2.423	0.267		
Postpartum	20 and less	58	2.185	0.366	0.289	0.834
	21-25	127	2.165	0.346		
	26-30	117	2.165	0.307		
	31 and more	70	2.132	0.313		
	Total	372	2.162	0.330		

One-way ANOVA test

Table (4.15) showed that there were no statistically significant differences in practices at preconception phase (P= 0.634), during pregnancy (P= 0.899), and at postpartum phase (P= 0.834). This result indicated no significant differences in practices of RH related to age of mothers.

4.3.2 Differences in Knowledge, attitudes, and practice related to governorate

Table (4.16): Differences in knowledge related to residency

Phase	Governorate	N	Mean	SD	F	P value
Preconception	Rafah	53	1.830	0.386	3.407	0.009 *
	Khanyounis	53	1.805	0.399		
	Middle	53	1.801	0.409		
	Gaza	160	1.861	0.362		
	North	53	1.645	0.313		
	Total	372	1.809	0.376		
During pregnancy	Rafah	53	2.060	0.307	5.996	0.000 *
	Khanyounis	53	2.134	0.299		
	Middle	53	2.184	0.356		
	Gaza	160	2.249	0.385		
	North	53	2.018	0.302		
	Total	372	2.164	0.357		
Postpartum	Rafah	53	2.096	0.280	12.953	0.000 *
	Khanyounis	53	2.247	0.377		
	Middle	53	2.421	0.335		
	Gaza	160	2.356	0.408		
	North	53	2.021	0.391		
	Total	372	2.265	0.399		

One-way ANOVA test *Significant at 0.05

Table (4.16) showed that there were statistically significant differences in knowledge about pregnancy between different governorates in the preconception phase (P= 0.009), during pregnancy (P= 0.000), and postpartum (P= 0.000).

Post hoc LSD showed that participants from the north governorate showed lower knowledge about RH compared to the other governorates.

Table (4.17): Differences in attitudes related to residency

Phase	Governorate	N	Mean	SD	F	P value
Preconception	Rafah	53	2.053	0.311	4.419	0.002 *
	Khanyounis	53	2.195	0.469		
	Middle	53	2.106	0.559		
	Gaza	160	2.218	0.458		
	North	53	1.949	0.366		
	Total	372	2.137	0.454		
During pregnancy	Rafah	53	2.077	0.309	8.006	0.000 *
	Khanyounis	53	2.259	0.404		
	Middle	53	2.250	0.402		
	Gaza	160	2.329	0.411		
	North	53	2.047	0.296		
	Total	372	2.232	0.395		
Postpartum	Rafah	53	2.075	0.252	11.872	0.000 *
	Khanyounis	53	2.271	0.374		
	Middle	53	2.290	0.393		
	Gaza	160	2.328	0.422		
	North	53	1.956	0.376		
	Total	372	2.225	0.407		

One-way ANOVA test *Significant at 0.05

Table (4.17) showed that there were statistically significant differences in attitudes toward RH between different governorates in the preconception phase (P= 0.002), during pregnancy (P= 0.000), and postpartum (P= 0.000). Post hoc LSD showed that participants

from the north governorate showed lower attitudes towards RH than the other governorates.

Table (4.18): Differences in practice related to residency

Phase	Governora	N	Mean	SD	F	P value
Preconception	Rafah	53	1.666	0.444	3.978	0.004 *
	Khanyounis	53	1.763	0.472		
	Middle	53	1.792	0.447		
	Gaza	160	1.874	0.530		
	North	53	1.595	0.512		
	Total	372	1.777	0.504		
During pregnancy	Rafah	53	2.487	0.269	5.052	0.001 *
	Khanyounis	53	2.435	0.200		
	Middle	53	2.375	0.311		
	Gaza	160	2.456	0.257		
	North	53	2.295	0.269		
	Total	372	2.423	0.267		
Postpartum	Rafah	53	2.003	0.240	13.037	0.000 *
	Khanyounis	53	2.143	0.297		
	Middle	53	2.293	0.368		
	Gaza	160	2.239	0.339		
	North	53	1.976	0.223		
	Total	372	2.162	0.330		

One-way ANOVA test *Significant at 0.05

Table (4.18) showed that there were statistically significant differences in practices of RH between different governorates in the preconception phase (P= 0.004), during pregnancy (P= 0.001), and postpartum (P= 0.000). Post hoc LSD showed that participants from the north governorate showed lower practices about RH than the other governorates.

4.3.3 Differences in Knowledge, attitudes, and practice related to work

Table (4.19): Differences in knowledge, attitudes, and practice related to work

	Phase	Work status	N	Mean Rank	P value
Knowledge	Preconception	Housewife	359	184.98	0.151
		Working	13	228.42	
		Total	372		
	During pregnancy	Housewife	359	186.03	0.654
		Working	13	199.50	
		Total	372		
	Postpartum	Housewife	359	185.49	0.336
		Working	13	214.38	
		Total	372		
Attitudes	Preconception	Housewife	359	185.89	0.561
		Working	13	203.23	
		Total	372		
	During pregnancy	Housewife	359	186.29	0.838
		Working	13	192.38	
		Total	372		
	Postpartum	Housewife	359	185.80	0.502
		Working	13	205.88	
		Total	372		
Practice	Preconception	Housewife	359	185.59	0.392
		Working	13	211.54	
		Total	372		
	During pregnancy	Housewife	359	184.95	0.141
		Working	13	229.38	
		Total	372		
	Postpartum	Housewife	359	184.45	0.052
		Working	13	243.12	
		Total	372		

Mann-Whitney test

Table (4.19) showed that there were no statistically significant differences in knowledge at preconception phase (P= 0.151), during pregnancy (P= 0.654), and at postpartum phase (P= 0.052). This result indicated no significant differences in knowledge about RH between mothers who are working and mothers who are not working.

The results also showed that there were no statistically significant differences in attitudes at preconception phase (P= 0.561), during pregnancy (P= 0.838), and at postpartum phase (P= 0.502). This result indicated no significant differences in attitudes towards RH between mothers who are working and mothers who are not working.

Furthermore, the results showed that there were no statistically significant differences in practices at preconception phase (P= 0.392), during pregnancy (P= 0.141), and at postpartum phase (P= 0.052). This result indicated no significant differences in practices of RH between mothers who are working and mothers who are not working.

4.3.4 Differences in Knowledge, attitudes, and practice related to level of education

Table (4.20): Differences in knowledge related to level of education

Phase	Level of education	N	Mean	SD	F	P value
Preconception	Prep school	48	1.691	0.356	10.815	0.000 *
	Secondary school	193	1.760	0.365		
	University	131	1.926	0.373		
	Total	372	1.809	0.376		
During pregnancy	Prep school	48	2.055	0.288	7.540	0.001 *
	Secondary school	193	2.129	0.346		
	University	131	2.254	0.379		
	Total	372	2.164	0.357		
Postpartum	Prep school	48	2.108	0.367	16.194	0.000 *
	Secondary school	193	2.203	0.381		
	University	131	2.413	0.392		
	Total	372	2.265	0.399		

One-way ANOVA test *Significant at 0.05

Table (4.20) showed that there were statistically significant differences in knowledge about RH related to level of education in the preconception phase (P= 0.000), during pregnancy (P= 0.001), and postpartum (P= 0.000).

Post hoc LSD showed that participants who had university education showed higher knowledge about RH compared to participants who have prep and secondary education.

Table (4.21): Differences in attitudes related to level of education

Phase	Level of education	N	Mean	SD	F	P value
Preconception	Prep school	48	1.975	0.470	14.101	0.000 *
	Secondary school	193	2.069	0.418		
	University	131	2.296	0.457		
	Total	372	2.137	0.454		
During pregnancy	Prep school	48	2.078	0.294	13.298	0.000 *
	Secondary school	193	2.181	0.382		
	University	131	2.363	0.411		
	Total	372	2.232	0.395		
Postpartum	Prep school	48	2.064	0.321	12.028	0.000 *
	Secondary school	193	2.179	0.407		
	University	131	2.352	0.401		
	Total	372	2.225	0.407		

One-way ANOVA test *Significant at 0.05

Table (4.21) showed that there were statistically significant differences in attitudes toward RH related to level of education in the preconception phase (P= 0.000), during pregnancy (P= 0.000), and postpartum (P= 0.000).

Post hoc LSD showed that participants who had university education showed higher attitudes towards RH compared to participants who have prep and secondary education.

Table (4.22): Differences in practices related to level of education

Phase	Level of education	N	Mean	SD	F	P value
Preconception	Prep school	48	1.597	0.490	4.266	0.015 *
	Secondary school	193	1.777	0.520		
	University	131	1.843	0.472		
	Total	372	1.777	0.504		
During pregnancy	Prep school	48	2.355	0.308	3.248	0.040 *
	Secondary school	193	2.412	0.260		
	University	131	2.464	0.257		
	Total	372	2.423	0.267		
Postpartum	Prep school	48	2.054	0.260	5.942	0.003 *
	Secondary school	193	2.142	0.341		
	University	131	2.231	0.325		
	Total	372	2.162	0.330		

One-way ANOVA test *Significant at 0.05

Table (4.22) showed that there were statistically significant differences in practices of RH related to level of education in the preconception phase (P= 0.015), during pregnancy (P= 0.040), and postpartum (P= 0.003).

Post hoc LSD showed that participants who had university education showed higher practices of RH compared to participants who have prep and secondary education.

4.3.5 Differences in Knowledge, attitudes, and practice related to income

Table (4.23): Differences in knowledge, attitudes, and practices related to income

	Phase	Income	N	Mean	SD	T value	P value
Knowledge	Preconception	less than 1000	265	1.789	0.376	-1.666	0.097
		1000 and more	107	1.860	0.373		
	During pregnancy	less than 1000	265	2.143	0.349	-1.786	0.075
		1000 and more	107	2.216	0.374		
	Postpartum	less than 1000	265	2.259	0.393	-0.433	0.655
		1000 and more	107	2.279	0.414		
Attitudes	Preconception	less than 1000	265	2.117	0.463	-1.332	0.184
		1000 and more	107	2.186	0.431		
	During pregnancy	less than 1000	265	2.229	0.383	-0.226	0.821
		1000 and more	107	2.239	0.425		
	Postpartum	less than 1000	265	2.212	0.410	-1.024	0.307
		1000 and more	107	2.259	0.399		
Practice	Preconception	less than 1000	265	1.766	0.505	-0.662	0.508
		1000 and more	107	1.804	0.504		
	During pregnancy	less than 1000	265	2.406	0.283	-1.971	0.050 *
		1000 and more	107	2.466	0.220		
	Postpartum	less than 1000	265	2.164	0.341	0.175	0.861
		1000 and more	107	2.157	0.303		

Independent sample (t) test *Significant at 0.05

Table (4.23) showed that there were no statistically significant differences in knowledge at preconception phase (P= 0.097), during pregnancy (P= 0.075), and at postpartum phase (P= 0.655). This result indicated no significant differences in knowledge about RH related to family income.

The results also showed that there were no statistically significant differences in attitudes at preconception phase (P= 0.184), during pregnancy (P= 0.821), and at postpartum phase (P= 0.307). This result indicated no significant differences in attitudes towards RH related to family income.

Furthermore, the results showed that there were no statistically significant differences in practices at preconception phase (P= 0.508), and at postpartum phase (P= 0.861). This result indicated no significant differences in practices of RH related to family income.

The results also showed that there were statistically significant differences in practices during pregnancy (P= 0.050) which indicated that mothers who have family income of 1000 NIS and more expressed higher level of pregnancy-related practices compared to mothers with lower family income.

4.3.6 Differences in Knowledge, attitudes, and practice related to number of pregnancies

Table (4.24): Differences in knowledge related to number of pregnancies

Phase	Number of pregnancies	N	Mean	SD	F	P value
Preconception	Two times	115	1.768	0.385	2.461	0.087
	3 – 5 times	188	1.803	0.366		
	6 and more	69	1.894	0.379		
	Total	372	1.809	0.376		
During pregnancy	Two times	115	2.139	0.348	0.594	0.553
	3 – 5 times	188	2.166	0.363		
	6 and more	69	2.198	0.360		
	Total	372	2.164	0.357		
Postpartum	Two times	115	2.261	0.405	0.170	0.844
	3 – 5 times	188	2.275	0.406		
	6 and more	69	2.243	0.371		
	Total	372	2.265	0.399		

One-way ANOVA test

Table (4.24) showed that there were no statistically significant differences in knowledge at preconception phase (P= 0.087), during pregnancy (P= 0.553), and at postpartum phase (P= 0.844). This result indicated no significant differences in knowledge about RH related to number of pregnancies.

Table (4.25): Differences in attitudes related to number of pregnancies

Phase	Number of pregnancies	N	Mean	SD	F	P value
Preconception	Two times	115	2.127	0.455	0.347	0.707
	3 – 5 times	188	2.128	0.463		
	6 and more	69	2.178	0.433		
	Total	372	2.137	0.454		
During pregnancy	Two times	115	2.239	0.399	0.096	0.909
	3 – 5 times	188	2.234	0.387		
	6 and more	69	2.213	0.414		
	Total	372	2.232	0.395		
Postpartum	Two times	115	2.207	0.412	0.379	0.685
	3 – 5 times	188	2.224	0.408		
	6 and more	69	2.260	0.398		
	Total	372	2.225	0.407		

One-way ANOVA test

Table (4.25) showed that there were no statistically significant differences in attitudes at preconception phase (P= 0.707), during pregnancy (P= 0.909), and at postpartum phase (P= 0.685). This result indicated no significant differences in attitudes towards RH related to number of pregnancies.

Table (4.26): Differences in practice related to number of pregnancies

Phase	Number of pregnancies	N	Mean	SD	F	P value
Preconception	Two times	115	1.822	0.503	0.738	0.479
	3 – 5 times	188	1.765	0.502		
	6 and more	69	1.735	0.515		
	Total	372	1.777	0.504		
During pregnancy	Two times	115	2.410	0.270	0.207	0.813
	3 – 5 times	188	2.431	0.265		
	6 and more	69	2.423	0.272		
	Total	372	2.423	0.267		
Postpartum	Two times	115	2.191	0.366	0.964	0.382
	3 – 5 times	188	2.158	0.317		
	6 and more	69	2.122	0.303		
	Total	372	2.162	0.330		

One-way ANOVA test

Table (4.26) showed that there were no statistically significant differences in practices at preconception phase (P= 0.479), during pregnancy (P= 0.813), and at postpartum phase (P= 0.382). This result indicated no significant differences in practices of RH related to number of pregnancies.

4.3.7 Differences in Knowledge, attitudes, and practice related to number of deliveries

Table (4.27): Differences in knowledge related to number of deliveries

Phase	Number of deliveries	N	Mean	SD	F	P value
Preconception	One time	138	1.797	0.381	0.759	0.469
	2 – 4 times	195	1.804	0.367		
	5 times and more	39	1.879	0.407		
	Total	372	1.809	0.376		
During pregnancy	One time	138	2.156	0.358	0.176	0.839
	2 – 4 times	195	2.173	0.363		
	5 times and more	39	2.142	0.337		
	Total	372	2.164	0.357		
Postpartum	One time	138	2.278	0.412	1.081	0.340
	2 – 4 times	195	2.273	0.398		
	5 times and more	39	2.176	0.345		
	Total	372	2.265	0.399		

One-way ANOVA test

Table (4.27) showed that there were no statistically significant differences in knowledge at preconception phase (P= 0.469), during pregnancy (P= 0.839), and at postpartum phase (P= 0.340). This result indicated no significant differences in knowledge about RH related to number of deliveries.

Table (4.28): Differences in attitudes related to number of deliveries

Phase	Number of deliveries	N	Mean	SD	F	P value
Preconception	One time	138	2.159	0.460	0.359	0.699
	2 – 4 times	195	2.130	0.452		
	5 times and more	39	2.094	0.450		
	Total	372	2.137	0.454		
During pregnancy	One time	138	2.267	0.406	1.543	0.215
	2 – 4 times	195	2.225	0.390		
	5 times and more	39	2.144	0.371		
	Total	372	2.232	0.395		
Postpartum	One time	138	2.223	0.421	0.653	0.521
	2 – 4 times	195	2.240	0.406		
	5 times and more	39	2.159	0.361		
	Total	372	2.225	0.407		

One-way ANOVA test

Table (4.28) showed that there were no statistically significant differences in attitudes at preconception phase (P= 0.699), during pregnancy (P= 0.215), and at postpartum phase (P= 0.521). This result indicated no significant differences in attitudes towards RH related to number of deliveries.

Table (4.29): Differences in practice related to number of deliveries

Phase	Number of deliveries	N	Mean	SD	F	P value
Preconception	One time	138	1.819	0.495	2.233	0.109
	2 – 4 times	195	1.777	0.515		
	5 times and more	39	1.626	0.466		
	Total	372	1.777	0.504		
During pregnancy	One time	138	2.413	0.284	0.205	0.815
	2 – 4 times	195	2.432	0.252		
	5 times and more	39	2.416	0.286		
	Total	372	2.423	0.267		
Postpartum	One time	138	2.187	0.359	0.775	0.461
	2 – 4 times	195	2.153	0.315		
	5 times and more	39	2.119	0.300		
	Total	372	2.162	0.330		

One-way ANOVA test

Table (4.29) showed that there were no statistically significant differences in practices at preconception phase (P= 0.109), during pregnancy (P= 0.815), and at postpartum phase (P= 0.461). This result indicated no significant differences in practices of RH related to number of deliveries.

4.3.8 Differences in Knowledge, attitudes, and practice related to history of abortion

Table (4.30): Differences in knowledge, attitudes, and practices related to history of abortion

	Phase	Previous abortion	N	Mean	SD	T value	P value
Knowledge	Preconception	No	247	1.778	0.378	-2.283	0.023 *
		Yes	125	1.872	0.366		
	During pregnancy	No	247	2.143	0.355	-1.589	0.113
		Yes	125	2.205	0.360		
	Postpartum	No	247	2.239	0.390	-1.735	0.084
		Yes	125	2.315	0.412		
Attitudes	Preconception	No	247	2.097	0.439	-2.382	0.018 *
		Yes	125	2.216	0.476		
	During pregnancy	No	247	2.215	0.385	-1.139	0.255
		Yes	125	2.265	0.413		
	Postpartum	No	247	2.183	0.394	-2.878	0.004 *
		Yes	125	2.310	0.419		
Practice	Preconception	No	247	1.757	0.504	-1.071	0.285
		Yes	125	1.816	0.506		
	During pregnancy	No	247	2.407	0.265	-1.629	0.104
		Yes	125	2.455	0.270		
	Postpartum	No	247	2.161	0.337	-0.079	0.937
		Yes	125	2.164	0.318		

Independent sample (t) test *Significant at 0.05

Table (4.30) showed that there were statistically significant differences in knowledge about RH at preconception phase (P= 0.023), which indicated that mothers who had history of previous abortions had higher knowledge about PCC compared to mothers who did not have previous abortions, but there were no statistically significant differences in knowledge during pregnancy (P= 0.113), and at postpartum phase (P= 0.084) related to previous abortions.

In addition, there were statistically significant differences in attitudes towards RH at preconception phase (P=0.018), and at postpartum phase (P= 0.004), which indicated higher level of attitudes towards RH among mothers who had previous abortions, while there were no statistically significant differences in attitudes towards RH during pregnancy phase (P= 0.255) related to previous abortions.

Moreover, there were no statistically significant differences in practices at preconception phase (P= 0.285), during pregnancy (P= 0.104), and at postpartum phase (P= 0.937). This result indicated no significant differences in practices RH related to previous abortions.

4.4 Discussion

This study was conducted to assess level of KAP about RH among mothers at governmental PHCCs in GS. The sample of the study consisted of 372 women, about one-third of them aged 21 – 25 years with mean age 26.029 years, half of them had secondary school education and more than one-third had university education, the vast majority are housewives, and more than two-thirds have low income of less than 1000 NIS. Most of the study participants were multiparous, one-third had history of previous abortion, and the vast majority of them do not have history of chronic disease. Our study result was consistent with other studies that confirm the same age 20-25 years old (Akhtar et al., 2018; Ahirwar, 2018; Lilungulu et al., 2016).

At the same time our study was not in agreement with a study carried out in Sudan which their result revealed that the mean age of the participants was 30.92 years, 44% of the women were educated, and most of them were multiparous (Ahmed et al., 2015).

The study carried out by Ahmed et al. (2015) found that mean age of the participants was 30.92 years, 44% of the women were educated, and most of them were multiparous, and Kassa and Yohannes (2018) found that one-fifth of the women never attended formal education, more than half attended primary education, and about two-thirds of participants were urban residents.

In my opinion, our results were inconsistent with some studies and that could be attributed to cultural differences as in GS many girls are married at young age and many are married at teen age while they are in the secondary school, while in other cultures it is common to marry after completing university education.

Knowledge, attitudes, and practice about preconception care

Preconception counseling is an important aspect of the care of reproductive-aged women (Arluck and Mayhew, 2018). Therefore, newly married and engaged females need to have adequate KAP about RH and pregnancy so they can be well prepared for pregnancy and childbirth.

The results of the present study indicated that mothers had moderate degree of knowledge, above moderate positive attitude, and practice about pregnancy at preconception phase. These results were consistent with the results of Ahmed and Jamil (2017) who found that about three-fourths of mothers had fair knowledge about PCC, and the majority of mothers expressed good attitude about PCC. Moreover, Kasim et al., (2016) found that half of mothers had good knowledge of PCC, the vast majority had good attitudes, and 45.2% had good practices of PCC.

Controversy, the present study is inconsistent with Gaferi et al. (2018) study which showed that more than two-thirds of the participants had inaccurate knowledge, while only about one-third had correct knowledge regarding RH. The majority of participants had positive attitudes regarding RH, while only 11.7% had negative attitudes, and mothers were a vital source of information regarding RH.

According to the researcher opinion, I believe that understanding and awareness about PCC is important for the future mothers and their babies, and increase mothers' commitment to follow ANC instructions. In this regard, Ahmed et al. (2015) found that awareness regarding PCC was seen in only 11% of the women, nearly one-third had positive attitudes towards PCC, and the majority of the women either have partial knowledge or have no knowledge about the impact of pregnancy on their disease and health condition. Moreover, Kassa and Yohannes (2018) found that one-fifth of women had good level of knowledge about PCC. In addition, Zhou et al. (2019) found that utilization of RH services was poor in individuals as about one-third of study participants could access RH policies, education, counselling, contraceptive use, and examinations.

It is recommended to take folic acid supplementation for all women preferably before pregnancy to reduce anomalies such as neural tube defects (Barua et al., 2014), and in this study the results showed that the majority of mothers knew that consumption of folic acid before pregnancy decrease the risk of fetal anomalies.

In this study, RH components included preconception care, antenatal care during pregnancy, and postpartum care and FP. In this regard, Yemaneh et al. (2017) found that one-fifth of study participants were knowledgeable about RH service and less than half of them knew about component of RH, 12.5% were knowledgeable about FP and STI, 92.5% knew about ways of pregnancy prevention. Moreover, less than half expressed favorable

attitude towards RH service, and majority of the respondents strongly agreed about the importance of RH service for youths, but about one-third had practice of RH services.

According to the researcher opinion, variations in results concerning KAP about PCC are attributed to differences in the target groups being studied, with cultural and beliefs in different societies. In addition, some cultures consider the utilization of PCC before marriage or even before getting pregnant is prohibited and unacceptable due to norms and values of the society. It is worth to say that PCC as part of RH should be initiated early at secondary school and university in order to gain adequate and accurate knowledge about RH and in consequence enhance their attitude and practice of healthy behaviors about their RH.

Knowledge, attitudes, and practice about antenatal care during pregnancy

The results of the present study indicated that mothers have above accepted moderate degree of knowledge about ANC. The majority of study participants knew that antenatal clinics provide physical and lab. tests during pregnancy including blood analysis, urine analysis, albumen, blood glucose, weight, and height. Moreover, the majority of study participants knew that regular visits to the antenatal clinic are necessary for the safety of mothers and their babies. In addition, the majority of participants knew that antenatal clinics provide follow up care to the mother and her fetus during pregnancy. These results were consistent with the results of Akhtar et al. (2018) which showed that more than two-thirds of study participants agreed that pregnant women need to go for antenatal check-up, more than two-thirds agreed that the first antenatal check-up should be done in the first 3 months, and the majority of participants agreed that regular BP examination is necessary during pregnancy.

The results also indicated that most of the participants knew that taking balanced meals is necessary for them and their fetus, and the majority of participants knew that vaginal bleeding or leakage of vaginal fluid is a risk factor for pregnancy. The results of Ahirwar (2018) found that the majority of participants had correct knowledge that a pregnant woman should visit a doctor after first missed period. More than two-thirds had correct knowledge that fetal movement is first felt between 4^{th} and 5^{th} month of pregnancy, and about two-thirds had correct knowledge that fetal well-being is known by regular antenatal checkup, about two-thirds had knowledge about warning signs during pregnancy and the vast majority knew that they should report to a doctor in case of vaginal bleeding during antenatal period. Furthermore, more than three-fourths of participants had knowledge regarding essential examinations during antenatal checkup, most of study participants had correct knowledge regarding tetanus immunization. The majority of participants had correct knowledge that adequate diet during pregnancy helps for growth and development of fetus, and the majority of participants had knowledge that extra iron is needed during pregnancy to prevent anemia, While about half of participants had knowledge that folic acid is needed during pregnancy to prevent anemia and birth deformities. In addition, Oumer and Hussein (2019) found that about one-third and 11.7% were agreed and strongly agreed on the role of FP in prevention of anemia, and almost half of participants agreed that child spacing is important to prevent IDA.

In addition, the results of the present study indicated that the mothers have above moderate attitudes towards ANC. The majority of study participants believed that it is necessary to be committed to the appointments at antenatal clinic, and the vast majority of participants believed that it is essential to check their BP regularly during pregnancy. These results were consistent with the results of Akhtar et al. (2018) which showed that most of study participants believed that early antenatal booking is good for their pregnancy, the majority

of participants believed that antenatal follow up is good to monitor mother's and fetus' health, and three-fourths of participants will allow the doctor to check their blood pressure.

Moreover, the results of the study indicated that the mothers expressed high level of practices about ANC. Most of study participants visited the antenatal clinic regularly according to appointments, the majority of them had BP measurement, the majority of them take folic acid and iron supplement, more than three-fourths take balanced meals, and the majority of them had checkup of their hemoglobin and blood glucose level. These results were inconsistent with the results of Akhtar et al. (2018) which found that only one-fifth of study participants seek ANC regularly during pregnancy, about three-fourths waited for the fetus movement before going for ANC, only 5% had five antenatal visits during pregnancy. Moreover, half of participants agreed to receive Tetanus Toxoid injection during pregnancy, while the majority of them agreed about the need to take vitamin supplement and iron, folic acid tablet during pregnancy. Furthermore, Oumer and Hussein (2019) found that two-thirds of pregnant women had a good knowledge on prevention methods of iron deficiency anemia (IDA), and more than half of them had favorable attitude towards prevention of IDA, but less than two-thirds of them had poor adherence to prevention practice of IDA. In addition, about one third of participants knew that anemia can be prevented by healthy and balanced nutrition, half of them agreed and recommend the use of iron supplementation for pregnant in addition to regular diet to prevent IDA.

According to the researcher opinion, pregnancy is a special event during the life of married women. Every woman wants to pass this period and give birth to her baby safely. It is important for every pregnant woman to monitor and follow up her pregnancy, and that could be attained by utilizing ANC services. In order to comply with ANC, the pregnant woman need to have adequate knowledge about the importance of ANC services, enhance

positive attitudes about ANC, which in turn will be reflected in appropriate practices of ANC. Nurses and midwives play a major role in ANC, with adequate knowledge and skills, they can provide quality ANC services in monitoring the progress of pregnancy and early detection of abnormalities, which will have positive effect on pregnant women and increase their utilization of ANC.

Knowledge, attitudes, and practice about postpartum care

Postpartum period is a critical stage in the lives of mothers and newborn babies as most maternal deaths occur after birth (WHO, 2014), therefore, special care and attention should be paid during PP period.

The results of the present study showed that mothers showed above moderate knowledge about PPC. Comparing the results of the current study with other studies, the results obtained by Kebede (2019) showed that more than half of study participants had good knowledge, and Tesfahun et al. (2014) reported that the majority of the women were aware and considered PPC necessary. The majority of study participants knew the importance of PPC for their health and their baby health, the importance of vaccination program, and knew about the complications that may occur such as vaginal bleeding and elevated body temperature. Yadav et al. (2016) found that most of mothers knew about immunization, signs of illness in newborn and newborn feeding during antenatal checkups. In contrary, maternal knowledge about newborn danger signs was low, breast feeding practice was not satisfactory, and maternal knowledge on newborn hygiene care was unsatisfactory, while Majumder et al. (2018) found that a small proportion of respondents had good level of knowledge about newborn care.

The results of the study also showed that mothers have above moderate attitudes towards ANC. Different results obtained by Majumder et al. (2018) which showed that a small

proportion of respondents had good attitude towards newborn care. In addition, the results of the study indicated that the majority of participants believe that natural breastfeeding is a healthy behavior for the mother and for the baby. in this regard, Vijayalakshmi et al. (2015) reported that mothers have good knowledge on breast feeding, but they expressed neutral attitudes toward breast feeding, and mothers who were currently breast feeding had more positive attitudes than non- breastfeed mothers.

Furthermore, the results of the study indicated above moderate practice of PPC. Consistent results obtained by Tesfahun et al. (2014) who found that more than two-thirds of women obtained PPC, and Kebede (2019) found that about two-thirds of participants had good practice of newborn care, and Abota and Atenafu (2018) reported that more than three-fourths of mothers attended postnatal clinic mainly to immunize their baby.

According to the researcher's opinion, attitudes are very important as positive attitudes towards RH will enhance good practices of RH which will be reflected in good outcome of pregnancy and reduce complications that may encounter during pregnancy and childbirth.

Differences in Knowledge, attitudes, and practice related to sociodemographic factors

The results of the study indicated no statistically significant differences in KAP about RH related to age of mothers**,** work, income, number of pregnancies, and number of deliveries.

In my opinion, these results are logic, because having adequate knowledge and maintaining healthy behaviors of RH is essential for every woman at preconception, during pregnancy and after childbirth for her wellbeing and her baby regardless to any factors and any circumstances. In this study, all the participants are mothers in the reproductive age, who have been pregnant and have babies, therefore, they should have adequate KAP about their RH because they gained experience from previous pregnancies and deliveries, and that would improve their KAP about RH. Kebede (2019) found that age of the mother and

occupation have significant association with utilization of PPC, and overall knowledge and attitude levels have significant association with newborn care practice.

To enhance access to the PPC services and reduce maternal and neonatal mortality, women must receive appropriate education. A study conducted by Wudineh et al. (2018) showed that maternal education, monthly income, pregnancy outcomes, and the place of birth were closely related to the use of PPC services.

The results of the study also showed that participants from the north governorate showed statistically significant lower KAP about RH than the other governorates.

In my opinion, the north governorate especially Bet Hanoon and Bet Lahia are considered conservative rural areas with many women are belonging to farmer families and working in agriculture in their lands, thus, they are not free and do not have adequate time to seek knowledge and counselling about RH. In addition, many women marry at younger age in in these areas as part of cultural and societal norms, which in turn affect their preparedness to acquire KAP about their RH, and most of the new mothers gain their knowledge and practice of RH from their mothers or their mothers in law, which mostly based on traditions and believes. This result was consistent with the results of Kassa and Yohannes (2018) who found that women who are urban residence had significantly higher level of knowledge on RH. In addition, Ahirwar (2018) found significant association between place of residence and booking status for ANC with higher utilization among urban women compared to rural women. Furthermore, Tesfahun et al. (2014) found that place of residence, distance from the health institution, ANC visits were factors found to be significantly associated with PPC utilization. Also, Abuidhail (2014) found that rural Jordanian mothers depended on the cultural health beliefs and knowledge to perform the PPC practices.

Moreover, the results of the study indicated that participants who had university education showed statistically significant higher KAP about RH compared to participants who have prep and secondary education. In my opinion, this result is logic.

I believe that education plays an important role in gaining KAP of RH, because women who have higher education are willing to learn, have higher awareness and understanding of their health needs in general and RH in particular, therefore, they would have better KAP compared to low educated or illiterate women.

This result was consistent with the result of Kassa and Yohannes (2018) who found that women who have secondary and above education level had significantly higher level of knowledge on RH, and having secondary and above education is a significant predictor of knowledge on PCC. In addition, Ahirwar (2018) reported significant association between booking status for ANC and education status of participants as graduate and post graduate mothers had significantly higher booking for ANC compared to illiterate and those educated up to primary school. It is obvious that education have great effect on the practices of pregnant women regarding attaining of ANC regularly during pregnancy. Accordingly, Akhtar et al. (2018) reported that there was significant association between qualification and KAP of RH.

On the other hand, some studies reflected different results. Majumder et al. (2018) found highly significant statistical association between the knowledge and attitude level and socio-demographic characteristics of respondents. Berhan and Gulema (2018) found that poor knowledge has strong association with women's occupation, parity of the women as women who were primiparous are more likely to have poor knowledge compared to women who were multiparous, and women who had less than four antenatal visits were more likely to have poor knowledge than those who visit four times and above. In addition,

Zhou et al. (2019) found that age was significantly associated with the use of RH education, and the average monthly income had a significant beneficial effect on the use of free RH examinations. Abota and Atenafu (2018) reported that some factors that decrease the utilization of PPC services such as lack of information which was considered a main reason for not following PPC, working women were less likely to attend for PPC, while women who were aware of problems that may occur during postnatal period were more likely to attend PPC. In addition, married women who followed ANC were more likely to attend PPC compared with those who did not attend ANC at all. Furthermore, Mukonka (2018) found that the main factor that hindered attendance to PPC included lack of advice given by midwives to return for PPC. Awareness of PPC services, mothers' educational level and growth monitoring all promoted utilization of PPC. These results have implications for training and practice; therefore, nursing schools should emphasize the importance of postnatal care and, and in practice, supervisors should ensure that mothers are appointed for PPC.

In my opinion, PPC is very important for monitoring the health status of the mother and her baby. In addition, through PPC, health problems would be detected early and appropriate interventions would be implemented, which will prevent and reduces maternal and neonatal morbidity and mortality. Therefore, all the mothers should receive PPC regardless of their sociodemographic factors and cultural background.

Chapter Five

Conclusion and Recommendations

5.1 Conclusion

The main objective of this study was to assess KAP of mothers for RH services in GS based on mothers' perspectives.

The results of the study revealed that the study participants have moderate degree of knowledge, above moderate positive attitude, and moderate level of practice about preconception care. Also, the results indicated above moderate degree of knowledge, above moderate positive attitude, and high level of practices about ANC during pregnancy. Furthermore, the results showed moderate degree of knowledge, above moderate positive attitudes, and above moderate practices about PPC.

The results indicated that there were no statistically significant differences in KAP about RH related to mothers' age**,** work, income, number of pregnancies, and number of deliveries. In addition, participants from the north governorate showed statistically significant lower KAP about RH compared to other governorates, while participants who had university education showed statistically significant higher KAP about RH compared to participants who have prep and secondary education.

Generally, the study revealed that mother have low level of practice regarding preconception care, moderate knowledge regarding antenatal care and moderate practice for postnatal practice.

5.2 Recommendations

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

- Monitoring and evaluating the reproductive health services provided at primary health care centers in Gaza Strip.
- Empowering and engaging community institutions (such as Red Crescent), UNRWA in campaigns to integrate the efforts about reproductive health.
- The need to include reproductive health in young age at secondary school as part of increase awareness about the importance of reproductive health as part of general health.
- Further studies should be conducted a barrel study at UNRWA, and private sector as comparison study to present study.
- Further studies should be conducted to identify factors that affect the utilization of maternal reproductive health care services.
- Conduct further studies to determine knowledge, attitudes, and practice of reproductive health at UNRWA and private sectors.

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Annexes

Annex (1): List of experts

Name	Place of work
Dr. Hamza Abdeljawad	Palestine College of Nursing
Dr. Ahmad Nijm	Al Azhar University
Dr. Yousef Fahajan	Al Najjar Hospital
Dr. Abed Al Kareem Radwan	Islamic University – Gaza
Dr. Ahmed Al Shaer	Islamic University – Gaza
Dr. Mysoon Abd El Aziz	Islamic University – Gaza

Annex (2): Sample size calculation

Determine Sample Size	
Confidence Level:	**95%** **99%**
Confidence Interval:	5
Population:	11440
Sample size needed:	**372**

Number of women who received ANC and PPC at governmental PHCCs in GS

Year	2018	2017	2016	Average
Pregnant women who received antenatal care	17,266	16,350	16,332	16,649
Number of women who received postpartum care	12,500	11,900	9,920	11,440

Annex (3): Consent form

السيدة الفاضلة:

السلام عليكم ورحمة الله وبركاته

أنا الطالبة/ صابرين خليل جراد ، ملتحقة ببرنامج ماجستير صحة الأم والطفل بجامعة القدس أبو ديس.
بين أيديكم استبانة خاصة برسالة الماجستير التي أقوم بإجرائها وهي تهدف إلى التعرف على مستوى المعرفة والاتجاهات والممارسات لدى الأمهات المترددات على عيادات الصحة الإنجابية في مراكز الرعاية الأولية الحكومية في قطاع غزة.
يرجى الاستجابة على جميع فقرات الاستبانة بشكل أمين، حيث أنه لا توجد إجابات خاطئة ولكن إجابتك تعبر عن رأيك الشخصي، مع العلم أن المعلومات التي سيتم جمعها سوف تستخدم لأغراض البحث العلمي فقط، ولا داعي لكتابة اسمك الشخصي.

أشكركم على حسن تعاونكم ،،،

الباحثة

صابرين جراد

جوال :0592101856

Annex (4): Knowledge, Attitudes, and Practice about Reproductive Health

Questionnaire (Arabic Version)

استبانة خاصة بالمعرفة والاتجاهات والممارسات لدى الأمهات المترددات على عيادات الصحة الإنجابية في مراكز الرعاية الأولية الحكومية في قطاع غزة

المحور الأول: البيانات الشخصية وبيانات الحمل والولادة:

1. العمر:	..... سنة
2. مكان السكن:	□ رفح □ خانيونس □ الوسطى □ غزة □ الشمال
3. الحالة الاجتماعية:	□ متزوجة □ أرملة □ مطلقة
4. العمل:	□ ربة بيت □ تعمل / موظفة
5. المؤهل العلمي:	□ ابتدائي فأقل □ إعدادي □ ثانوي □ جامعي
6. الدخل الشهري:	..... شيكل
7. عدد مرات الحمل:	.....
8. عدد مرات الولادة:	.....
9. عدد مرات الإجهاض:	.....

10.	هل تعانين من أمراض مزمنة؟	نعم	لا
11.	إذا كانت الإجابة (نعم)، حددي نوع المرض.....		

السيدة الفاضلة .. يرجى الإجابة على جميع فقرات الاستبانة بكل أمانة وذلك بهدف الحصول على معلومات دقيقة تساعدنا في تطوير الرعاية الصحية لك ولطفلك.

المحور الثاني: فترة ما قبل الحمل

فترة ما قبل الحمل		الإجابات		
مدى المعرفة بالمعلومات ذات العلاقة بالحمل		أوافق بدرجة عالية	أوافق	لا أوافق
1	توجد خطورة في الحمل إذا كان عمر الأم أقل من 18 سنة.			
2	توجد خطورة في الحمل إذا كان عمر الأم 35 سنة فما فوق.			
3	توجد خطورة في الحمل عندما يكون وزن الأم قليل (كتلة الجسم أقل من الطبيعي).			
4	توجد خطورة في الحمل عندما يكون وزن الأم كبير (السمنة).			
5	يعتبر الحمل خطراً على الامهات عندما تحمل بتوأم أو أكثر.			
6	يؤدي عدم المباعدة بين الحمولات إلى حدوث فقر الدم لدى الأم.			
7	يؤدي عدم المباعدة بين الحمولات إلى تشوه خلقي للجنين.			
8	يؤدي عدم المباعدة بين الولادات إلى نزيف بعد الولادة.			
9	اتباع نظام غذائي متوازن قبل الحمل يعتبر ضروري للمرأة الحامل.			
10	تناول أقراص حمض الفوليك قبل الحمل يقلل من مخاطر حدوث			

	تشوهات خلقية للجنين.			
	الاتجاهات نحو الحمل	**أوافق بدرجة عالية**	**أوافق**	**لا أوافق**
1	أعتقد أن أخذ المشورة من عيادة الأمهات قبل الحمل يساعد في تهيئتي جسدياً ونفسياً للحمل.			
2	أعتقد أن أخذ المشورة من عيادة الأمهات قبل الحمل يقلل من امكانية حدوث مضاعفات أثناء الحمل.			
3	أعتقد أن الرعاية الصحية قبل الحمل لها أثار إيجابية على الحمل والولادة.			
4	أعتقد بضرورة إجراء فحوصات طبية (ضغط الدم، السكر) قبل حدوث الحمل.			
5	أعتقد بضرورة إجراء فحص الهيموغلوبين في الدم قبل حدوث الحمل.			
6	أعتقد بضرورة إجراء فحص فصيلة الدم قبل حدوث الحمل.			
	الممارسات ذات العلاقة بالحمل	**دائماً**	**أحياناً**	**لا**
1	أقوم بزيارة عيادة ما قبل الحمل قبل حدوث الحمل.			
2	أقوم بإجراء فحص الهيموغلوبين في الدم قبل الحمل.			
3	أقوم بإجراء فحص فصيلة الدم قبل الحمل.			
4	أقوم بإجراء فحص السكر في الدم قبل حدوث الحمل.			
5	أقوم بقياس ضغط الدم قبل حدوث الحمل.			
6	أقوم بإجراء فحوصات للقلب قبل حدوث الحمل.			
7	أتناول أقراص حمض الفوليك بانتظام قبل حدوث الحمل.			
8	أتناول وجبات غذائية متوازنة قبل حدوث الحمل.			
9	أمارس الرياضة (أي نوع .. مشي، تمارين رياضية ...) قبل حدوث الحمل.			

المحور الثالث: خلال فترة الحمل

	خلال فترة الحمل	**الإجابات**		
	مدى المعرفة بالحاجة للرعاية الصحية خلال فترة الحمل	**أوافق بدرجة عالية**	**أوافق**	**لا أوافق**
1	أعرف بوجود عيادات لرعاية الحوامل في مراكز الرعاية الأولية.			
2	أعرف أن عيادات رعاية الحوامل تقدم خدمات ورعاية صحية للحوامل بشكل يومي.			
3	أعرف أن الزيارات الدورية لعيادات رعاية الحوامل ضرورية لتمر فترة الحمل بشكل آمن لي ولطفلي.			
4	أعرف أن عيادات رعاية الحوامل تقدم خدمة الفحوص المخبرية والجسمية خلال فترة الحمل (فحص الدم، فحص البول، الزلال، فحص السكر، الوزن، الطول).			
5	أعرف أن عيادات رعاية الحوامل تقدم خدمة متابعة تطور الجنين خلال فترة الحمل.			
6	أعرف أن الحمل بتوأم أو أكثر يصنف كحمل خطر.			
7	أعرف أن تسرب السائل المهبلي يعتبر من علامات الخطر على الحمل.			

8	أعرف أن النزيف المهبلي يعتبر من علامات الخطر على الحمل .			
9	أعرف أن اتباع نظام غذائي متوازن أثناء الحمل يعتبر ضروري لي وللجنين.			
	الاتجاهات نحو الحمل الحالي	**أوافق بدرجة عالية**	**أوافق**	**لا أوافق**
1	لقد كنت مستعدة لهذا الحمل من الناحية الجسدية والنفسية.			
2	أعتقد بضرورة الالتزام بمواعيد الزيارات لعيادة رعاية الحوامل أثناء الحمل.			
3	أعتقد أن الممرضات / القابلات في عيادة رعاية الحوامل يمتلكن المهارة والكفاءة لتقديم الرعاية الصحية المطلوبة.			
4	أعتقد أن خدمات الرعاية الصحية التي تقدمها عيادات رعاية الحوامل مفيدة لي.			
5	أعتقد بضرورة إجراء قياس ضغط الدم بشكل دوري أثناء الحمل.			
6	أعتقد بضرورة إجراء فحص مستوى السكر في الدم أثناء الحمل.			
7	أعتقد بضرورة إجراء فحص الهيموغلوبين بشكل دوري أثناء الحمل.			
8	أعتقد بضرورة تناول وجبات غذائية متوازنة أثناء الحمل للمحافظة على صحتي وصحة الجنين.			
	الممارسات ذات العلاقة بالحمل الحالي	**دائماً**	**أحياناً**	**لا**
1	أقوم بزيارة عيادة رعاية الحوامل بانتظام حسب المواعيد المحددة لي.			
2	يتم إجراء فحص الهيموغلوبين في الدم خلال زيارتي لعيادة رعاية الحوامل.			
3	أتبع التعليمات والإرشادات التي تقدمها لي الممرضات /القابلات في عيادة رعاية الحوامل.			
4	يتم إجراء فحص مستوى السكر في الدم خلال زيارتي لعيادة رعاية الحوامل.			
5	يتم قياس ضغط الدم خلال زيارتي لعيادة رعاية الحوامل.			
6	يتم قياس الطول والوزن خلال زيارتي لعيادة رعاية الحوامل.			
7	يتم فحص حركة الجنين خلال زيارتي لعيادة رعاية الحوامل.			
8	يتم قياس ارتفاع الرحم خلال زيارتي لعيادة رعاية الحوامل.			
9	أنا مستمرة في تناول أقراص حمض الفوليك والحديد بانتظام خلال فترة الحمل.			
10	أتناول أدوية بدون وصفة طبية خلال فترة الحمل (أكامول، مسكنات، مضادات حيوية).			
11	أتناول وجبات غذائية متوازنة خلال فترة الحمل.			
12	أمارس أي نوع من أنواع الرياضة بشكل منتظم خلال فترة الحمل.			

المحور الرابع: فترة ما بعد الولادة

فترة ما بعد الولادة		**الإجابات**		
	مدى المعرفة بالحاجة للرعاية الصحية بعد الولادة	**أوافق بدرجة عالية**	**أوافق**	**لا أوافق**
1	أعرف أنه توجد عيادات لمتابعة الأمهات بعد الولادة في مراكز الرعاية الأولية.			
2	أعرف أن الزيارات الدورية لعيادات متابعة الأمهات بعد الولادة			

	ضرورية لصحتي ولصحة طفلي.			
3	أعرف أن المتابعة المنتظمة في عيادات متابعة الأمهات بعد الولادة تؤدي لاكتشاف المضاعفات التي قد تحدث بعد الولادة قبل تفاقمها.			
4	أعرف أن مضاعفات الولادة قد تحدث خلال الفترة الحساسة والتي تمتد لستة أسابيع بعد الولادة.			
5	أعرف أن استمرار النزيف المهبلي (دم أحمر) يعتبر من المضاعفات التي قد تحدث بعد الولادة.			
6	أعرف أن ارتفاع درجة حرارة الجسم يعتبر من المضاعفات التي قد تحدث بعد الولادة.			
7	أعرف أن اتباع نظام غذائي متوازن بعد الولادة يعتبر ضروري لي ولطفلي.			
8	أعرف أن مراكز الرعاية الأولية تقدم خدمة التطعيم ومتابعة النمو لطفلي.			
9	أعرف أنه يتوجب علي الالتزام بجدول التطعيمات المحدد بدقة.			
	الاتجاهات نحو الرعاية الصحية بعد الولادة	**أوافق بدرجة عالية**	**أوافق**	**لا أوافق**
1	أعتقد بضرورة المتابعة في مراكز الرعاية الأولية بعد الولادة.			
2	أثق في قدرة وكفاءة الممرضات / القابلات في تقديم الرعاية الصحية المطلوبة لي ولطفلي.			
3	أعتقد أن إجراء الفحص المهبلي ضروري للتأكد من سلامة المهبل وقناة الولادة.			
4	أعتقد أن إجراء فحص الثدي ضروري لاكتشاف أي مشاكل قد تعيق عملية الرضاعة الطبيعية.			
5	أعتقد بضرورة إجراء قياس ضغط الدم بشكل دوري بعد الولادة.			
6	أعتقد بضرورة إجراء فحص مستوى السكر في الدم بعد الولادة.			
7	أعتقد بضرورة إجراء فحص الهيموغلوبين بشكل دوري بعد الولادة.			
8	أعتقد بضرورة تناول وجبات غذائية متوازنة بعد الولادة للمحافظة على صحتي وصحة طفلي.			
9	أعتقد بضرورة إعطاء التطعيمات لطفلي حسب الجدول المحدد في العيادة.			
10	أعتقد أن الرضاعة الطبيعية تعتبر من الممارسات الصحية لي ولطفلي.			
	الممارسات الصحية ذات العلاقة بفترة ما بعد الولادة	**دائماً**	**أحياناً**	**لا**
1	أقوم بالمراجعة في عيادة متابعة الأمهات بعد الولادة بانتظام حسب المواعيد المحددة.			
2	يتم إجراء فحص الهيموغلوبين في الدم في عيادة متابعة الأمهات بعد الولادة.			
3	يتم إجراء فحص مستوى السكر في الدم في عيادة متابعة الأمهات بعد الولادة.			
4	يتم قياس ضغط الدم في عيادة متابعة الأمهات بعد الولادة.			
5	يتم قياس درجة حرارتي في عيادة متابعة الأمهات بعد الولادة.			
6	يتم إجراء فحص مهبلي للتأكد من سلامة المهبل وقناة الولادة في عيادة متابعة الأمهات بعد الولادة.			
7	يتم إجراء فحص الثدي للتأكد من عدم وجود تشققات قد تعيق عملية الرضاعة الطبيعية لطفلي.			
8	يتم قياس ارتفاع الرحم في عيادة متابعة الأمهات بعد الولادة.			
9	يتم متابعة النمو (قياس الطول والوزن ومحيط الرأس) لطفلي في عيادة متابعة الأمهات بعد الولادة.			
10	أتبع جدول التطعيمات لطفلي حسب المواعيد المحددة.			

11	يتم قياس درجة حرارة طفلي في عيادة متابعة الأمهات بعد الولادة.			
12	أقوم بغسل الثدي والتأكد من نظافته مباشرة قبل إرضاع طفلي.			
13	أقوم بغسل منطقة المهبل بالماء والصابون عدة مرات في اليوم وعند استعمال الحمام.			
14	أتناول وجبات غذائية متوازنة بعد الولادة.			
15	أمارس التمارين الرياضة / المشي بشكل منتظم بعد الولادة لشد عضلات البطن.			

أشكركم على حسن تعاونكم ،،،

Annex (5): Knowledge, Attitudes, and Practice about Reproductive Health

Questionnaire (English Version)

Dear participant .. would you please respond to all the following items.

Preconception phase

No.	Knowledge	Strongly agree	Agree	Disagree
1	Pregnancy is risky if mother's age less than 18 years.			
2	Pregnancy is risky if mother's age more than 35 years.			
3	Pregnancy is risky if mother's weight (BMI) is low.			
4	Pregnancy is risky if the mother was obese.			
5	Pregnancy is risky in case of twin's pregnancy.			
6	Decrease the distance between pregnancies cause anemia for the mother.			
7	Decrease the distance between pregnancies leads to congenital anomalies.			
8	Decrease the distance between pregnancies leads to postpartum hemorrhage.			
9	It is essential for the mother to eat balanced meals before pregnancy.			
10	Consumption of folic acid before pregnancy decreases the risk of fetal anomalies.			
No.	**Attitude**	**Strongly agree**	**Agree**	**Disagree**
1	I believe that consultation with the preconception clinic is helpful to prepare myself for pregnancy physically and psychologically.			
2	I believe that consultation with the preconception clinic decrease the chance of complications during pregnancy.			
3	I believe that preconception healthcare has			

	positive effects on pregnancy and delivery.			
4	I believe that it is necessary to do medical investigations (such as BP, glucose level) before pregnancy.			
5	I believe that it is necessary to check hemoglobin level before pregnancy.			
6	I believe that it is necessary to check blood group before pregnancy.			
No.	**Practice**	**Strongly agree**	**Agree**	**Disagree**
1	I visited the preconception clinic before getting pregnant.			
2	I checked my hemoglobin level before getting pregnant.			
3	I checked my blood group before getting pregnant			
4	I check my blood glucose level before getting pregnant.			
5	I check my blood pressure before getting pregnant.			
6	I made heart investigations before getting pregnant.			
7	I take folic acid tablets regularly before getting pregnant.			
8	I take balanced meals regularly before getting pregnant.			
9	I make exercise / sport activities before getting pregnant.			

Pregnancy phase

No.	**Knowledge**	**Strongly agree**	**Agree**	**Disagree**
1	I know about presence of antenatal clinics at PHCCs*			
2	I know that antenatal clinics provide health			

	services to pregnant women every day.			
3	I know that regular visits to the antenatal clinic are necessary for the safety of me and my baby.			
4	I know that antenatal clinics provide physical and lab. tests during pregnancy (blood analysis, urine analysis, albumen, blood glucose, weight, height).			
5	I know that antenatal clinics provide follow up care to the fetus during pregnancy.			
6	I know that being pregnant with twins is considered risky pregnancy.			
7	I know that leakage of vaginal fluid is a risk factor of pregnancy.			
8	I know that vaginal bleeding is a risk factor of pregnancy.			
9	I know that taking balanced meals is necessary for me and my fetus.			
No.	**Attitude**	**Strongly agree**	**Agree**	**Disagree**
1	I have been ready for this pregnancy physically and psychologically.			
2	I believe that it is necessary to be committed to the appointments at antenatal clinic.			
3	I believe that the nurses and midwives at antenatal clinic are skillful to provide the needed care.			
4	I believe that the health services provided at antenatal clinic are beneficial for me.			
5	I believe that it is essential to check my blood pressure regularly during pregnancy.			
6	I believe that it is essential to check my blood glucose level during pregnancy.			
7	I believe that it is essential to check my blood hemoglobin regularly during pregnancy.			
8	I believe that it is essential to take balanced meals during pregnancy for my health and ma fetus.			

No.	Practice	Strongly agree	Agree	Disagree
1	I visit the antenatal clinic regularly according to the designed appointments.			
2	The nurse checks my hemoglobin during my visit to the antenatal clinic.			
3	I follow the instructions that the nurse / midwife provide to me at antenatal clinic.			
4	The nurse checks my blood glucose during my visit to antenatal clinic.			
5	The nurse checks my blood pressure during my visit to antenatal clinic.			
6	The nurse checks my height and weight during my visit to antenatal clinic.			
7	The nurse checks fetal movement during my visit to antenatal clinic.			
8	The nurse checks my uterus height during my visit to antenatal clinic.			
9	I continue taking folic acid and iron supplement during pregnancy.			
10	I take medication without prescription during pregnancy (Acamol, analgesics, antibiotics).			
11	I eat balanced meals during pregnancy.			
12	I practice any type of exercise during pregnancy.			

Postpartum phase

No.	Knowledge	Strongly agree	Agree	Disagree
1	I know that postnatal clinics are present in PHCCs.			
2	I know that regular visits to postnatal clinic are essential for my health and my baby health.			
3	I know that regular visits to postnatal clinic are essential to discover postpartum complications.			
4	I know that postpartum complications could occur up to 6 weeks after delivery.			
5	I know that continuity of vaginal bleeding (red blood) is a postpartum complication.			
6	I know that elevated body temperature is a postpartum complication.			
7	I know that following a balanced diet is essential for me and my baby.			
8	I know that PHCCs provide vaccination and follow up of the growth of my baby.			
9	I know that I have to be committed to the vaccination program.			
No.	**Attitude**	**Strongly agree**	**Agree**	**Disagree**
1	I believe that it is necessary to follow up at PHCC after delivery.			
2	I am confident in the nurses and midwives' skills and abilities to provide the needed health care to me and to my baby.			
3	I believe that it is necessary to have vaginal exam to ensure the safety of vagina and birth canal.			
4	I believe that it is necessary to have breast exam to discover any problem that may disrupt natural breastfeeding.			
5	I believe that it is necessary to check my blood pressure after delivery.			
6	I believe that it is necessary to check my blood glucose after delivery.			
7	I believe that it is necessary to check my hemoglobin after delivery.			
8	I believe that it is necessary to have balanced meals after delivery to maintain good health for me and for my baby.			

9	I believe that it is necessary to vaccinate my baby according to the vaccination program.			
10	I believe that natural breastfeeding is a healthy behavior for me and for my baby.			
No.	**Practice**	**Strongly agree**	**Agree**	**Disagree**
1	I follow up at postnatal clinic regularly according to appointments.			
2	I check my hemoglobin at postnatal clinic.			
3	I check my blood glucose at postnatal clinic.			
4	I check my blood pressure at postnatal clinic.			
5	I check my temperature at postnatal clinic.			
6	The nurse / midwife performs vaginal exam at postnatal clinic.			
7	The nurse / midwife perform breast exam for ulcers that may disrupt natural breastfeeding.			
8	The nurse / midwife checks the uterus level at postnatal clinic.			
9	The nurse / midwife check growth development of my baby (weight, height, head circumference).			
10	I commit to the vaccination program for my baby.			
11	The nurse / midwife checks the temperature of my baby at postnatal clinic.			
12	I clean my breasts immediately before breastfeeding.			
13	I wash vaginal area with soap and water many times during the day and after toilet.			
14	I take balanced meals after delivery.			
15	I make exercises / walking regularly after delivery to strengthen abdominal muscles			

Annex (6): Approval from Helsinki Committee

المجلس الفلسطيني للبحث الصحي

Palestinian Health Research Council

تعزيز النظام الصحي الفلسطيني من خلال مأسسة استخدام المعلومات البحثية في صنع القرار

Developing the Palestinian health system through institutionalizing the use of information in decision making

Helsinki Committee
For Ethical Approval

Date: 2019/10/7 **Number:** PHRC/HC/629/19

Name: Sabreen Khalil Jarad الاسم:

We would like to inform you that the committee had discussed the proposal of your study about:

نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:

Knowledge, Attitude, and Practice among Mothers Attending Governmental Primary Health Care Clinics Regarding Maternal Reproductive Health

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/629/19 in its meeting on 2019/10/7

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

Signature

Member

Member

Dr. Yehia Abed

Chairman

Genral Conditions:-

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

Specific Conditions:-

E-Mail:pal.phrc@gmail.com

Gaza - Palestine غزة - فلسطين

شارع النصر - مفترق العيون

Annex (7): Approval from Ministry of Health

State of Palestine
Ministry of health

دولة فلسطين
وزارة الصحة

التاريخ:15/10/2019
رقم المراسلة 380465

السيد : رامي عيد سليمان العبادله المحترم

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

السلام عليكم ,,,

الموضوع/ تسهيل مهمة الباحثة// صابرين جراد

التفاصيل //
بخصوص الموضوع أعلاه، يرجي تسهيل مهمة الباحثة/ صابرين خليل جراد
الملتحقة ببرنامج ماجستير التمريض -- تخصص صحة الأم والطفل -- كلية الصحة العامة- جامعة القدس أبوديس في إجراء بحث بعنوان:-
"Knowledge, Attitude, and Practice among Mothers Attending Governmental Primary Health Care Clinics Regarding Maternal Reproductive Health"
حيث الباحثة بحاجة لتعبئة استبانة من عدد النساء المترددات على عيادات صحة الام والطفل مراكز الرعاية الصحية الاولية في محافظات قطاع غزة.
نأمل توجيهاتكم لذوي الاختصاص بضرورة الحصول على الموافقة المستنيرة من النساء اللاتي لديهن استعداد للمشاركة في الدراسة ومن ثم تمكين الباحثة من التواصل معهن، بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، ودون تحمل الوزارة أي أعباء أو مسئولية.
وتفضلوا بقبول التحية والتقدير،،،
ملاحظة /
1. تسهيل المهمة الخاص بالدراسة أعلاه صالح لمدة 4 أشهر من تاريخه.
2. البحث المذكور حصل على موافقة لجنه اخلاقيات البحث الصحي (لجنة هلسنكي)

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

المشروبات

1 محمد ابراهيم محمد السرساوي(مدير دائرة)	← رامي عيد سليمان العبادلة(مدير عام بالوزارة)	إجراءاتكم بالخصوص(15/10/2019)
2 رامي عيد سليمان العبادلة(مدير عام بالوزارة)	← مدحت عباس خضر حسن(مدير عام بالوزارة)	إجراءاتكم بالخصوص(15/10/2019)
3 مدحت عباس خضر حسن(مدير عام بالوزارة)	← هيا أحمد شمس طبنة(مدير دائرة)	لعمل اللازم(15/10/2019)
4 مدحت عباس خضر حسن(مدير عام بالوزارة)	← صلاح الدين علي عبد الحفيظ الرئيسي(مدير دائرة)	لعمل اللازم(15/10/2019)
5 مدحت عباس خضر حسن(مدير عام بالوزارة)	← عبد الكريم سعيد العبد النجار(مدير دائرة)	لعمل اللازم(15/10/2019)
6 مدحت عباس خضر حسن(مدير عام بالوزارة)	← فواز ادريس محمد ابو زياده(طبيب، مدير)	لعمل اللازم(15/10/2019)
7 مدحت عباس خضر حسن(مدير عام بالوزارة)	← ناهض عبد حسن جودة(مدير دائرة)	لعمل اللازم(15/10/2019)
8 مدحت عباس خضر حسن(مدير عام بالوزارة)	← خليل محمد محمود صيام(مدير دائرة)	لعمل اللازم(15/10/2019)

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مدحت عباس خضر حسن(مدير عام بالوزارة) ← نهله صقر سليمان الأعرج(مدير دائرة) لعمل اللازم(15/10/2019)

مركز شهداء رفح
مركز شهداء خانيونس
مركز دير البلح
مركز عبارة الرمال
مركز عبارة الدرج
مركز شهداء الزيتون
مركز شهداء جباليا

لا مانع من تسليم سيارة الباحثة صابرين خليل جراد
مديرة الدائرة د. نهلة الأعرج

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عنوان الدراسة: المعرفة والاتجاه والممارسة للصحة الإنجابية لدى الأمهات المترددات على مراكز الرعاية الأولية الحكومية في قطاع غزة.

إعداد: صابرين خليل جراد

إشراف: د. عريفة الكسيح

ملخص الدراسة

تعتبر الصحة الإنجابية أحد المكونات الهامة لصحة الأم والطفل. هدفت هذه الدراسة إلى تقصي المعرفة والاتجاه والممارسة للصحة الإنجابية لدى الأمهات المترددات على مراكز الرعاية الأولية الحكومية في محافظات غزة، وتم استخدام المنهج الوصفي في هذه الدراسة. تكونت عينة الدراسة من 372 من الأمهات المترددات على مراكز الرعاية الأولية الحكومية بغرض الرعاية الصحية بعد الولادة. لجمع البيانات، قامت الباحثة بإعداد استبانة لمعرفة مستوى المعرفة والاتجاه والممارسة للصحة الإنجابية، وقد تم توزيع الاستبانة على مجموعة من الخبراء بهدف اختبار صدق الاستبانة، كما تم اجراء دراسة استطلاعية على 30 أمرأة بهدف التأكد من ثبات الاستبانة، حيث بلغ معامل كرونباخ ألفا لجميع أبعاد الاستبانة أكثر من 0.80. لتحليل البيانات استخدمت الباحثة برنامج الرزم الإحصائية SPSS (22)، وتم استخدام التكرارات، النسب المئوية، المتوسطات، اختبار (ت)، اختبار مان–وتني، واختبار التباين الأحادي.

بينت نتائج الدراسة أن 34.1% من الأمهات المشاركات في الدراسة تراوحت أعمارهن بين 02 – 25 سنة، 51.9% أنهن التعليم الثانوي و35.2% حاصلات على الشهادة الجامعية، 96.5% ربات بيوت، 71.2% لديهن دخل أقل من 1000 شيكل في الشهر. أيضاً 50.5% من الأمهات تراوحت عدد مرات الحمل لديهن بين 3 – 5 مرات، في حين أن 37.1% من الأمهات كانت أول ولادة لهن، 33.6% كان لديهن إجهاض سابق، كما أن 97.6% من الأمهات ليس لديهن تاريخ مرضي لأي من الأمراض المزمنة.

بالنسبة للرعاية الصحية في فترة ما قبل الحمل، فقد بينت النتائج وجود مستوى متوسط من المعرفة (م= 1.8؛ 60%)، مستوى فوق المتوسط في الاتجاه (م= 2.13؛ 71%)، ومستوى متوسط من الممارسة (م= 1.77؛ 59%). بالنسبة للرعاية الصحية خلال فترة الحمل، فقد بينت النتائج وجود مستوى مستوى فوق المتوسط في المعرفة (م= 2.16؛ 72%)، مستوى فوق المتوسط في الاتجاه (م= 2.23؛ 74.3%)، ووجود مستوى عال من الممارسة (م= 2.42؛ 80.6). بالنسبة للرعاية الصحية ما بعد الولادة، فقد بينت النتائج وجود مستوى فوق المتوسط في المعرفة (م= 2.26؛ 75.3%)،

مستوى فوق المتوسط في الاتجاه (م= 2.22؛ 74%)، ووجود مستوى فوق المتوسط في الممارسة (م= 2.16؛ 72%).

وأظهرت نتائج الدراسة عدم وجود فروق ذات دلالة إحصائية في المعرفة والاتجاه والممارسة للصحة الإنجابية تعزى لكل من عمر الأمهات، العمل، الدخل الشهري، عدد مرات الحمل وعدد مرات الولادة.

وبينت النتائج أن الأمهات اللاتي أجهضن في السابق كان لديهن مستوى المعرفة بالرعاية ما قبل الحمل أعلى، ومستوى أعلى من الاتجاه نحو الرعاية ما قبل الحمل والرعاية بعد الحمل مقارنة بالأمهات الأخريات، في حين لم توجد فروق في الممارسة.

في المقابل أظهرت نتائج الدراسة أن مستوى المعرفة والاتجاه والممارسة للصحة الإنجابية كان أدنى لدى الأمهات في محافظة شمال غزة مقارنة بالمحافظات الأخرى، في حين أن الأمهات ذوات التعليم الجامعي كان لديهن مستوى أعلى من المعرفة والاتجاه والممارسة للصحة الإنجابية مقارنة بالأمهات ذوات المستوى التعليمي الثانوي والإعدادي.

في الإجمال أظهرت نتائج الدراسة وجود مستوى متدني من الممارسة في فترة ما قبل الحمل، مستوى متوسط من المعرفة بالنسبة للرعاية أثناء الحمل ومستوى متوسط من الممارسة في فترة ما بعد الولادة. وأوصت الدراسة الحاجة إلى رفع درجة الوعي والمعرفة والممارسة في فترة ما قبل الحمل وما بعد الولادة بهدف إعدادهن بشكل جيد للحمل والولادة في المستقبل.