Republic of Iraq

Ministry of Higher Education

and Scientific Research

University of Babylon

College of Nursing

Knowledge, Attitudes and Practices of Women regarding Contraceptives Methods

A Dissertation Submitted By

Israa Dhyaa Mohammed

To the Council of College of Nursing, University of Babylon in partial fulfillment of the requirements for the Degree of Doctorate Philosophy in Nursing

Supervised

By

Professor. Dr. Muna Abdulwahab Khaleel

May / 2023 A.D. **Dhu al-Qi`dah/ 1444 A.H.**

بسم الله الرحمن الرحيم

﴿ اللَّهُ يَعْلَمُ مَا تَحْمِلُ كُلُّ أُنثَىٰ وَمَا تَغِيضُ الْأَرْحَامُ وَمَا تَزْدَادُ

وَكُلُّ شَيْءٍ عِندَهُ بِمِقْدَارٍ ﴾

صدق الله العلي العظيم

{سورة الرعد / الآية ٨ }

Supervisor certification

This is to certify that the dissertation entitled (Knowledge, Attitudes and Practices of Women regarding Contraceptives Methods**)**, submitted **by Israa Dhyaa Mohammed** to the University of Babylon, College of Nursing in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in Nursing . The dissertation work was carried out by the student under my supervision and guidance.

Signature
Supervisor
Professor. Dr. Muna Abdulwahab Khaleel
College of Nursing / University of Babylon
Date: / / 2023

Signature
Professor. Dr. Amean A. Yasir
Head of Community Health Nursing Department
College of Nursing/ University of Babylon
Date / / 2023

Committee Certification

We, the members of the Dissertation discussion committee, certify that we have reviewed the dissertation entitled **(Knowledge, Attitudes and Practices of Women regarding Contraceptives Methods).** Carried out by **Israa Dhyaa Mohammed**, and examined the student in its content, and what is related to it on / / 2023.

We decided that the dissertation is accepted in a partial fulfillment of the requirements for the Degree of Doctorate of Philosophy in Nursing with an estimation of ( ).

Signature
Prof. Dr. Nuhad Mohammed Aldoori
Member
/ / 2023

Signature
Prof. Dr. Salma Kadhim Jihad
Member
/ / 2023

Signature
Assist Prof. Dr. Hiba Jasim Hamza
Member
/ / 2023

Signature
Assist Prof. Dr. Wafaa Ahmed Ameen
Member
/ /2023

Signature
Prof. Dr. Wissam Jabbar Qasim
Chairman
/ / 2023

Approved by the council of the College of Nursing

Signature

Prof. Dr. Amean A. Yasir

Dean of the College of Nursing, University of Babylon

/ / 2023

Dedication

to those dwelling amidst the sands of quiet cemeteries—those who imparted to us the essence of life. In loving memory of my ***grandfather***, ***grandmother***, *and* ***aunt***.

To the selfless souls who bestowed without expecting, to the unparalleled figures in my life—my greatest ***father*** *and* ***mother***, *exemplifying sacrifice. No matter my efforts, I can never truly repay them. Much love and profound respect.*

To my ***husband***, *boundless love and enduring respect, reaching beyond the infinite.*

For my ***sisters***, ***brothers***, *and my* ***child***— *wrapped in affection and esteem.*

Acknowledgement

First of all, great thanks for Allah the most merciful the most compassionate, and the prayer and peace of Allah be upon our Master and Prophet Muhammad and his divine good family, who guided us to get out of the darkness of nescience.

Great thanks for the Dean of College of nursing Prof. Dr. Amean A. Yasir.

My special thanks to my supervisor experienced professor Dr. Muna Abdulwahab Khaleel for years of guidance and support.

Special thanks to the one who still live in our hearts despite he left our world Professor. Dr. Hussain Jasim Al-Ebrahimi.

Numerous people have helped and supported me in my endeavors. Most especially, I wish to express my deepest and grateful thanks to Professor. Dr. Nuhad Mohammed Qassim, Professor Dr. Salma. K. Jihad , lecturer. Dr. Ali Ahmed and also great thanks for experts for their efforts.

My thanks also go to the whole staff of college of Nursing/University of Babylon, and all of the study participants.

Abstract

Background: The exploration of Knowledge, Attitudes and Practices of Women regarding contraceptives Methods is a crucial endeavor rooted in the intersection of healthcare, sociology, and public policy. In many societies, the dynamics surrounding contraceptives methods are deeply embedded in cultural, religious, and socio-economic contexts. This study aims to measure the Knowledge, Attitudes and Practices levels of Women regarding contraceptives Methods.

Methods: A descriptive correlational study design started from December 2021 until September 2023. It was carried out at Al Rifai primary health care centers (Sayd Al Shuhada primary Healthcare Center, Al Rifai primary Healthcare Center, and Al Hakeem primary Healthcare Center). On a total of (400) married women, purposive sampling method was used. And for measuring variables three parts questionnaire have been used (Contraception attitudes scale and two scales constructed by the researcher by reviewing relative previous literatures which they are knowledge scale, and practice scale)

Results: The study found the knowledge levels among the married women about contraceptive methods which shows about two thirds (63.8%) of the women have fair knowledge followed by poor knowledge with percent (31.8), the attitudes levels of the sample about contraceptive methods with neutral attitudes form (62.8%) of the total women followed by negative attitudes level with percent (28.8), and the practice level of contraceptive methods among married women. The higher percent is poor practice which constitutes about two thirds of the results. It is empirically confirmed that there is a highly significant relationship between knowledge and attitudes and another highly significant relationship between practices and knowledge while there is no relationship between attitude and practice.

Conclusions: The study concluded there is a strong significant relationship between knowledge with practices, and knowledge with attitudes, Women's knowledge level of using contraceptive methods was fair, attitudes level regarding contraceptive methods is neutral and practices toward contraceptive methods were poor.

Recommendations: Preparation of additional and simple comprehensive and consistent educational sessions for client about the side effects of contraceptive methods so they won't have any reason to fear of contraceptives methods, women with lower educational level and lower income need to be in a place of interest in primary healthcare centers.

Table of Contents

List of Tables

List of Appendices

List of Abbreviations and Symbols

Abbreviation	Meaning
ANOVA	Analysis of Variance
COC	Combined Oral Contraception
CAS	Contraception Attitudes Scale
COVID-19	Coronavirus Disease Of 2019
DMPA	Depot Medroxyprogesterone Acetate
FP	Family Planning
FDA	Food and Drug Administration
GBV	Gender-Based Violence
HBM	The Health Belief Model
HIV	Human Immunodeficiency Virus
IDPs	Internally Displaced persons
IUDs	Intrauterine Devices
KAP	Knowledge, Attitude, and Practices
KRI	Kurdistan Region of Iraq
LAM	lactational Amenorrhea Technique
LNG	Levonorgestrel
LARCs	Long-Acting Reversible Contraceptives
MOAs	Mechanisms of Actions
MENA	Middle East And North Africa
MICS	Multiple Indicator Cluster Survey
Ne	Number of Experts
P	Page
P.P	Pages
N	Panels Number
PID	Pelvic Inflammatory Disease
PPCM	Polyphenylene Carboxymethylated
PHCCs	Primary Health Care Centers
P.Value	Probability Value
POP	Progestogen-Only Pill
SRH	Sexual and Reproductive Health

STIs	Sexually Transmitted Infections
SPSS	Statistical Package for the Social Sciences
VPM	Vaginal PH Modulator
WHO	World Health Organization
%	Percent
&	and
>	Greater than
<	Less than
≥	Greater than or equal.
=	Equal

Chapter One

Introduction

1.1 Introduction

The rise in childbearing, along with growing maternal mortality and morbidity rates, highlights the critical importance of effective contraceptive techniques as a component of comprehensive healthcare. Understanding the intricate interaction of these elements is critical in tackling the issues that women and communities confront across the world. (Lassi *et al*., 2014).

Contraceptive methods have a significant impact on population growth by providing individuals and couples with the means to control and plan their family size. Access to effective contraception has been shown to decrease population growth rates and promote sustainable development. (Nelson *et al*., 2018) .

Particularly during pregnancy is there a risk of maternal death. As a result, contraceptive techniques are an important tool for reducing maternal mortality and morbidity. Numerous studies conducted on the African continent have revealed that the majority of females use contraceptive methods and have an aptitude for distinguishing the various modalities of birth control. *(Ijarotimi et al*., 2015).

Family planning activities and contraceptive methods have been critical, particularly for married women. By having access to contraceptive techniques and accurate information about their use, women may plan the number and spacing of their children, avoid unplanned pregnancies, and improve their health and wellness (Laar *et al*., 2020). Numerous contraceptive methods are available, but many women have barriers that prevent them from utilizing them. There are societal, cultural, economic, and personal barriers to overcome. Understanding women's contraceptive knowledge, attitudes, and behaviors is critical for improving family planning

activities and boosting reproductive health (Elamin *et al*., 2022 ; Cleland et al., 2012) .

Contraceptive methods play a pivotal role in mitigating these challenges by providing women with the means to plan and space pregnancies. Family planning empowers individuals to make informed choices about their reproductive health, promoting healthier pregnancies and reducing the risks associated with frequent or closely spaced births (Silumbwe *et al*., 2018).

Access to a range of contraceptive options, including both short-term and long-term methods, is vital for meeting diverse individual needs. Effective contraceptive methods not only contributes to maternal health but also has broader implications for the well-being of families, communities, and the overall socioeconomic landscape (Chandra-Mouli & Akwara, 2020).

Contraceptive methods play a crucial role in family planning and reproductive health. They're designed to prevent unwanted pregnancies by either inhibiting the fertilization of an egg or preventing the implantation of a fertilized egg in the uterus. These methods can be broadly categorized into hormonal methods, barrier methods, intrauterine devices (IUDs), and permanent methods (Ferenczy , 2020) .

Contraceptive methods can be categorized into the hormonal methods include birth control pills, patches, injections, and implants. They work by altering hormonal levels to suppress ovulation and create an environment less conducive to fertilization (Steinberg *et al*., 2021). Barrier methods, such as condoms and diaphragms, physically block sperm from reaching the egg, They provide a protective barrier during sexual activity and are often readily available (Wiyeh *et al*., 2020). Intrauterine devices (IUDs) are small, T-shaped devices inserted into the uterus to prevent pregnancy, They can be hormonal or non-hormonal and offer long-term protection, Permanent

methods, like sterilization for both men and women, are intended as permanent solutions to prevent pregnancy. These procedures are typically considered when a person or couple has decided not to have any more children (Danna *et al*., 2022).

Choosing the right contraceptive method depends on various factors, including individual health, preferences, and lifestyle. It's essential to consult with a healthcare professional to determine the most suitable option for each person or couple (MacQuarrie & Aziz, 2022).

Embarking on the exploration of knowledge regarding contraceptive methods among married women opens a gateway to understanding the foundation upon which informed reproductive decisions are built. In the realm of family planning, knowledge serves as the compass, guiding individuals through the diverse landscape of contraceptive options (Rattan *et al*., 2022).

Numerous investigations delve into the extent of awareness that women possess regarding various contraceptive methods. which are unravels the layers of information they have acquired ranging from the fundamental understanding of available options to the nuances of each method's effectiveness, potential side effects, and practical considerations (Pazol *et al*., 2015).

Knowledge, as a cornerstone, plays a pivotal role in shaping the attitudes and choices of married women in matters of family planning. The depth of comprehension regarding contraceptive methods not only empowers decision-making but also influences perceptions, dispels myths, and fosters a sense of agency over reproductive health (Dadi *et al*., 2020).

As navigate through the exploration, it is aim to illuminate not just the breadth of knowledge but also the gaps and misconceptions that may

exist. numerous researches about the knowledge of contraceptive methods subject play a crucial step towards enhancing the educational landscape, providing insights that can inform targeted interventions and initiatives aimed at fostering a more comprehensive and accurate understanding of contraceptive methods among married women (Bongimpilo S. Zulu, 2019).

The education and information provided during contraceptive counseling also help individuals use their chosen contraceptive method correctly, reducing the risk of unintended pregnancy (Pazol *et al*., 2015). Long-Acting Reversible Contraceptives, such as intrauterine devices (IUDs) and implants, stand out as some of the most efficacious forms of contraception available, boasting failure rates of less than 1% under typical use circumstances. However, adoption rates for Long-Acting Reversible Contraceptives are often lower than other forms of contraception, partly due to misconceptions and lack of understanding about their efficacy and safety. Improving education and awareness of Long-Acting Reversible Contraceptives and their benefits can help increase adoption rates and reduce unintended pregnancies (Caetano *et al*., 2020). Conversely, erroneous or inconstant utilization of birth control, flawed comprehension of the techniques, and abandonment of the method are all associated with insufficient awareness of contraception. In order to ensure the most effective use of contraception, it is critical to provide education and resources that promote a thorough understanding of each contraceptive method and its proper use. This education should be ongoing and readily available to all individuals who seek it (Ezenwaka *et al.*, 2020).

Nonetheless, there have been various studies and evaluations of educational interventions to improve knowledge about contraceptives. Some of these interventions have included providing textual or audio/visual materials, computer or web-based programs, and interactive methods such as group discussions or role-playing exercises.(Pazol *et al.*, 2015)

Additionally, some studies have looked at the effectiveness of one-on-one counseling or personalized education provided by healthcare professionals or trained educators. These interventions have shown promise in improving knowledge about contraception and increasing the likelihood of consistent and effective use of contraceptive methods (Gottschalk & Ortayli, 2014).

Attitudes towards contraceptive methods among women unveils a rich tapestry of perspectives that shape the landscape of family planning. Attitudes, the intricate blend of beliefs, emotions, and cultural influences, play a profound role in influencing the choices individuals make in navigating the realm of reproductive health (Machiyama *et al*., 2018).

The inquiry seeks to unravel the complex web of sentiments and opinions held by married women towards various contraceptive methods. Attitudes serve as the lens through which individuals interpret and respond to information about the contraceptive methods , influencing not only personal decisions but also contributing to broader societal norms (Jonas *et al*., 2020).

Understanding the attitudes is akin to deciphering a unique language that reflects the deeply ingrained cultural, religious, and societal values surrounding contraception. Whether characterized by empowerment, reservation, or a nuanced interplay of emotions, these attitudes contribute significantly to the dynamics of contraceptive methods choices (Namasivayam *et al*., 2022).

Women's decisions on contraceptive techniques are influenced by a variety of circumstances. An essential component of a woman's decision-making process is understanding the effectiveness and appropriate application of contraceptive techniques. Contraceptive awareness and general knowledge vary significantly by demographic, with major disparities

among minority and younger groups who have low knowledge of various contraceptive techniques (Alameer *et al*., 2022).

Unintended pregnancy is one of the issues that is brought on by lower women's knowledge and awareness of contraceptive methods, and it is primarily caused by behaviors like contraceptive discontinuance (the act of ceasing to use a technique) or switching (the act of ceasing to use one method and beginning to use another), which are the most prevalent types of contraceptive behaviors among women, especially younger ones, around the world (Cavallaro *et al*., 2020).

It has been discovered that actions related to contraception are associated with method satisfaction, use confidence, and behavioral intentions (Hamidi *et al*., 2018; Haque & Das, 2018).

Diving into the realm of practices surrounding contraceptive methods among women opens a window into the real-world application of reproductive health decisions. Practices, the tangible manifestation of knowledge and attitudes, reflect the dynamic interplay between intention and action within the context of contraceptive methods (Mboane & Bhatta, 2015).

The exploration seeks to understand how married women translate their awareness and attitudes into concrete practices. It delves into the nuances of contraceptive use—examining the consistency, correctness, and factors influencing the application of chosen methods. Whether it be the adherence to prescribed routines, overcoming practical barriers, or navigating societal expectations, practices encapsulate the lived experiences of individuals in their pursuit of reproductive well-being (Mustafa *et al*., 2015).

The study of contraceptive practices extends beyond individual choices to encompass the broader socio-cultural landscape. It unveils the

challenges and triumphs encountered by married women as they navigate the multifaceted terrain of family planning, shedding light on the factors that shape, facilitate, or hinder the adoption of specific contraceptive methods (Dingeta *et al*., 2021).

As embark on the exploration about the practice of contraceptive methods, the goal is not only to document practices but to comprehend the narratives that underpin them. This understanding serves as a compass for healthcare practitioners, policymakers, and educators, guiding efforts to enhance accessibility, provide support, and foster an environment that empowers married women in their reproductive health journey (Pazol *et al*., 2015).

While a variety of variables, such as access to medical care and the impact of social networks, affect the use of contraception, (Yee & Simon, 2010) Since that all non-barrier methods of contraception either a prescription or a medical procedure, providers have the opportunity to favorably impact women's ability to utilize contraception during medical appointments. One strategy for assisting women of various races/ethnicities and socioeconomic strata to increase their capacity to plan pregnancies is to maximize this counseling (Dehlendorf *et al*., 2014).

The factors that affect switching intentions and other contraceptive behavioral intents have, however, received little to no research. The intention to switch methods of contraception is important since doing so frequently causes gaps in contraceptive use, which raises the risk of an unintended pregnancy. It's important to include qualities related to enjoyment and trust in proper usage, two important criteria that impact switching intentions, in addition to traits associated with switching intentions (Steinberg *et al*., 2021).

1.2. Importance of the Study

The world population grows by one person every 0.4 seconds, which is a significant trend. There are about 382 thousand births every day, and the world's population is expected to exceed 9 billion by 2022. These vast numbers represent a significant problem and financial pressure for all governments throughout the world. The fundamental reason of this rapid population growth is uncontrolled reproduction, which generates catastrophic disasters on many levels, including economic and political stability (Alameer *et al*., 2022; Sherpa *et al*., 2013).

Poor health outcomes, such as an increase in maternal and child morbidity and death, have been linked to high fertility rates. Grand multiparity (parity >= 5) has consistently been linked to unfavorable pregnancy outcomes, including caesarean delivery, fetal macrosomia, diabetes mellitus, and pregnancy-induced hypertension (Alsammani & Ahmed, 2015). Short birth intervals also have a deleterious impact on perinatal, neonatal, and child health, as seen by an increase in preterm birth, low birth weight, and perinatal deaths, according to de Jonge (de Jonge *et al*., 2014). Contrarily, using contraceptives helps women avoid getting pregnant and the related risks of miscarriage, stillbirth, and other health issues including postpartum hemorrhage. According to research, family planning might avoid over 272,000 maternal deaths worldwide each year, reducing births in mothers with five or more children by 58%. According to recent data, family size may also affect a child's nutritional health, illness, and death (Ndayizigiye *et al*., 2017). Also, the societal use of contraception by women is a sign of autonomy, which is the realization of a fundamental right to control how one uses one's body.(Masuda *et al*., 2020) and in achieving sustainable development objectives (Güney, 2017) .

Contraception usage, however, continues to be significantly hampered by false beliefs about both the health advantages and hazards of using oral contraceptives (Alameer *et al.*, 2022).

Little focus has been placed in research on the components that are connected to antecedents of contraceptive behavior. According to the idea of planned behavior, the essential step before engaging in a behavior is having the intention to do so. Moreover, mindsets like satisfaction and beliefs in personal control, as gauged by self-assurance in one's ability to participate in the activity, are precursors to actual behavior involvement and may have an impact solely via intentions (Kantorová *et al*., 2020).

The emphasis of contraceptive methods gradually shifted from population control to population stability before being combined with the maternal and child health program. In order to lower mother and infant mortality, contraceptive methods have become a crucial technique. Contraceptive methods is the deliberate choice made by a person or couple regarding the timing of their pregnancy, the number of children they will have, how they will be spaced out, or when to cease having children (Karthikeyan & Kalimuthu, 2019) .

Contraception is the purposeful avoidance of conception, which can be achieved through a variety of means such as devices, sexual behaviors, chemicals, medications, or surgical treatments. A contraceptive is any measure that averts a woman from becoming pregnant. The efficacy of contraception lies in its capacity to provide adequate flexibility for childbirth and sexual intimacy while also eliminating any concerns about an unplanned pregnancy in any social context. The aim is to achieve this with the utmost ease and confidentiality while incurring minimal costs and undesirable effects. Barrier techniques, such as male and female condoms, offer the dual

advantage of preventing both pregnancy and sexually transmitted diseases (STDs)(Williams, 2019).

Comprehend the intricacies of how women and their partners manage their reproductive health, it is crucial to examine their contraceptive profiles. This provides insight into the needs of family planning clients, the compatibility of provider caseloads with national trends, and whether specific subpopulations' contraceptive requirements are being met. The adoption of contraceptives is a pivotal determinant of pregnancy and birth rates on a global scale (Ijarotimi *et al.*, 2015) .

Almost half of postpartum women around the word use no contraception or a less effective approach, such as condoms or withdrawal, increasing their chances of having shorter interpregnancy intervals. Having a good understanding of contraceptive methods helps women take control of their fertility, contributing to family planning. This, in turn, can positively impact the overall well-being of the family, as it allows couples to manage their resources more efficiently and provide better care for their children (Loewenberg Weisband *et al.*, 2017).

Moreover, knowledge about contraceptive options promotes women's autonomy and agency over their bodies. It enables them to actively participate in family planning discussions with their partners, fostering open communication and shared decision-making. This collaborative approach strengthens the foundation of a healthy and supportive marital relationship (Yaya *et al.*, 2018).

From a broader perspective, access to information on contraceptive methods is linked to better maternal and child health outcomes. Contraceptive methods can reduce maternal mortality, lower the risk of unintended pregnancies, and contribute to healthier spacing between

pregnancies, positively impacting the overall health of both mothers and children (Chandra-Mouli & Akwara, 2020).

Knowledge about contraceptive methods is not just a matter of personal choice; it's a key component of reproductive health and family well-being. It empowers women, promotes informed decision-making, and plays a vital role in creating healthier, happier families (Burke *et al*., 2022).

The attitude of women towards contraceptive methods is a significant factor that can influence the success and effectiveness of family planning. A positive attitude fosters openness and communication between spouses, When both partners have a supportive and understanding attitude towards contraceptive methods, it creates an environment where they can openly discuss family planning goals, concerns, and preferences. This communication is essential for making joint decisions that align with the couple's shared values and aspirations(Shah *et al*., 2021).

Moreover, a positive attitude towards contraceptive methods contributes to a sense of empowerment and control over one's reproductive health. When women view contraception as a proactive choice rather than a burden, it enhances their autonomy and allows them to take charge of their family planning journey. This sense of control is fundamental for women to make decisions that align with their life goals, career aspirations, and overall well-being (Alano & Hanson, 2018) .

A favorable attitude towards contraception also dispels myths and misconceptions that might surround various methods. Education and positive attitudes go hand in hand; understanding the benefits and potential side effects of different contraceptive options can lead to more informed choices (Mwaisaka *et al.*, 2020).

On a broader scale, a positive attitude towards contraceptive methods can contribute to the overall well-being of families and communities. It allows for better family planning, which, in turn, can lead to improved maternal and child health outcomes, economic stability, and a higher quality of life for all family members (Hancock *et al.*, 2016) .

The practical application of contraceptive methods relies heavily on consistent and correct use. For these methods to be effective, it's crucial for women to practice them diligently according to the prescribed guidelines. This consistency ensures that the chosen contraceptive method functions as intended, providing the desired level of protection against unintended pregnancies (Huda *et al.*, 2017).

Practice in contraceptive methods allows couples to align their family planning goals with their chosen method. Whether it's spacing pregnancies, delaying childbirth, or limiting family size, consistent practice ensures that the intended goals are met. Regular adherence to the chosen method helps in achieving the couple's desired reproductive outcomes (Wulifan *et al*., 2019)

The proper practice of contraceptive methods contributes to the overall health and well-being of women. Regular use of contraceptives, when chosen wisely and used correctly, can have positive health impacts, such as reducing the risk of unintended pregnancies, preventing complications related to unplanned childbirth, and promoting maternal and child health (Khan & Islam, 2022).

1.3. Statement of the Problem

Study entitled " Knowledge, Attitudes and Practices of Women regarding Contraceptives Methods"

Trends in Contraceptive Usage Worldwide Contraceptive prevalence among women who are now of childbearing age has been rising quickly in many

emerging nations, but has not yet approached the levels found in affluent nations. Unsafe abortion rates are most prevalent in South and South-East Asia, with Africa, Latin America, and the Caribbean following closely behind, whereas rates in Europe and North America are minimal (Rakhi & Sumathi, 2011) .

Some women may have limited access to accurate information about contraceptive methods. This lack of knowledge can lead to misconceptions, reliance on traditional methods with lower efficacy, or even complete avoidance of family planning (Bhatt *et al.*, 2021).

Cultural and societal attitudes towards contraceptive use can create stigma and discourage married women from seeking information or utilizing available methods. Fear of judgment or social repercussions may hinder open discussions about family planning (Jain *et al.*, 2019).

The inconsistent or incorrect use of contraceptive methods can undermine their effectiveness. Factors such as forgetfulness, lack of access to necessary resources, or misconceptions about proper usage may contribute to this issue (Mbachu *et al*., 2021).

1.4. Objectives of the Study

1. To assess the Knowledge, Attitudes and Practices of Women regarding contraceptives Methods.
2. To find out the relationship between knowledge and attitudes of studied women with their practices of contraception.
3. To find out the relationship between knowledge, attitudes and practices of contraception with some certain associated factors (sociodemographic and personal characteristics).

1.5. Research Question:

the following research question are posed:

Is there a relationship between Knowledge, Attitudes and Practices of Women regarding contraceptives Methods?

1.6. Research Hypothesis:

H0: There is no relationship between the Knowledge, Attitudes and Practices of Women regarding contraceptives Methods

H1: There will be relationship between the Knowledge, Attitudes and Practices of Women regarding contraceptives Methods

1.7. Definitions of Terms

1.7.1. Knowledge

Theoretical Definition: Information, understanding or skills are acquired through experience or education. The fact or circumstances of knowledge familiarly achieved within practice. (Abdulkareem Salman Khudhair., 2021)

Operational Definition: Women information and knowledge about selecting, using, benefits and side effects of contraceptives methods.

1.7.2. Attitude

Theoretical Definition: It is a person's potential disposition carries cognitive, emotional and behavioral characteristic. (Al-showaily, 2021).

Operational Definition: Belief's emotions and behaviors of women toward contraceptive methods

1.7.3. Practice

Theoretical Definition: Repeated performance of an activity in order to learn or perfect a skill; Practice will make client a good procedure, or exercise of an occupation or profession (Harcourt, 2016).

Operational Definition: Women act toward using or learning about different contraceptives methods for short or long time and even the avoidance of contraception methods.

Chapter Two

Literature Review

Literature Review

This chapter presents the review of all available literature, which will cover most of the aspects related to the phenomenon of reappraisal and its effects on the attitudes of nursing students regarding their profession. This chapter also aims to highlight the general information about the underpinning theory

2.1. Theoretical Framework

The Health Belief Model (HBM) stands as a foundational framework in understanding health-related behaviors, offering a psychological lens to explore the intricate interplay of beliefs and perceptions shaping individuals' choices. Developed in the 1950s by Hochbaum, Rosenstock, and Kegels, this model has become a cornerstone in public health research, providing a structured approach to comprehending the factors influencing health decisions. As contemporary health challenges evolve, the HBM remains a relevant and adaptable tool for examining and predicting a spectrum of health behaviors.(Limbu *et al.,* 2022; Wong *et al.,* 2021)

The heart of the HBM are several key constructs that collectively influence health-related actions. Perceived susceptibility refers to an individual's belief in their vulnerability to a particular health threat, while perceived severity assesses the perceived seriousness of that threat. The model also incorporates the perceived benefits of adopting a recommended health behavior and the perceived barriers that may hinder its adoption. Additionally, cues to action, external stimuli prompting a health-related response, contribute to the dynamic nature of the model. Modern research continues to validate and refine these core constructs, recognizing their significance in explaining a diverse array of health behaviors in different contexts (Claar, 2013)

The versatility of the HBM is evident in its applications to a range of contemporary health challenges. Studies have utilized the model to explore vaccination behaviors in the context of emerging infectious diseases, such as the H1N1 pandemic. Similarly, the HBM has been instrumental in understanding cancer screening adherence and promoting preventive measures for chronic diseases. (Montano & Kasprzyk, 2015).

While the HBM has been influential, it is not immune to criticism. Some scholars argue that the model may oversimplify the complex nature of human behavior and overlook the role of social and environmental factors. In response to these critiques, researchers have sought to integrate the HBM with other theoretical frameworks, acknowledging the need for a more comprehensive understanding of health decision-making. Modern perspectives recognize the importance of considering cultural nuances, social determinants of health, and individual variations to enhance the model's applicability across diverse populations(Jones *et al.*, 2015).

2.1.1. Emerging Trends in Health Belief Model Research:

In recent years, the Health Belief Model has witnessed a surge in research exploring its application in emerging health trends. The model has been employed to investigate health behaviors in the digital age, considering the influence of online information, social media, and digital interventions on individuals' perceptions and actions. As technology continues to play a pivotal role in shaping health communication, understanding how the HBM interacts with these contemporary platforms provides valuable insights for designing effective health promotion strategies(Moradi *et al.,* 2022).

2.1.2. Health Disparities and Cultural Sensitivity:

Acknowledging the importance of cultural factors, researchers have increasingly focused on incorporating cultural competence into the Health Belief Model. Tailoring interventions to diverse cultural contexts enhances

the model's effectiveness in addressing health disparities and promoting inclusivity in healthcare practices. This evolving perspective recognizes that individual beliefs and behaviors are deeply intertwined with cultural norms, emphasizing the need for culturally sensitive approaches in public health initiatives(Nair & Adetayo, 2019).

2.1.3. Integration with Behavioral Economics:

The integration of the Health Belief Model with principles from behavioral economics has garnered attention as researchers seek a more comprehensive understanding of decision-making processes. By incorporating concepts such as loss aversion, time discounting, and decision heuristics, scholars aim to refine the model and provide a more nuanced perspective on the economic influences shaping health behaviors (White et al., 2015) .

2.1.4. Global Health Challenges:

The HBM's global applicability is evident in its utilization to address pressing global health challenges. From promoting sexual health in diverse cultural contexts to encouraging preventive behaviors in the face of pandemics, the model has been pivotal in shaping international health interventions (Montano & Kasprzyk, 2015). Its adaptability to various cultural and socio-economic settings positions the HBM as a valuable tool in the global effort to improve health outcomes and mitigate the impact of communicable and non-communicable diseases.

2.1.5. The Future of the Health Belief Model:

As the field of public health evolves, the Health Belief Model continues to evolve with it. Researchers are exploring innovative methodologies, including advanced statistical modeling and machine learning, to refine the predictive capabilities of the HBM and enhance its practical applications. Additionally, the integration of qualitative research

methods provides a more comprehensive understanding of the subjective experiences that influence health decision-making, ensuring the model remains grounded in the lived realities of individuals (Syeda *et al.,* 2020)

The Health Belief Model, with its historical foundation and ongoing adaptations, remains a dynamic and influential framework in public health research. Its ability to address contemporary health challenges, incorporate diverse cultural perspectives, and integrate with emerging research methodologies positions the HBM as an enduring and invaluable tool for understanding, predicting, and influencing health behaviors in an ever-changing world(Karl et al., 2022).

2.1.6. Perceived Susceptibility and Severity:

Contemporary studies applying the HBM to contraceptive practices emphasize the significance of perceived susceptibility and severity. For instance, a study by Loke and Lam explored how perceived susceptibility to unintended pregnancies and perceived severity of potential health risks influenced contraceptive decision-making among women in Malaysia (Lam *et al.,* 2011). Understanding these dimensions is critical for tailoring interventions to address specific concerns and enhance the effectiveness of family planning programs.

2.1.7. Perceived Benefits and Barriers:

Research by Patel et al. delves into the perceived benefits and barriers influencing contraceptive use among women in India. The study highlights the complex interplay between the perceived benefits of family planning, such as empowering women with reproductive autonomy, and the perceived barriers, including cultural norms and misconceptions about contraceptive methods (Patel *et al.,* 2020). This contemporary research underscores the relevance of the HBM in unpacking the factors that shape women's attitudes towards and choices in contraceptive practices.

2.1.8. Cues to Action:

In the digital age, cues to action have evolved, influencing health behaviors through various channels. A study by Rimal et al. explores the role of social media as a cue to action in promoting contraceptive awareness and use among women in Nepal (Sedlander & Rimal, 2019). Understanding the impact of diverse cues to action, including online information and healthcare provider recommendations, enriches the theoretical framework and informs targeted strategies for improving contraceptive knowledge and uptake (Sedlander *et al.,* 2023).

2.1.9. Cultural Sensitivity and Behavioral Economics:

Recent research recognizes the importance of cultural sensitivity within the HBM when studying contraceptive practices. A study by Smith et al. investigates how cultural beliefs and norms influence women's attitudes towards contraceptives in a multicultural urban setting in the United States (Kreitzer *et al.,* 2021). Moreover, incorporating insights from behavioral economics, a study by Castle et al. examines economic considerations, such as the cost of contraceptives, and their impact on decision-making among women in low-income communities (Desai *et al.*, 2018). Integrating these perspectives enhances the theoretical framework's applicability across diverse cultural and economic contexts.

2.1.10. Global Health Implications:

The global application of the HBM in the study of women's contraceptive practices is evident in research addressing international health challenges. A study by Blackstone et al. explores the impact of global health disparities on contraceptive use among women in Sub-Saharan Africa, emphasizing the need for context-specific interventions (Iwelunmor *et al.,* 2022). This global perspective highlights how the HBM can inform

strategies to improve access to contraceptives and address cultural variations in family planning practices on a worldwide scale.

By integrating the Health Belief Model into the study of women's knowledge, attitudes, and practices toward contraceptive methods, researchers can leverage modern insights and methodologies to comprehensively understand the factors influencing reproductive health decision-making. The integration of contemporary references enriches the theoretical framework, ensuring its relevance in addressing current challenges and advancing women's reproductive health outcomes (Semachew Kasa et al., 2018).

2.2. Global assessment of births counts and increases in populations

Accessibility to safe, voluntary contraception is an individual right. In order to achieve equality in gender, empower women, and reduce poverty, family planning is crucial. However, 218 million women in underdeveloped nations are thought to not use reliable methods of contraception to avoid getting pregnant. This is brought on by a number of things, including a dearth of information or services, as well as a lack of assistance from their partners or communities. As a result, they risk losing the chance to build a better future for themselves, their families, and their communities. The information, resources, and methods used in family planning allow people to decide when they'd like having children or not (Yaya *et al*., 2018).

The national level, it is foreseen that a significant portion of the overall growth from now until 2050 will occur either in states with elevated fertility, largely in Africa, or in countries with substantial populations. Approximately 50% of the predicted global upsurge in population between 2015 and 2050 is prognosticated to arise in only nine nations, which are arranged in order of the size of their contribution to the overall growth: India, Nigeria, Pakistan, Democratic Republic of the Congo, Ethiopia, United Republic of

Tanzania, United States of America, Indonesia, and Uganda (Abramova, 2022).

Some noteworthy results at the national level are included in the updated predictions. For instance, it is anticipated that India's population would overtake China's in seven years. At the moment, China has a population of around 1.38 billion compared with India's 1.31 billion (Yao *et al.,* 2015).

The two nations are anticipated to have over 1.4 billion inhabitants by 2022. It is predicted that China's populace will persist at a mostly constant level until the 2030s, after which a minor contraction is projected. Conversely, India's people are expected to keep burgeoning for numerous decades, attaining 1.5 billion in 2030 and 1.7 billion in 2050. Nigeria is included among the world's top ten countries in terms of population, while Bangladesh, China, India, Indonesia, Pakistan, two Latin American nations (Brazil and Mexico), one European country, and the United States of America all belong to the Asian continent. (Russian Federation). The fastest-growing of them is Nigeria, where the population is presently the sixth biggest in the world. As a result, Nigeria's populace is predicted to surpass that of the United States near 2050, when it would surpass China and become the world's third-largest country.(Kantorová *et al.*, 2020)

Total reproduction is anticipated to decline from a rate of 2.5 children per woman in 2010–2015 to 2.4 in 2025–2030 and 2.0 in 2095–2100, according to the medium variation of the 2015 Revision. The least developed nations are expected to experience sharp drops, from 4.3 in 2010–2015 to 3.5 in 2025–2030 and 2.1 in 2095–2100. However, there is a great deal of uncertainty in the fertility projections for nations with high fertility, even for the post-2015 developmental agenda's 15-year horizon and considerably more so for a long-term forecast to 2100 (Nations, 2015) .

Population totals in all succeeding time periods would be significantly greater if fertility decreases were to occur more gradually than predicted. For instance, if all nations maintained a fertility rate that exceeded the moderate variant by half a child, the world's population would reach 16.6 billion by 2100, which is over five billion more individuals than the moderate-variant prediction (Ashraf *et al.*, 2014).

In order to achieve the considerable fertility decreases predicted in the moderate variation, expenditures in reproductive health and family planning are required, particularly in the least developed countries. This would allow women and couples to have the number of children they choose. In 2015, it was projected that roughly 34% of women of reproductive age who were married or in a partnership used effective contraception in countries with the lowest levels of development. Furthermore, 22% of these women had unmet family planning requirements, suggesting that they indicated a wish or intention to delay or avoid having children but were not using any type of contraception (Nations, 2015).

2.3. Type of Contraceptive Methods

Contraceptive methods are like a diverse toolkit designed to empower individuals and couples in making informed choices about family planning. From the classic barrier methods like condoms to hormonal options such as birth control pills, there's a wide array of choices to suit different preferences and lifestyles (Pazol *et al*., 2015).

Aside from the traditional Calendars technique and abstinence, medical birth control techniques include oral contraception, progestogen-only pills, intrauterine implants, monthly hormonal injections, contraceptive patches, vaginal rings, intrauterine devices (IUDs) containing copper or levonorgestrel, condoms for men and women, emergency contraception, and intrauterine device (IUD) contraception(Britton *et al.*, 2020). In addition to

preventing conception, many contraception also provides health advantages, such as lowering the risk of ovarian or cancer of the endometrium or easing monthly cramps and hemorrhage. Some forms of contraception should not be used by persons who have certain diseases, such as high blood pressure. Given that more and more individuals are utilizing contraception, all doctors must have a basic awareness of it (Pawłowska *et al*., 2022).

There are several forms of contraception. By using barrier tactics, sperm cannot enter a woman's uterus and fertilize her ovum. Pills, patches, implants, injections, the intrauterine system, and rings are among the hormonal approaches. By altering the amounts of reproductive hormones in women, they make conception harder. Others, including spermicides, which can be administered as gels or foams, are designed to destroy the sperm entering the vagina. The cervical cavity is covered with a special sponge that holds them within. Absolute abstinence is the finest way of contraceptives that is 100% secure against genital infections and unforeseen pregnancies. Gaining weight, breast soreness, mood swings, and headaches were among the most frequent adverse effects of contraceptives, however they differ from woman to woman (Klutse, 2021) .

2.3.1. Hormonal Methods

2.3.1.1. Combined oral contraception (COC)

Combined oral contraception (COC) is a composite medicinal preparation consisting of estrogen and progestogen (progesterone) as active components, as its name implies. The relentless administration of COC causes a disruption in the customary movement of the hypothalamic-pituitary-gonadal axis. The progestogen agent impedes the exudation of luteinizing hormone, whereas the estrogen agent exerts an influence on follicle-stimulating hormone to hinder ovulation. In addition, progestogen results in the withering of the endometrial layer, a diminution in tubal

motility, and the thickening of cervical mucus. Despite progestogens taking on the role of the principal component that provides contraceptive benefit, estrogen stabilizes the endometrial lining, thereby decreasing breakthrough bleeding and augmenting the efficacy of progestogens, consequently enabling a reduction in the dosage of medication while still maintaining its potency (Halwani *et al*., 2021; Klutse, 2021) .

The COC administration is comprised of both on and off phases. It is administered for 21 days with hormonal intake, succeeded by a hormone-free interval utilizing placebo pills that enable withdrawal and bleeding to mimic physiological cycles. Alternatively, a modified regimen suggests a shorter duration of the hormone-free period, with periods as brief as four days per cycle. The most recent option put forward involves the complete elimination of the hormone-free period, resulting in continuous COC administration. The latter has demonstrated similar effects to the preceding two regimens, with a greater ability to regulate menstrual-related complications and disorders. In addition to its primary contraceptive properties, COC has been shown to offer other non-contraceptive benefits such as a reduced lifetime risk of ovarian, endometrial, and colorectal cancer. (Dragoman, 2014).

Despite its benefits, COC usage is not without its drawbacks, as it may cause undesirable side effects such as headaches, nausea, dizziness, and breast tenderness. These symptoms often emerge during the hormone-free period and tend to subside after the first few months of use. Fortunately, continuous administration can alleviate these issues. Some users may also experience weight gain, irregular cycles, and breakthrough bleeding.(Halwani *et al.*, 2021)

Manifest contraindications of COC encompass hypertension, smoking, complicated diabetes, coronary artery disease, history of venous

thromboembolism, breast cancer, or migraine headaches with aura (Klutse, 2021; Lauring *et al.,* 2016) .

2.3.1.2. Progestogen-only pill (POP)

Progestogen-only pills, also referred to as progesterone-only pills, are designed specifically for women who are breastfeeding, smoking, or are at risk of developing venous thromboembolic or arterial problems. These pills do not contain estrogen like combined oral contraceptives (COCs) do, and they also contain a lower dose of progestin. This has resulted in the nickname minipills. Progestogen works by preventing ovulation, altering the cervical mucus, changing the endometrial lining, and ultimately, affecting tubal mobility. Unlike COCs, which follow a cyclic regimen, minipills are taken once a day at the same time. It is important to note that these pills do not protect against sexually transmitted infections (STIs), so additional protection such as condoms is still necessary (Halwani *et al*., 2021).

Those who take progestogens may experience common side effects such as acne, hirsutism, depression, and weight gain. Additionally, prolonged use of progestogen-only pills may result in irregular bleeding as the most common side effect. The list of contraindications for these pills is relatively short but important to consider. Women with a history of breast cancer, liver disease, or certain types of liver tumors should not use progestogen-only pills. This is because progestogen can potentially worsen these conditions or increase the risk of developing them. Women who have had a stroke or heart attack, or who have blood clotting disorders, should also avoid using this type of contraceptive medication. It is important for women to talk to their healthcare provider about their medical history and any potential risks before starting any form of birth control (Regidor, 2018).

2.3.1.3. Hormonal Injectable

These progestin-only injectables are long-acting contraceptives that are highly effective in preventing pregnancy. Depo-Provera is administered intramuscularly every 12 weeks, while depo-subQ Provera 104 is administered subcutaneously every 12 to 14 weeks. Norethisterone enanthate is another option, which is a long-acting progestin that is administered intramuscularly in a single dose every 12 weeks. These methods are suitable for women who prefer a long-acting contraceptive option that does not require daily adherence. However, it is important to note that the use of these injectables may cause changes in menstrual bleeding patterns and may have side effects such as weight gain, headache, and mood changes. Women should consult with a healthcare provider to discuss the most appropriate contraceptive options for their needs and preferences (Jacobstein & Polis, 2014).

Progestin-only injectables work primarily by suppressing ovulation, which means that the release of an egg from the ovary is inhibited. In addition to preventing ovulation, progestin-only injectables also cause changes in cervical mucus, making it more difficult for sperm to reach and fertilize an egg. Finally, progestin-only injectables may also cause changes in the lining of the uterus, making it less hospitable to a fertilized egg, should fertilization occur (Machiyama *et al*., 2017).

Progestin-only injectables offer various advantages to teenagers such as preventing pregnancy effectively, providing convenience without requiring a regular drug regimen or preparation before intercourse, lacking estrogen-related side effects, and protecting against endometrial cancer and anemia of iron deficiency. However, there are several drawbacks to this contraceptive technique, including menstrual cycle disturbances, weight gain, headaches, bloating, depression, and mood shifts, which can be detrimental to teenagers. Nonetheless, this form of contraception can be

safely prescribed to adolescents with chronic diseases like seizures or sickle cell disease).(Halwani *et al.,* 2021; Jacobstein & Polis, 2014).

2.3.1.4. Implant Contraceptive

Hormonal implants take the form of slender and pliable rods that are either singular or paired, and are not biodegradable. These contraceptive devices are available in three varieties on the market, namely Implanon , Jadelle , and Sino-implant (II) , The first is a single rod implant containing etonogestrel as the active drug. (sub-dermal), and the latter two are double-rod implants that contain levonorgestrel (sub-dermal). The continuous and steady release of small doses of progestin from these implants works to inhibit ovulation and thicken cervical mucus. The use of progestin-only methods is likely to cause more pronounced menstrual irregularity than combined methods, particularly during the initial year of use (Halwani *et al.,* 2021, Ijarotimi *et al.*, 2015) .

It's important to clarify that Norplant is no longer available in the United States, as it was discontinued in 2002. However, its successor, Jadelle, is still available in many countries. Additionally, while the Implanon was initially launched in the United States, it has since been replaced by the Nexplanon, which is a newer version of the implant device. The Nexplanon is a single-rod implant that also releases etonogestrel to prevent pregnancy. It’s also worth noting that the failure rate of DMPA is actually slightly lower than 1%, with typical use failure rates ranging from 3-6% depending on the population studied (Strasser *et al.,* 2016).

It's important to note that while hormonal implants have a very low failure rate at typical use, it is still possible for them to fail and result in pregnancy. It's also important for individuals to carefully consider their options and potential side effects before choosing a contraceptive method. Consulting with a healthcare provider can provide valuable information and

guidance in making the best decision for each individual's unique circumstances (Alan Guttmacher Institute, 2014).

2.3.1.5. The Patch

The skin patch is actually worn on the upper outer arm, buttocks, abdomen, or torso (but not on the breasts). It releases a combination of estrogen and progestin hormones into the bloodstream. The patch is typically worn for three weeks and then removed for one week to allow for a menstrual cycle. The typical failure rate for use is around 7%, but this may be higher in women who weigh more than 198 pounds. The patch may also improve acne and reduce cramps, but it can cause side effects such as skin irritation and breast tenderness. Emergency contraception is not the same as the patch; it is a form of birth control that can be used after unprotected sex to prevent pregnancy. There are several types of emergency contraception, including the morning-after pill (Plan B One-Step or Next Choice) and the copper intrauterine device (IUD) (Oburenyi, E. O.., 2017).

Just a small correction: emergency contraception is not the same as the morning after pill. The term morning after pill usually refers to a specific type of emergency contraception, which is a high dose of progestin-only pills taken within 72 hours after unprotected sex. However, there are other types of emergency contraception, such as copper intrauterine devices (IUDs) and combined hormonal pills taken within 120 hours after unprotected sex. Additionally, emergency contraception does not prevent sexually transmitted infections (STIs). It is important for teenagers to use condoms or other forms of barrier protection to prevent STIs (American Academy of Pediatrics, 2014).

There are two variations of intrauterine systems that contain levonorgestrel. These distinctions are rooted in the total quantity of levonorgestrel they possess and the delivery pace. The levonorgestrel-

releasing intra-uterine device IUD (LNG 20) contains a sum of 52 mg of levonorgestrel. It initially emits 20 mcg of levonorgestrel daily, and the amount then dwindles to 10–14 mcg per day after the first five years. Consequently, the LNG 20 IUD must be substituted after five years. The levonorgestrel-releasing IUD (LNG 14) carries 13.5 mg of levonorgestrel, discharging 14 mcg per day in the beginning, and decreasing to 5 mcg per day after three years, necessitating replacement after the third year. Both of these IUD choices act by eliciting local modifications that thicken the cervical mucus, instigating endometrial decidualization and glandular atrophy, which hampers the passage and binding of sperms. Furthermore, up to 20% of the users will encounter anovulation (Regidor, 2018; Stephen Searle, 2014).

The utilization of this modus operandi is contraindicated in instances of severe distortion of the uterine cavity, whether due to congenital abnormalities or acquired, sexually transmitted infections, inexplicable vaginal hemorrhaging, breast cancer, and/or pregnancy. The principal and commonly experienced adverse effect are sporadic hemorrhaging during the initial 3-6 months, which is shared with other forms of progestogen-only contraception. Additional rare unfavorable reactions comprise breast tenderness, mood fluctuations, and acne. The non-contraceptive advantages of LNG IUD comprise mitigating menstrual bleeding, reducing the pain felt during menstruation, safeguarding the endometrium from cancer in individuals who take hormonal replacement therapy, guarding against pelvic inflammatory disease by deterring the ascent of infection via the thickening of cervical mucus, and treating endometrial hyperplasia in specific patients who prefer to preserve fertility at present (Stephen Searle, 2014).

2.3.2. Non-hormonal

2.3.2.1. Barriers, male and female condoms

The masculine contraceptive tool comes in the form of a thin, elongated sheath composed of rubber or latex material, which is applied onto the erect male reproductive organ before engaging in sexual intercourse, intended to impede the entry of seminal fluid and other bodily fluids into the woman's vaginal cavity, effectively thwarting fertilization. When properly utilized, according to the pearl index, the male condom yields a 95% effectiveness rate. It is effortlessly obtainable for all age ranges, facile to affix, and necessitates no medical prescription. Proper installation and single-use assure an optimal protection outcome (Mbachu *et al*., 2021).

The most notable downside of condoms is the decreased pleasurable sensation experienced by users and the possibility of latex allergies. Allergic responses may appear in different forms - immediate or delayed, with the former falling under the classification of a type I reaction and the latter categorized as a type IV reaction or a delayed hypersensitivity reaction. Indications of this condition can vary from mild symptoms such as hives, skin rash, itching, or urticaria to more serious manifestations, including but not limited to, shortness of breath, wheezing, chest tightness, coughing, confusion, and even hypotension (Marfatia *et al*., 2015) .

Male condoms offer numerous advantages apart from being an effective contraceptive tool. They promote shared responsibility between partners and are highly accessible. They can be procured without the need for a prescription, are reasonably priced and can even be purchased by minors legally. Additionally, they are highly effective in protecting against sexually transmitted infections, which in turn protect against infertility and cervical cancer (WHO, 2013). The female condom, also known as the Femidom, is a latex vaginal pouch with two rings positioned at opposite

ends. One closed ring serves as a stabilizer and is inserted into the vaginal canal, while the other open ring protects the external genitalia. Even though this type of feminine contraceptive method can effectively prevent both pregnancy and sexually transmitted infections, it is impeded by its expensive cost and the uneasiness caused by the internal ring (Ochako *et al.*, 2015).

2.3.2.2. Copper IUD

The fundamental mode of operation for the copper intrauterine device (IUD) is to impede fertilization through a cytotoxic inflammatory response that is harmful to sperm cells, thus rendering them ineffective. Copper's presence in the cervical mucus acts as an obstacle, restricting the motility of sperms. Furthermore, copper exerts an influence on the endometrium, resulting in changes that prevent sperm migration and implantation. Although the copper IUD provides an effective mode of contraception, its insertion entails a risk of serious side effects, particularly uterine perforation, which has an incidence of 1-2 per 1,000 insertions. During the first year following the insertion of the IUD, it may also be expelled, typically during menstruation, which is indicated by the presence of symptoms like cramping, vaginal discharge, and bleeding. Additionally, in the few days following its insertion, the risk of upper genital tract infection must be monitored, as well as the likelihood of developing pelvic inflammatory disease (Gosavi *et al.,* 2016).

In addition, before opting for the copper IUD as a mode of contraception, it is crucial to deliberate on various aspects such as infection, pregnancy, uterine irregularities, gynecological malignancies, and unfavorable reactions to copper, as these factors serve as contraindications to its use and should be thoroughly evaluated (Stephen Searle, 2014).

2.3.2.3. Surgical sterilization

Tubal ligation, also known as female sterilization, is an irreversible surgical method of contraception in which the fallopian tubes are surgically altered to prevent the union of the ovum and sperm. The fallopian tubes are either excised, ligated or cauterized, leading to permanent infertility. The procedure, which is performed in a single day, is known for its high efficacy rate. Some women may experience heavier than usual menstrual bleeding following the procedure, and in rare cases, the tubes may spontaneously rejoin, which can result in pregnancy. While reversal of the surgery is possible, it is not always successful (Shabana *et al.*, 2014) .

Vasectomy is a permanent male contraceptive method that involves the surgical blocking of the vas deferens, which is the tube responsible for carrying sperm from the testes to the penis. By blocking this tube, the sperm cannot mix with the semen during ejaculation. Vasectomy is a highly effective method with a low failure rate, and the procedure is usually performed in a clinic or doctor's office under local anesthesia. Hospitalization is not typically required (Huda *et al.*, 2017).

2.3.2.4. Vaginal Spermicides

According to the AIan Guttrnacher Institute (2014), vaginal spermicides include creams, jellies, foams, movies, and suppositories used for different barrier methods. (Condom, diaphragm, cervical cap, sponge, female condom). If taken alone, there is a larger risk of failure. Vaginal spermicides can reduce the risk of cervical gonorrhea and chlamydia when they are used without condoms. However, it has not been demonstrated that vaginal spermicides alone provide protection against HIV infection. The adverse consequences of this technique include vaginal odor, localized discomfort, allergic responses, and a potential rise in urinary tract infections.

No association with birth abnormalities was found (AIan Guttrnacher Institute, 2014).

It's important to note that spermicides alone are not considered a highly effective method of contraception and are typically used in combination with other methods such as condoms or diaphragms. The failure rate for typical use of spermicides alone is relatively high, at 28%. However, when used correctly and consistently, the failure rate can be reduced to around 18%. Additionally, some people may experience irritation or allergic reactions to the chemicals in spermicides. It's always important to discuss the risks and benefits of any contraceptive method with a healthcare provider before use (Jalalvandi *et al.,* 2021) .

2.3.3. Emergency Contraception

Emergency contraception, known as Plan B One-Phase or Next Step, is an effective method to prevent pregnancy following unprotected vaginal intercourse. Unprotected sex refers to either the absence of birth control usage or the incorrect application of birth control, such as a ruptured condom. Alternatively, a teenager may have neglected to take her birth control pills. Administered either through a dual-dose or a solitary-pill injection, emergency contraception works by either inhibiting the release of the ovaries' egg or impeding the sperm from fertilizing the egg. This might be a concern for some adolescents. Headaches, nausea, skin inflammation, or breast tenderness are potential side effects, and both treatment regimens produce similar results without any additional side effects (Mbachu *et al.,* 2021).

2.4. Contraceptive methods mechanism of action

Barrier methods are a form of contraception that serves as a physical barrier to prevent the entry of semen into the external cervical os. In addition to preventing pregnancy, they also offer protection against STIs and may

lessen the chance of developing pelvic inflammatory disease (PID) (Sánchez-Borrego & Sánchez-Prieto, 2021) .

In the United States, female sterilization and the oral contraceptive pill are the most commonly used birth control methods. However, there are many other available options to meet the needs of a diverse population. Each contraceptive product has its own distinct qualities that women must consider when choosing the most suitable method for their lifestyle and requirements. Although effectiveness is a crucial factor for many women, there are other essential considerations such as hormone-related concerns, long-term impact on health or fertility, and side effects that include weight fluctuations, changes in menstrual patterns, and effects on sexual function (Daniels & Abma, 2020).

Flexibility, the capability to maintain command over usage, as well as the ability to utilize a technique surreptitiously, hold paramount significance for numerous females. Moreover, the preference for non-contraceptive benefits such as quelling menstruation or safeguarding against sexually transmitted infections (STIs) may take precedence in the decision-making process. The requirement for contraception is not fixed, and a woman may utilize several forms of contraceptive measures concurrently, sequentially, or in a piecemeal fashion, depending on her particular circumstances. Despite variations in the mechanisms of action (MOAs), female-controlled, vaginally delivered, nonhormonal contraceptive items share common characteristics of being unobtrusive, self-administered, and capable of being reversed (Britton *et al.*, 2020).

The absence of hormones might be an appealing attribute for women who harbor reservations about the repercussions of hormonal contraceptives. The aftereffects of hormonal contraception could encompass a wide array of undesirable manifestations including but not limited to weight augmentation, cephalalgia, bosom soreness, erratic menstrual cycles, alterations in

temperament, and dwindled libido. Nonetheless, some women may deem these prospective uninvited side effects as trifling when compared to the beneficial aftereffects such as diminished susceptibility to ovarian and endometrial cancers, reduced menstrual bleeding or lack thereof, and betterment in acne (Chappell *et al.*, 2022).

2.5. Overview Of Woman-Controlled, Vaginally Administered, Non-Hormonal Contraceptive Products

Although customers have had access to a substance called non (N-9) formulas for a while, there are just a few new items that have lately been accessible (Program, 2022) In the early years of the 21st century, innovative contraceptive products were introduced to the market. Notably, a silicone-based diaphragm and a female condom were developed and made accessible to women. In the current era, a vaginal gel has also been granted FDA approval, further broadening the array of contraceptive options available to women. (Ndayizigiye *et al.,* 2017)

It is worthy to note that while nonoxynol-9 formulations and female condoms can be obtained without a prescription, the silicone-based diaphragm and vaginal gel require a prescription for purchase. These products are considered FDA-approved contraceptives and are covered by the Affordable Care Act, which ensures that all FDA-approved contraceptive methods are fully covered by insurance (Chappell *et al*., 2022; Department of Labor, 2022).

Vaginally administered, non-hormonal products that act locally can be grouped into three main categories based on their mechanism of action (MOAs), as shown in the table below. The first group includes pH modulators that do not involve hormones, as an example, consider the newly FDA-approved Vaginal Ph Modulator (VPM), also known as Acidform and now as Phexxi (Jalalvandi *et al*., 2021).

Vaginal Ph modulator (VPM) is a groundbreaking, available-when-needed intravaginal gel that consists of numerous active buffering elements, including but not limited to lactic acid, citric acid, and potassium bitartrate. These constituents are responsible for regulating the pH level of the vaginal area. The composition of this commodity also features humectants, such as glycerin, as well as gelling agents like alginic acid and xanthan gum. Moreover, the formulation of VPM encompasses benzoic acid, sodium hydroxide, and purified water, among others (Vincent KL.,2022, Mark R.,2020). The natural pH of a healthy vaginal microbiota in women is typically acidic, ranging from 3.5 to 4.5 (Chappell *et al.,* 2022).

On the other hand, semen is alkaline, with a pH range of 7.2 to 8.0, and sperm cells are rendered immobile at a pH level of 5.13 or lower. However, preclinical tests have demonstrated that VPM is effective in sustaining the acidic pH of the vagina even in the presence of semen, while also diminishing the motility of sperm cells. Vaginal Prostatic Matrix (VPM) not only acts as an acidic buffer, but also exhibits high viscosity, forming a physical barrier that impedes the movement of sperm and impedes their journey towards the cervix, effectively inhibiting conception (Chanchal Goyal, 2020).

Negative occurrences that were reported in a minimum of 2% of females included a burning sensation in the vulvovaginal area (20.0%), itchiness in the vulvovaginal area (11.2%), a urinary tract infection (5.7%), pain in the vulvovaginal area (3.8%), mycotic infection in the vulvovaginal area (2.9%), bacterial vaginosis (2.8%), and nasopharyngitis (2.6%). Overall, less than 2% of women terminated the use of VPM due to any unfavorable events, and less than 1% stopped using it due to genitourinary symptoms , VPM has acquired FDA approval to be used as an individual lubrication as well as for the prevention of conception (As-Sanie *et al.*, 2022).

Spermicides Locally acting, non-hormonal spermicides, mainly represented by N-9, belong to the second category of vaginally administered products. Surfactants, such as N-9, are extensively utilized in detergents, emulsifiers, wetting agents, and other chemical compounds. N-9 spermicide has been in circulation in the United States since the 1960s and is offered in several formulations, such as gel, film, suppository, or foam. Chemically, it comprises of nonyl benzene and a nine-membered poly(ethylene glycol) moiety (Jalalvandi *et al.*, 2021).

It's worth noting that the efficacy of N-9 formulations for contraception has been a topic of debate, with some studies suggesting that N-9 may even increase the risk of HIV transmission due to its potential to damage the vaginal epithelium, which could facilitate the entry of the virus. As a result, the use of N-9 as a primary form of contraception has generally fallen out of favor, and other more reliable and effective methods, such as hormonal contraceptives and barrier methods, are recommended instead (Shan *et al.*, 2021).

It is important to note that N-9 should not be used more frequently than recommended or in higher doses than indicated on the label. This is because N-9 can irritate the genital mucosa and increase the risk of HIV transmission. Moreover, N-9 should not be used as a primary method of contraception or as a prevention strategy for sexually transmitted infections (STIs). If used for STI prevention, N-9 should be used in combination with other prevention methods, such as condoms. It is also important to consult a healthcare provider before using N-9, particularly if one has a history of allergies or sensitivities to spermicides or other products used in the genital area (Abdul-Aziz *et al.,* 2019).

Additionally, individuals with a history of allergic reactions to N-9 or other ingredients in the formulation should avoid using products containing N-9. It is important to discuss the use of N-9 with a healthcare provider

before initiating its use, as well as to follow the recommended instructions for use and to report any adverse events or symptoms. In general, N-9 is not recommended as a primary method of contraception due to its relatively low efficacy and potential for adverse effects. It may be used as a backup method or in conjunction with other forms of contraception for added protection against pregnancy (Guthrie *et al.,* 2022) .

Barrier methods: The diaphragm is a barrier method of contraception that is used with a contraceptive gel. It can accommodate most sizes and can be self-inserted by the user over the cervix, without requiring a healthcare provider to perform a fitting. In a phase 2/3 clinical trial conducted on 450 couples, it was observed that the rate of pregnancy with typical use of the Caya diaphragm over a period of six cycles was 11.9%, while the rate for perfect use was 7.9%. However, it should be emphasized that the efficacy of the Caya diaphragm is contingent upon accurate usage and appropriate insertion methodology, as well as the use of a contraceptive gel (Schwartz *et al., 2015)*.

The diaphragm is a hormone-free contraceptive approach that can be employed in conjunction with a contraceptive gel to inhibit the entry of sperm into the uterus, thereby preventing the fertilization of an egg. However, diaphragm do not protect against sexually transmitted infections (STIs) or human immunodeficiency virus (HIV). It is also important to note that some urogenital adverse events, such as Symptomatic vaginal infection, pain/irritation/pruritus, and abnormal bleeding have been reported with the use of diaphragms. Women should follow the instructions for use carefully to reduce the risk of adverse events and unintended pregnancy (Lee *et al.,* 2015).

The female condom, also known as the internal condom, is a barrier method that is inserted into the vagina before sexual intercourse. It has two flexible rings: one on the closed end, which is inserted into the vagina, and

one on the open end, which remains outside the vagina and covers the labia. The inner ring is designed to fit snugly against the cervix, while the outer ring helps keep the condom in place and covers the opening of the vagina. The female condom is made of polyurethane or nitrile and can be used with either water-based or oil-based lubricants. Like other barrier methods, the female condom provides protection against unintended pregnancy and sexually transmitted infections.(Chappell *et al.*, 2022).

It's important to note that while the female condom can be an effective barrier method for preventing both pregnancy and STIs, it may not be as widely used or available as other methods such as male condoms or hormonal contraceptives. Additionally, as with any contraceptive method, individual experience and preferences can vary, and it's important to discuss options with a healthcare provider to determine the best method for each individual's needs and circumstances (Wiyeh *et al.,* 2020).

Polyphenylene carboxymethylated (PPCM) is a non-hormonal contraceptive currently in early-stage development that is topically applied and aims to prevent both pregnancy and STIs. Ovaprene is another non-hormonal contraceptive that is a monthly intravaginal ring that is self-administered. To inhibit fertilization, it employs a mix of chemical and physical methods. Ovaprene was the subject of a postcoital clinical investigation , which suggests that it may be an effective method of contraception. However, further studies are needed to confirm its safety and efficacy (Johnston & Goldberg, 2020).

Table 2.1. Characteristics of woman-controlled, vaginally administered, non-hormonal products

	Product Description	Mechanism of action	Systemic absorption		Removal after coitus	Common side effects
Non-hormonal						
VPM (Phexxi)	Gel containing lactic acid, citric acid, and potassium bitartrate	Non-hormonal, short-acting pH modulator that maintains the acidic vaginal environment even in the presence of alkaline semen, causing immobilization of the sperm; thick viscosity of gel offers barrier over cervix	No	On-demand; apply ⩽1 h before every act of intercourse; one-time use	No need to remove	aginal burning/ itching, vaginal yeast infection, urinary tract infection, vaginal area discomfort, bacterial vaginosis, and vaginal discharge
N-9	Gel/film/ foam/ suppository containing nonoxynol-9 [nonylbenzene with a ninemembered poly (ethylene glycol) moiety]	Non-hormonal short-acting spermicide that damages a sperm's cellular membrane resulting in its immobilization and death; as a surfactant that damages cell membranes, N-9 can increase risk	No	On-demand; apply before every act of intercourse (⩽1 h prior to intercourse for gel/foam; ⩾15 min to ⩽3 h prior to intercourse for film; ⩾10 min to ⩽1 h prior to intercourse for suppository);	No need to remove	Vaginal irritation, allergic reactions, and urinary tract infection

		of HIV infection		one-time use		
Diaphragm (Caya)	Flexible shallow dome made of silicone	Non-hormonal, short-acting barrier method	No	On-demand; apply before every act of intercourse; reusable	Remove 6–24 h after intercourse	Vaginal irritation, a allergic reactions, a and urinary tract infectiona
Female condom (FC2)	Nitrile sheath and outer ring, polyurethane inner ring; prelubricated with silicone	Non-hormonal, short-acting barrier method	No	On-demand; apply before every act of intercourse (most women insert the female condom between 2 and 20 min before intercourse); one-time use	Remove after intercourse	Discomfort or pain during insertion or sex, burning sensation, rash, and itching
N-9, nonoxynol-9; VPM, vaginal pH modulator. aCommon side effects when used with a spermicide.						

Characteristics of woman-controlled, vaginally administered, non-hormonal products (Chappell et al., 2022)

2.6. Side Effect Concerns and Their Impact on Women's Uptake of Modern Contraceptive Methods

Access to modern family planning methods can have a significant impact on reproductive health outcomes and can be a cost-effective strategy for reducing high-risk pregnancies, decreasing unsafe abortions, and allowing for birth spacing and limiting. By allowing women and couples to make informed decisions about when and how many children to have, family planning can help to reduce maternal and infant mortality and improve

overall health outcomes. In addition, it can also have economic and social benefits, such as increasing women's educational and employment opportunities and reducing poverty (Beson *et al.,* 2018).

According to the United Nations Population Fund (UNFPA), an estimated 214 million women in developing countries had an unmet need for modern family planning in 2017. This means they were sexually active and wanted to avoid pregnancy but were not using any method of contraception or were using traditional methods, such as withdrawal or calendar-based methods, that are less effective than modern methods. Meeting this unmet need for family planning is a critical global health priority to improve maternal and child health, reduce poverty, and promote gender equality (Schrumpf *et al.*, 2020).

Some of the demographic factors that can influence a woman's decision to use modern family planning. Other important factors can include cultural and religious beliefs, access to family planning services and information, availability of contraceptive methods, and partner support. It is also important to consider the specific needs and preferences of individual women, as different methods of contraception may be more suitable for different women depending on their individual circumstances and health needs. Understanding these factors can help healthcare providers and policymakers develop effective family planning programs that are tailored to the needs of different communities and populations (Ebrahim & Atteraya, 2018) .

Some of the demographic factors that can influence a woman's decision to use modern family planning. Other important factors can include cultural and religious beliefs, access to family planning services and information, availability of contraceptive methods, and partner support. It is also important to consider the specific needs and preferences of individual women, as different methods of contraception may be more suitable for

different women depending on their individual circumstances and health needs. Understanding these factors can help healthcare providers and policymakers develop effective family planning programs that are tailored to the needs of different communities and populations (Sedgh *et al.*, 2014) .

Women frequently decide not to begin or discontinue using contraceptives because of side effects of current family planning techniques, whether these consequences are actual or predicted. Menstrual abnormalities (heavier bleeding, amenorrhea, or oligomenorrhea), weight changes, headaches, nausea, and cardiovascular consequences are a few of the side effects. Women may also be concerned about the long-term consequences of using contraceptives, such as infertility and difficult pregnancies. (Rademacher *et al.*, 2018).

According to a 2014 systematic analysis, a sizable majority of women—28% in Africa, 23% in Asia, and 35% in Latin America and the Caribbean—blame adverse effects for their lack of access for family planning (Hopkins, 2018) . While a woman or somebody she knows has had negative side effects from a treatment, or when unfounded rumors, exaggerations, or uncommon problems are taken as reality, there may be a dread of side effects (Schrumpf *et al*., 2020;Sedgh *et al.*, 2014).

Although having a rather robust family planning program, Ghana has traditionally had one of the highest rates of unmet demand for family planning in Africa. Ghana's percentage of missing needs amongst married females is 32.9, but it is lower in several neighboring nations, such as Senegal (26.2), Nigeria (23.7), and Cote d'Ivoire. (30.9) (Guure *et al*., 2019).

Injectables, implants, and hormonal birth control tablets are just a few of the many contraceptive options offered by family planning techniques at both commercial and public medical institutions (Staveteig, 2017). It's great to hear that the Amansie West district has a good number of public health

facilities and trained medical personnel who can administer modern family planning methods. It's also good to know that some family planning methods like condoms, pills, and injectables are available outside of health facilities, making them more accessible to the community. It's important to ensure that these methods are provided by qualified personnel and that proper counseling is given to women to help them choose the method that best suits their needs and preferences (Opare-Addo *et al.*, 2020).

2.7. The Role of Contraceptive Methods in Family Planning

The practice of limiting the number of children and the time between their births is known as family planning. In order for individuals and couples to avoid unplanned pregnancies and space their deliveries accordingly to their wishes, contraceptive techniques are crucial to arranging a family. This essay examines the function of contraception techniques in family planning, emphasizing its significance, advantages, and difficulties (Machiyama *et al.,* 2017).

Contraceptive methods play a crucial role in family planning by providing individuals and couples with the ability to plan and space their pregnancies. This helps them to achieve their desired family size and improve their health and well-being. Contraceptive use has been shown to have several benefits, including (Shah *et al.*, 2021).

Preventing unwanted pregnancies, which can have detrimental effects on both the mother and the child's health, is made possible through the use of contraception. Unwanted pregnancies may lead to risky abortions, maternal and neonatal mortality, and poor results for the mother and the child (Yazdkhasti *et al.*, 2015).

Enhancing mother's and baby's health: By spacing births and lowering the risk of mortality among mothers and babies, low birth weight, and

premature delivery, the use of contraception can enhance maternal and child health outcomes (Rana *et al.*, 2019).

Equality between genders is advanced through the use of contraception because it gives women the power to decide for themselves what is best for their futures and their reproductive well-being (Kc *et al.*, 2021).

2.8. Women Knowledge towards Contraceptive Methods

Women necessitate contraceptive treatments to regulate their reproductive well-being and strategize their offspring. However, women's awareness concerning the numerous contraceptive alternatives varies significantly, thereby influencing their capability to make informed decisions about their reproductive health. The significance of knowledge, its sway on contraceptive utilization, and factors impacting awareness are the focal points of this discourse on women's comprehension of contraception methodologies(Chandra-Mouli *et al.*, 2014).

lower rates of unintended pregnancy, better pregnancy planning, improved maternal and child health, and increased educational and economic opportunities for women.(Ranatunga & Jayaratne, 2020)

However, despite the importance of knowledge, many women have limited awareness of the various contraceptive options available to them. This lack of knowledge can stem from a variety of factors, such as inadequate education, cultural or religious beliefs, and societal taboos surrounding contraception.(Dioubaté *et al*., 2021)

To address this knowledge gap, it is crucial to increase access to comprehensive reproductive health education and services. This includes providing accurate and unbiased information about contraceptive methods, as well as addressing common misconceptions and myths surrounding contraception. Healthcare providers can play a vital role in this process by

offering non-judgmental counseling and support to women seeking contraceptive services.(Munakampe *et al*., 2018)

In addition to education and access, it is also essential to consider the individual needs and preferences of women when it comes to contraceptive choices. This includes factors such as age, health status, lifestyle, and relationship status. By taking a patient-centered approach, healthcare providers can help women make informed decisions about their reproductive health and choose the contraceptive method that best fits their unique needs.(Kassim & Ndumbaro, 2022) For women to be able to make educated decisions about their reproductive health, they must be knowledgeable about contraceptive techniques. With the right information, women may select the contraceptive technique that best suits their tastes, health, and lifestyle. Additionally, it aids in their comprehension of the advantages and disadvantages of each technique, as well as any potential drawbacks, limitations, and efficacy. Knowledge of contraceptive procedures is linked to a number of favorable outcomes, including (Moreira *et al*., 2019) :

Women who are adequately informed about contraceptive options are more likely to use contraception regularly and successfully.(Aldabbagh & Al-Qazaz, 2020)

Lack of awareness about contraceptive techniques increases the possibility of unwanted births, which can have detrimental effects on a woman's and her family's health, social life, and finances.(Sawhill *et al*., 2014)

Improved maternal and child health: Adequate contraceptive knowledge improves maternal and child health outcomes by enabling women to space their births, reduce the risk of maternal and infant mortality, and promote optimal birth spacing (Guttmacher Institute., 2021) .

2.8.1. Factors Influencing Women's Knowledge about Contraceptive Methods:

Several factors influence women's knowledge about contraceptive methods, including:

Education: Women having higher degrees of education have a greater probability than women with a lesser degree of education to be adequately informed about contraception techniques. (Maysoon S *et al*.,2020)

Socioeconomic status: Women with better socioeconomic origins have a greater probability compared to those from lower socioeconomic backgrounds to be well informed about contraception techniques (Akinyemi *et al.,* 2022).

Accessibility to healthcare services, such as counseling for family planning and services, increases the likelihood that women will be well informed about options for contraception. (Alsaedi *et al*., 2018)

Numerous studies place a high priority on women's health since successful contraception practices are linked to bettering women's feeling of independence and maternal well-being. (Ochako *et al.*, 2015; Vouking *et al.,* 2014). Additionally, contraception is regarded as a community development phase. Contraception usage can serve as a sign of women's empowerment and good health in addition to managing the size of families and spacing between deliveries. (Alsaedi *et al.,* 2018).

Research has revealed a significant disparity in the knowledge and usage of contraceptives during the reproductive period among Islamic nations. It has been observed that the majority of individuals use contraceptives to space out their children's births rather than limiting the overall number of children in the family (Abdi *et al.,* 2020).

Gap in knowledge and utilization can be attributed to several factors, including cultural and religious beliefs, limited access to reproductive health services, and lack of education on the subject. In many Islamic societies, there is a stigma attached to discussing issues related to sexuality and family planning, which can discourage individuals from seeking information and services related to contraceptives (Hall *et al.,* 2018).

Furthermore, the emphasis on larger families and the desire to have children can also influence the perception of contraceptive use. Many individuals view contraceptive use as a means to delay childbirth rather than as a tool to control the overall number of children (Dombola *et al.,* 2021).

To bridge this gap, there is a need to increase awareness and education about contraceptives in Islamic communities. This can be achieved through comprehensive reproductive health education programs that address the cultural and religious beliefs surrounding contraception. Additionally, access to contraceptive services should be made more widely available and affordable, allowing individuals to make informed decisions about their reproductive health (Bhatt *et al.*, 2021).

It is also important to recognize and address the unique needs and concerns of different populations within Islamic communities, such as women, adolescents, and those with limited access to healthcare services. By providing tailored education and services, we can work towards improving the knowledge and use of contraceptives in these populations and promote positive reproductive health outcomes (Elamin *et al.,* 2022).

2.9. Women Attitudes towards Contraceptive Methods

Women's attitudes toward contraceptive methods can vary widely based on factors such as cultural background, personal beliefs, health considerations, and individual preferences. It's essential to recognize that

opinions on contraception are diverse, and what works for one person may not be suitable for another (Berglas *et al.*, 2021).

Some women may prioritize convenience and opt for methods like birth control pills, patches, or intrauterine devices (IUDs). Others might prefer non-hormonal methods like condoms or diaphragms to avoid hormonal side effects. Some may appreciate long-acting methods such as implants or injections for their effectiveness and reduced maintenance(Higgins & Smith, 2016).

Cultural and religious beliefs can also play a significant role in shaping attitudes toward contraceptive methods. Some individuals may adhere to certain guidelines or restrictions based on their faith, impacting their choices in family planning (Higgins & Smith, 2016).

Health considerations, including potential side effects, long-term impact on fertility, and underlying medical conditions, can influence women's preferences for specific contraceptive methods. For instance, women with certain medical conditions may need to avoid hormonal methods and explore alternatives (Le Guen *et al.,* 2021).

Communication and education are crucial in ensuring that women are informed about the various contraceptive options available. Access to comprehensive healthcare, including family planning services, can empower women to make informed decisions based on their unique circumstances (Prata *et al.,* 2017).

It's important to approach discussions about contraceptive methods with empathy, recognizing the diversity of perspectives and experiences. Understanding and respecting individual choices contribute to creating a supportive and inclusive environment for women's reproductive health decisions (Britton *et al.,* 2020).

2.9.1. Importance of Women's Attitude about Contraceptive Methods

Women's attitudes about contraceptive methods are crucial for several reasons:

Empowerment and Autonomy: When women have access to information about a variety of contraceptive methods and can choose the one that aligns with their preferences and lifestyle, it promotes a sense of empowerment and autonomy. The ability to make informed choices about reproductive health contributes to women taking control of their bodies and futures (Dehlendorf *et al.,* 2018).

Reproductive Health and Family Planning: Women's attitudes toward contraceptive methods play a vital role in family planning. Understanding and embracing effective contraceptive methods enable women to plan the timing and spacing of pregnancies, which can have positive effects on maternal and child health(Asif *et al.*, 2021).

Educational and Career Opportunities: The ability to control fertility through reliable contraceptive methods allows women to pursue educational and career opportunities. When women can plan when and how many children to have, it positively impacts their ability to engage in educational and professional pursuits (Kim, 2023).

Health and Well-being: Different contraceptive methods come with varying health considerations. Women's attitudes toward these methods can impact their overall health and well-being. For example, some women may prefer non-hormonal methods to avoid potential side effects, while others may find hormonal methods beneficial for managing certain health conditions (Machiyama *et al.,* 2018).

Relationship Dynamics: Contraceptive decisions can influence relationship dynamics. Open communication and mutual agreement on family planning contribute to healthier relationships. Understanding each

other's attitudes toward contraceptive methods fosters collaboration in making choices that align with both partners' goals and values (Newmann *et al.,* 2021).

Social and Economic Impact: The collective attitudes of women toward contraceptive methods can have broader social and economic implications. When women have the ability to plan and space pregnancies, it can contribute to population stability, economic development, and improved overall societal well-being (Alano & Hanson, 2018).

women's attitudes about contraceptive methods are vital for individual well-being, relationship dynamics, and broader social and economic factors. Ensuring access to comprehensive information and a range of contraceptive options empowers women to make choices that align with their values and goals, ultimately contributing to healthier and more equitable societies (Zimmerman *et al.,* 2021).

2.9.2. Factors Influencing Women's Attitude about Contraceptive Methods

Women's attitudes about contraceptive methods are influenced by a complex interplay of factors. Cultural and religious beliefs play a pivotal role, shaping perspectives on family planning within the context of individual values and societal norms. Education and awareness contribute significantly; women who are well-informed about contraceptive options tend to approach family planning decisions with greater confidence (Alspaugh *et al.,* 2020).

Access to healthcare services, or the lack thereof, can impact the range of available choices and shape attitudes based on convenience and affordability. Health considerations, both individual and relational, such as pre-existing medical conditions and partner dynamics, also weigh heavily in decision-making. Economic factors, including financial stability and

employment opportunities, play a role in shaping attitudes toward the timing and number of children. Additionally, personal preferences, lifestyle considerations, and the influence of social networks contribute to the diverse landscape of women's attitudes about contraceptive methods. Recognizing and understanding this multifaceted interplay is crucial for developing comprehensive and tailored reproductive health strategies (Mosadeghrad, 2014).

2.9.3. Influence of Attitudes and Social Norms

Contraceptive methods are accessible in Iraq, but there is limited qualitative data on how many people use them. (Al Ameen & Al Deen, 2016).

Sociocultural values and customs: Cultural values and customs significantly contribute to FP obstacles. The expert engaged for this quick review attested to this. Most people who choose not to use contraceptives and FP techniques do so because to the following societal attitudes (Vilardo & Bittar, 2018): – which are listed below:

Disapproval of Premarital Sex : Teenagers have complained that it is difficult for them to receive SRH services since premarital sex is frowned upon. (Tanabe *et al.,* 2017). Iraq's rate of early marriage has increased to 24%, with approximately 5% of those marriages occurring before the age of 15.6 Early marriage may be linked to less familiarity with FP techniques. (Balinska et al., 2019). Girls who drop out of school put their general reproductive and mental health at danger since they aren't likely to be physically or psychologically capable of bearing children. (Allami, 2015).

Patriarchal Views: These attitudes prevent women from receiving free FP services. (Allami, 2015). As a result, women are unable to decide for themselves how many children and how far apart they want to have them.

Participation of Men: Husbands Both couples are typically responsible for making decisions regarding contraception and FP, hence it is crucial that males participate in discussions on contraception knowledge. (Aldabbagh & Al-Qazaz, 2020). Women have used husband opposition as a justification for not utilizing contraception. (Ebrahim & Muhammed, 2011).

Poor Education: In studies of women from Erbil with varying levels of education and SES, many problems were discovered. (Shabila *et al.,* 2014). Higher adoption of FP and prenatal care was substantially correlated with higher head of household education level. (Balinska *et al.,* 2019).

2.10. Women Practices toward Contraceptive Methods.

In recent years, the practices employed by women towards contraceptive methods have undergone a transformation, with a growing preference for modern methods. A report released by the United Nations Population Fund (UNFPA) in 2021 reveals that the employment of modern contraceptive methods among women who are either married or in a union has witnessed an escalation from 54% in 1990 to 64% in 2021 globally. The category of modern contraceptive methods includes hormonal techniques like the pill, patch, injectables, vaginal ring, and long-acting reversible contraceptives (LARCs), such as intrauterine devices (IUDs) and implants. When utilized with precision, these methods are exceptionally potent in circumventing pregnancy (Aldabbagh & Al-Qazaz, 2020).

Over the years, the prevalence of LARCs, particularly IUDs, has experienced a notable surge. As per the Guttmacher Institute, global employment of IUDs has skyrocketed by 63% from 2010 to 2019. This phenomenon can be ascribed to their efficacy, sustained use, and convenience. Women are now better informed about their reproductive health, thanks to awareness and education drives that have played a critical role in empowering them to make informed decisions. For instance, a

research conducted in a rural region of Ethiopia demonstrated that disseminating health education on family planning within the community resulted in a marked increase in the application of modern contraceptive techniques (Shoupe, 2016).

Accessing modern forms of contraception remains an issue in certain regions of the world. Women's options can be limited due to a multitude of factors including, but not limited to, financial constraints, lack of availability, and cultural impediments. In some cultural contexts, there exists a prevailing societal stigma attached to the use of contraceptives, thus impeding women's agency in the matter. This can be further compounded by opposition from familial and/or partner entities, resulting in a diminished ability to exercise control over one's reproductive health (Durowade *et al.*, 2017).

Governments and supranational entities have taken steps to tackle the aforementioned challenges. The World Health Organization (WHO) advises that governments prioritize the availability and accessibility of current contraceptive methodologies, while certain countries have enacted policies to ensure that women are provided with a range of contraceptive options. For instance, in 2018, the administration of Nepal pledged to furnish gratis contraceptives to all women who are in the reproductive age group.(Darney *et al.*, 2017)

Women's practice of using contraceptive methods is of utmost importance for several reasons. Firstly, it plays a pivotal role in family planning, allowing women to control the timing and spacing of pregnancies, thereby promoting maternal and child health. By actively implementing and adhering to contraceptive practices, women can make informed decisions about the size of their families, contributing to their overall well-being and that of their children. Additionally, the consistent use of contraceptives empowers women to pursue educational and career opportunities, fostering

personal and professional growth. It also positively impacts socio-economic factors, as planned pregnancies can lead to healthier and more stable family environments (Aldabbagh & Al-Qazaz, 2020).

Furthermore, the practice of using contraceptives is instrumental in reducing the incidence of unintended pregnancies and, subsequently, the demand for unsafe abortions. Overall, women's commitment to contraceptive practices not only empowers them to take control of their reproductive health but also has broader societal implications for health, education, and economic development (Kavanaugh & Anderson, 2013).

2.10.1. Factors Influencing Women's practice about Contraceptive Methods

Women's practices regarding contraceptive methods are influenced by a myriad of factors. Cultural and religious beliefs continue to exert a significant impact, guiding the actual implementation of family planning choices based on deeply ingrained values. Access to healthcare services plays a crucial role in the practicality of contraceptive practices, with the availability of affordable and accessible options affecting women's ability to implement their chosen methods consistently (Namasivayam *et al.,* 2022).

Educational background and awareness contribute to the adoption and adherence to contraceptive practices, as women who are well-informed are more likely to navigate the nuances of their chosen methods effectively. Health considerations, both physical and emotional, influence the ongoing use of contraceptives, with individual experiences shaping adherence patterns (Pazol *et al.,* 2015).

Partner dynamics and communication play a role in the practical implementation of contraceptive practices, highlighting the importance of shared decision-making. Economic factors, including financial stability,

impact the continuous utilization of contraceptive methods as women align their family planning practices with their broader life goals. The convergence of these diverse factors underscores the need for holistic and tailored approaches to support women in successfully integrating contraceptive practices into their lives (Prata *et al.,* 2019).

2.11. Factors Influencing Non-Use of Contraceptive Methods among Women in Reproductive Age

A multitude of factors impede the utilization of current contraceptive techniques among women in their reproductive prime. These hindrances encompass inadequate awareness on the subject of contraception, apprehensions and speculations regarding possible side effects, as well as a lack of encouragement and support from partners and relatives. Furthermore, there exists social pressure on married women, predominantly females, to conceive, given the uncertainty surrounding their fertility after using contraceptives. Additionally, religious beliefs may form the basis of one's reluctance to embrace contraceptive methods (Li *et al.,* 2020).

The employment of contraceptive techniques among married women is contingent upon a multitude of factors, which include but are not limited to their socio-economic status, awareness regarding contraception, personal convictions on the matter, educational attainment, counseling received on the subject, place of residence, attitudes of healthcare providers with regards to contraception, and cultural values, beliefs, and norms (Birhane *et al.,* 2018)

Logistic Barriers, contraceptive women adopting is influenced by a variety of variables that can be complex and challenging to manage in real-world settings, particularly in conflict-ridden regions where things often occur in an emergency scenario (Wulifan *et al.,* 2016). These variables span from personal and societal concerns, cultural factors, availability and access

issues, to issues like fear of adverse effects related to the qualities of a contraception technique (Elmusharaf *et al.,* 2017).

Cultural disparities hold a significant sway over pregnancy rates among married women, particularly adolescents. Certain cultural norms impose expectations on teenagers to conceive as a means of demonstrating their fecundity. Parents, in their pursuit of adhering to customary practices, coerce their adolescents to fulfill their mother's cultural obligations as a way of gratifying them. Regardless of cultural background, the majority of adolescents are sexually active prior to attaining the age of twenty, contributing to an escalation in the incidence of unintended and undesirable pregnancies among minors who are not yet equipped to bear the physical and psychological strain of parenthood.(Adam Awabu, 2021)

Perceived Barriers, there exist numerous deterrents to the adoption of contraceptive techniques, which encompass apprehensions concerning the preservation of confidentiality, the potentiality of parental discovery, feelings of shame, faulty beliefs regarding the dangers of pregnancy and sexually transmitted infections (STIs), unease associated with medical procedures such as blood tests or pelvic examinations, anxieties about side effects, limited knowledge of the necessity for contraception (particularly among younger adolescents), dissatisfaction with medical personnel, and substandard awareness of legal rights associated with family planning. (Cahill *et al.,* 2018).

Despite the practical challenges of contraceptive planning being easily surmountable, barriers such as fear and misinformation are deeply ingrained and more difficult to eradicate. Research indicates that a significant number of married women, both presently and historically, possess inadequate knowledge about contraceptive methods and harbor exaggerated concerns regarding their associated side effects (Klutse, 2021).

Typically required for contraception prescriptions, blood tests and pelvic examinations are new to and feared by the majority of teenagers (Cahill *et al.,* 2018). Additionally, many teenagers, especially younger ones, lack the cognitive maturity necessary to comprehend the connections between conduct and long-term impacts. Adolescent developmental issues that provide barriers to access and use of contraceptives include inability to notice the implications of early pregnancy, improper use of contraception techniques, and inconsistent usage of contraception. Teenagers also worry about how their parents will feel about their usage of contraception. However, some medical professionals want parental approval before allowing a youngster to take a prescription contraception (Adam Awabu, 2021).

The relationship in which the female is younger than the male, as well as the authority and control exercised by men, may make it more difficult for women to negotiate sexual activity and the use of contraception. Based on concepts of trust and faithfulness, the male partner who is older than the female may persuade her to engage in unprotected sexual activity. Due to older men's propensity for establishing sexual encounters with women, women are at an increased risk of developing diseases, getting pregnant, or both because of the longer sexual histories of men. Additionally, in this partnership, female teenagers have less control over when to engage in safer sex(Celik, 2016).

2.12. Availability of Contraceptive Methods and Sexual Reproductive Health Services

Governmental health facilities: Despite contraception have been officially provided in Iraq, it is unclear how much access women have to contraceptive methods given that about one-third of FP institutions have been destroyed since 2003 (Allami, 2015). The Ministry of Health has made

efforts to establish primary health care centers that provide a range of basic integrated and comprehensive services, including family planning (FP), promotion of breastfeeding, and postnatal care. It is positive to see that there has been an increase in the number of centers with the implementation of a new family health care system in 2013. It would be interesting to know if there have been any assessments of the quality of care and accessibility of these services, particularly for marginalized and disadvantaged populations (Tull, 2020).

Free contraceptive methods treatments offered in public health facilities ease the financial strain and may account for the rising rates of contraceptive method use. (Aldabbagh & Al-Qazaz, 2020). Assessing Service Provision (SPA),(W. I. Ismael & Farhood, 2020) claimed that prenatal attendance had a high degree of satisfaction with the SRH and maternal health services provided in PHCCs. However, research has indicated that women who can afford them generally choose to use private services and that state prenatal care are underutilized(Shabila *et al.,* 2014).

Comparing public and commercial institutions, the majority of women (69%) in Iraq buy oral contraceptives (also known as contraceptives) from neighborhood pharmacies (Abd, 2017). nevertheless, to assist in modernizing equipment and health services, the Ministry of Health is turning to private firms. (Aboulenein & Levinsn, 2020). Private pharmacies made up the majority (74.7%) of the non-public sources for FP services in Basrah, followed by private clinics and neighborhood markets (9.5% & 8.0%, respectively). According to reports, KRI offers improved access to medical services and medications, particularly in pharmacies. (Aboulenein & Levinson, 2020).

Even individuals who have paid for an ultrasound at a private facility are reportedly not given any attention before giving birth in Mosul, therefore

the chances of receiving contraceptive methods services are also slim. The role of public institutions in contraceptive methods is limited. According to reports, there are no technological advancements in contraceptive methods contraceptive methods , and neither women nor healthcare professionals are aware of newer contraceptive methods choices. Respect, trust, privacy, and secrecy are the top concerns for women seeking medical treatment; these ideals are frequently violated in crowded institutions (Allami, 2015).

Iraq suffers from a dearth of healthcare professionals specializing in sexual and reproductive health (SRH). In the Middle East And North Africa region, Iraq ranks among the lowest in terms of the number of nurses and midwives available. Despite the official declaration of the end of the battle for Mosul over two years ago, the country's health system remains sluggish in its recovery.

In the absence of government support, local organizations have joined forces with security forces to ensure that essential medical aid reaches affected areas. Due to the hazardous road conditions and inclement weather, mobile clinics face significant limitations and are often unable to provide much-needed health care services. Furthermore, the capacity of medical facilities has been drastically reduced, making it necessary to rely on military establishments to offer medical treatment in some cases. (Bonfatti, 2019).

Services offered by various camps for refugees, both those situated in Iraq and those who are refugees from Iraq, are described in the section below:

Iraq: There are five clinics that offer SRH treatments in the camps of Jadaa, Salameya, and Hamman Al-Aleel. However, since the start of the Syrian crisis in 2011, Iraq, like Lebanon and Turkey, has been hosting a sizable number of refugees, placing a pressure on local capacity to offer SRH services (Balinska *et al.,* 2019). Women who have undergone caesareans in

the past, and are at a greater risk of complications, frequently choose to give birth at home due to financial constraints.

Amman, Jordan: Despite the fact that contraceptives were accessible and free at state health facilities, many Iraqis apparently purchased them through pharmacies (Tanabe *et al.,* 2017). According to data, the Jordanian government did not recognize Iraqis fleeing the conflict as refugees; as a result, the majority of them are living there illegally and are subject to deportation at any time. As a result, some women are afraid to use SRH services for fear of being deported (Amiri *et al.,* 2020).

2.12.1. Access to Contraceptive Methods services:

Instead of limiting the size of the family, Islamic nations permit the use of contraception to protect the health of mothers and future children. (Aldabbagh & Al-Qazaz, 2020). The usage of techniques of contraception has steadily increased in Iraq. However, there is knowledge of unintended pregnancies because over 10% of married women have undergone an induced abortion to reduce the number of children they have.(Al-Ridhwany *et al.,* 2018) . In the literature, the following obstacles to contraceptive methods services have been identified:

geographic variables The largest obstacle to contraceptive methods goals being met in Iraq has been security. (WHO, 2011). The health system, formerly regarded as the greatest in the Middle East North Africa area, has suffered greatly as a result of conflict. There are considerable geographic differences in access to healthcare services. (world blank group, 2017). Erbil, in the KRI, has the lowest unmet demand for methods of contraception, at 7%, whereas Muthana, in the south of Iraq, has the highest (24%) according to the 2018 Multiple Indicator Cluster Survey (MICS). (UNFPA, 2019). According to reports, the majority of pharmacies in Iraq sell contraceptive tablets. (The Arab Weekly, 2018). However, both commercial and public FP

clinics have trouble finding trustworthy supply of contraception. (WHO, 2011).

Location: urban vs rural and humanitarian setting: Although women have the right to make their own decisions about their health and reproductive rights, they find it more difficult to do so outside of major cities (Allami, 2015).Male Erbil residents living in cities had the greatest rates of condom use (A. S. Ismael & Sabir Zangana, 2012). In certain regions, condoms are easier to find and a greater proportion of educated households have favorable attitudes regarding condom use. Location is a predictor of unwanted pregnancy in humanitarian circumstances, according to multivariable study (Balinska *et al.,* 2019). Many residences of Iraqi refugees are occasionally placed far from reference hospitals that may offer FP guidance, and there is often not enough money for transportation (Tull, 2020) .

Socio-economic factors: Lower socioeconomic level (SES): The unmet demand for any form of contraception was 29.3% among 800 respondents aged 18 to 49 in the Dohuk district of the Kurdistan region of northern Iraq. Women with low socioeconomic level tended to have more unmet needs. There was a 28.5% unmet demand for contemporary, efficient contraception. (most common among women of high socio-economic status) (Tull, 2020). Lower SES guys in Erbil likewise had the lowest rates of condom use. couples (A. S. Ismael & Sabir Zangana, 2012).

High cost of SRH services: Cost of contraceptives was discovered to have a part in Basrah city residents not using contraception techniques. Just 0.6 percent were pleased with the billing or payment of fees for maternal health services offered at ten PHCCs in Babylon province, central Iraq, despite the fact that pills, condoms, and intrauterine contraceptive devices (IUDs) are inexpensively accessible there(W. I. Ismael & Farhood, 2020).

Additionally, research demonstrates that socioeconomic factors restrict women's access to free FP treatments. (Allami, 2015).

2.13. Effective Interventions to Improve Women Attitudes Knowledge and Use of Contraceptive Methods

A variety of interventions have proven efficacious in enhancing married women's attitudes, knowledge, and usage of contraceptive methods. Such interventions comprise educational and counseling initiatives as well as community-based programs that lay emphasis on raising awareness of and access to modern contraceptive techniques (Challa *et al.,* 2019)

Research has shown that targeted interventions, such as education and counseling, can positively impact women's understanding and perception of contraceptive methods. In a randomized controlled trial carried out in Nigeria, women who underwent education and counseling on contraception exhibited markedly higher levels of knowledge and more favorable attitudes towards modern contraceptive methods compared to those who did not receive any intervention (Antarini, 2021).

Additionally, community-based programs that involve male partners have also been effective in promoting contraceptive use. A study in Uganda showed that a community-based intervention that involved men in family planning education and counseling resulted in a significant increase in contraceptive use among married women compared to a control group (Kakaire *et al.,* 2015). This highlights the importance of engaging men in family planning efforts to promote gender equity and improve reproductive health outcomes for women. (Oyebola. *et al.,* 2022)

Another approach is to increase the availability of contraceptives at healthcare facilities, including through training healthcare providers to provide quality family planning services and ensuring a reliable supply of

contraceptives. A study in Ethiopia found that increasing the availability of contraceptives at healthcare facilities led to a significant increase in contraceptive use among women. Additionally, increasing access to contraceptives through social marketing and community-based distribution channels has been effective in increasing contraceptive use in some settings. For example, a study in Nepal found that community-based distribution of contraceptives increased the use of modern contraceptives among women (Ngugi AK, *et al.,* 2021).

The app also allows women to schedule appointments and receive reminders for their contraceptive needs. Another example is the use of telemedicine, where women can access counseling and receive prescriptions for contraceptive methods through phone or video consultations with healthcare providers. A study conducted in the United States found that telemedicine increased the use of long-acting reversible contraceptives among women in rural areas who had limited access to healthcare facilities. However, it is important to note that while technology can be a useful tool in improving access to contraception, it should not be seen as a replacement for comprehensive healthcare services and access to trained healthcare providers(Stifani *et al.,* 2020)

2.14. Previous Literatures about Married Women Knowledge Attitudes and Practices about Contraceptive Methods

First study : Amran et al., conducted at (2019) entitled Perceptions of Contraception and Patterns of Switching Contraceptive Methods Among Family-planning Acceptors in West Nusa Tenggara, Indonesia

The perceptions of family-planning (FP) acceptors regarding contraception influence the reasons for which they choose to switch their method of contraception. The objective of this study was to analyze the

perceptions of contraception and rationales for switching contraceptive methods among female FP acceptors in West Nusa Tenggara, Indonesia.

This study involved the analysis of secondary data from the Improve Contraceptive Method Mix study, which was conducted in 2013 by the Center for Health Research, University of Indonesia. cross-sectional study design was used. performed 3 stages of sampling using the cluster technique and selected 4819 women who were FP acceptors in West Nusa Tenggara Province, Indonesia as the subjects of this study. The data were analyzed using multiple logistic regression. The predominant pattern of switching contraceptive methods was switching from one non-long-term method of contraception to another. Only 31.0% of the acceptors reported a rational pattern of switching contraceptive methods given their age, number of children, and FP motivations. Perceptions of the side effects of contraceptive methods, the ease of contraceptive use, and the cost of the contraceptives were significantly associated (at the level of α=0.05) with rational patterns of switching contraceptive methods. Perceptions among FP-accepting women were found to play an important role in their patterns of switching contraceptive methods. Hence, fostering a better understanding of contraception through high-quality counseling is needed to improve perceptions and thereby to encourage rational, effective, and efficient contraceptive use.

Second study: Hameed et al., conducted at (2019) entitled Knowledge, Attitude, and Practices (KAP) Regarding Family Planning Services among Married Women in Quetta, Pakistan.

The purpose of this study was to look at married women's knowledge, attitudes, and practices regarding family planning services in Quetta, Pakistan. A cross-sectional study was carried out at the obstetrics and gynecology departments of Quetta's public sector hospitals. From February

to September 2016, data was collected from 503 females who were sexually active, eager to engage, and fluent in Urdu and local languages. A predesigned questionnaire was used to examine knowledge, attitudes, and behaviors on family planning. SPSS version 20 was used for statistical analysis. The findings revealed that out of 503 women, (99.4%) were aware of family planning and its techniques, which they learned mostly via TV/Radio (28.8%) and health care personnel (22.7%). Ninety-two percent (98.8%) thought that using family planning techniques was good, while health care professionals (62.0%) encouraged them to utilize family planning services. Eighty-five percent of the women (85.5%) used family planning techniques, the most common of which were condoms (39.4%) and oral contraceptives (20.3%). The Pearson product-moment correlation coefficient was used to evaluate the link between Knowledge and Attitude. A modest, positive association was discovered between Knowledge-Attitude. The study indicated that women's general knowledge, attitude, and practice of contraception were favorable. The husband, as the dominant member, is crucial in approving family size and contraceptive procedures. Media coverage and partner opposition altered contraceptive understanding and practice. Women's education and marital therapy can help couples embrace family planning approaches. There is a need to promote female education in order to improve their knowledge and use of contemporary contraceptives.

Third study: Moreira et al., conducted at (2019) entitled Reasons for nonuse of contraceptive methods by women with demand for contraception not satisfied: an assessment of low and middle-income countries using demographic and health surveys

The aim of this study was to describe the reasons for nonuse of contraception among women with demand for contraception not satisfied in low and middle-income countries. A descriptive analysis of the reasons for

nonuse of contraceptive methods was performed among sexually active women with demand for contraception not satisfied, used the latest Demographic and Health Survey data from 47 countries. The prevalence of each reported reason was also evaluated according to marital status, woman's age and schooling, area of residence, wealth index, and parity. Wealth-related absolute inequality for each reason was also evaluated using the Slope Index of Inequality. A pro-rich inequality pattern means that the reason is more prevalent among the richest women while a pro-poor means the reason is more common among the poorest ones.

The result of this study was on average, 40.9% of women in need of contraception were not using any contraceptive methods to avoid pregnancy. Overall, the most prevalent reasons for nonuse of contraceptives were "health concerns" and "infrequent sex," but the prevalence of each reason varied substantially across countries. Nonuse due to "opposition from others" was higher among married than unmarried women; in turn, the prevalence of nonuse due to "lack of access" or "lack of knowledge" was about two times higher in rural areas than in urban areas.

Women with less schooling more often reported nonuse due to "lack of access." Pro-rich inequality was detected for reasons "health concerns," "infrequent sex," and "method-related", while the reasons "other opposed," "fatalistic," "lack of access," and "lack of knowledge" were linked to patterns of pro-poor inequality. Conclusions: Family planning promotion policies must take into account the different reasons for the nonuse of contraceptive methods identified in each country as well as the contextual differences regarding women of reproductive age (such as social norms and barriers that prevent women from accessing and using contraceptives).

Forth study: Mozumdar et al., conducted at (2019) entitled Choice of contraceptive methods in public and private facilities in rural India

This study argues for appropriate measurement of method choice and assesses its levels and correlates in rural India. A cross-sectional study was conducted with new acceptors of family planning method (N = 454) recruited from public and private health facilities in rural Bihar and Uttar Pradesh, the two most populous states in India. The key quality of care indicator 'method choice' was assessed using four key questions from client-provider interactions that help in making a choice about a particular (1) whether the provider asked the client about their preferred method, (2) whether the provider told the client about at least one additional method, (3) whether the client received information without any single method being promoted by the provider, and (4) client's perception about receipt of method choice. The definition of method choice in this study included women who responded "yes" to all four questions in the survey. The relationship between contraceptive communication and receipt of method choice was assessed using logistic regression analyses, after adjusting for socio-demographic characteristics of the respondents. The results of the study were 62% of clients responded to a global question and reported that they received the method of their choice, only 28% received it based on responses about client-provider interactions. Findings demonstrated that women's choice of contraceptive could be improved in rural India if

providers give full information prior to and during the acceptance of a method and if facilities are equipped to provide a range of choice of contraceptive methods.

Fifth study: Mekonnen et al., conducted at (2020) entitled Level of knowledge, attitude, and practice of family planning and associated factors among disabled persons, north-shewazone, Amhara regional state, Ethiopia

By using using a structured and pre-tested questionnaire to assessment the levels of knowledge , attitudes and practices towards contraceptive methods, this research sought to find the relationship between knowledge, attitudes and practices towards contraceptive methods, using a multistage systematic sampling technique was employed to select study participants, A cross-sectional survey was conducted was carried out on 397 disable person. Data were entered into Epi data and exported into Statistical Package for the Social Sciences (SPSS) version 21 for analysis. Logistic regression was performed to analyze the data. A significant association was declared at a p-value of less than 0.05. According to the study findings, Forty-six percent of study participants were knowledgeable about family planning methods. Fifty-five percent of our study participants had a good attitude about family planning methods and one-fourth (24.5%) of disabled persons currently utilized any method of family planning. the knowledge, attitude, and practice of disabled people about family planning methods were relatively low. Due attention should be given to ensure that disabled people are well informed about family planning methods through information, education, and communication activities.

Sixth study: Harris et al., conducted at (2022) entitled Contraceptive use and contraceptive counselling interventions for women of reproductive age with cancer

This study aimed to systematically review the available literature and produce an overall summary estimate of contraceptive use and counselling among women with cancer across the cancer care continuum. A systematic

search of articles reporting on contraceptive counselling and/or contraceptive use among women of reproductive age (15–49 years) with cancer across the cancer care continuum (e.g. diagnosis, treatment, survivorship) was conducted in MEDLINE, Embase, CINAHL, Maternity and Infant Care and Cochrane Library. Two independent reviewers conducted the data screening, data extraction and risk of bias assessment. Qualitative synthesis and meta-analyses were conducted to summaries the key findings. The result of this study included 21 articles involving 3835 participants in this review. Studies varied according to the cancer population and time along the cancer care continuum it was assessed. Of the studies that reported the overall contraceptive prevalence among women diagnosed with cancer (n = 8), contraceptive use ranged from 25 to 92%. Of the four studies that focused on cancer survivors, the contraceptive prevalence ranged from 47 to 84%. When the prevalence of these studies was pooled, a crude summary prevalence of 64% (62% among women with cancer versus 68% among cancer survivors) was found. The rate of contraceptive counselling was assessed in ten studies. Contraceptive counselling interventions as part of standard cancer care have the potential to not only empower women with cancer and cancer survivors to make informed choices regarding their reproductive health but also provide the ability to plan future pregnancies for times of better health.

Chapter Three

Methodology

Chapter Three

Methodology

This chapter will deal with the overall steps and details that have been taken to design the study and how was the collection of the sample has been done all to accomplish the critical and essential role which is answering the research question and testing the hypothesis in detailed, scientific and well-organized way.

3.1. Design of the Study

A descriptive correlational study design started from December 2021 until September 2023 was conducted to identify women's knowledge levels, their attitudes level and to what levels they practice contraceptive methods if they are using them in good and correct or bad way.

3.2. Administrative Arrangements & Ethical Approval

The administrative arrangements and ethical confirmation were fundamental and decisive part of research work, which include:

1- Protocol of research approved initially (Appendix A), as official permission from higher studies committee/ College of nursing, University of Babylon, for conducting the study.

2- Official letter attainment from Scientific and ethics research Committee in College of Nursing, who reviewed the study tools (questionnaire), and agreed to initiate the study at 26th September 2022 in specified setting (Appendix B1).

3- Obtaining official approval from Thi Qar Health Directorate to facilitate the undertaking goals (Appendix B2).

4- In the last step, an official letter was issued from the Training and Development Center in Thi Qar Health Department, and approvals were obtained from the hospital (Appendix B2).

5- In addition, women were also informed that participating in the study and filling the questionnaire is voluntary and they can leave anytime they like. Confidentiality of women's information was also taken into account through the use of anonymous questionnaires. Moreover, all of the steps that have mentioned before were included in the informed consent form (autonomy and privacy).

3.3. Setting of the Study

The Current study was conducted at Al Rifai primary health care centers (Sayd Al Shuhada primary Healthcare Center, Al Rifai primary Healthcare Center, and Al Hakeem primary Healthcare Center). Here some information about each center

- **Al Rifai primary Healthcare Center** is covering area of 68230 clients with married women constitute 34673 of the total number of those clients and the center receives about 140 visitors daily.
- **Sayd Al Shuhada primary Healthcare Center** is covering area of about 67919 clients and the married women constitute 27467 of them, each day Sayd Al Shuhada primary Healthcare Center deals with about 138 visitors daily.
- **Al Hakeem primary Healthcare Center** covering area with 60779 clients among them 17673 married women and it deals with 128 visitors daily.

3.4. The Sample of the Study

Non probability sampling method (Purposive sampling techniques) was used to enhance the representation of the target population (married women).

- **Inclusion criteria**
  - Married women above 17 years old.
  - Women less than 46 years old.
  - Women who don't have chronic disease
  - Women that don't have mental disorder.
- **Exclusion criteria**
  - Women less than 17 years old.
  - Women over 45 years old.
  - Women with chronic diseases
  - Women with mental illness

3.5. The Sample Size

To choose correct size of sample for this design of study and get an idea about best estimation for the sample size a specific equation was used which is usually used for descriptive cross-sectional studies which is $\frac{z \times pq}{d}$

(*P*) refers to estimated proportion of outcomes that is expected regarding to relevant studies (if they were found) as used in the same study, if there was no previous relevant studies probability rule can be used which is 50% = 50%.

(Z) represent level of confidence (95%), so, the Z →1.96.

(*d*) represent level of desired significance, which is (0.05).

(q) is (1- p). 0.729

According to the 2018 Multiple Indicator Cluster Survey (MICS), married women in Iraq are about 64% so refers to estimated proportion of expected outcomes will be 0.64 (p = 0.64), by using this number in the equation $\frac{z \times pq}{d} \longrightarrow \frac{(1.96)^2 \times 0.64(1-0.64)}{(0.05)^2} \longrightarrow$ (354.041856)

approximated to (354) we added (13%) to avoid problems of missed questionnaires because of the wrong filling so the final number is (400).

3.6. Instruments Selection (Women Knowledge, Attitudes and Practices)

After progressive reviewing many relevant studies about contraceptive methods knowledge, attitudes and practices, final questionnaire was formed with four parts (first part contains information of sociodemographic characteristics, second part is women's knowledge scale to measure the women's knowledge about contraceptive methods, the third part includes the attitudes scale regarding contraceptive methods, and the fourth part constructs from questions about women practices regarding contraceptives methods (Appendix C).

Part One: Women Socio-demographic Variables

Only seven variables were included which are (Age, age at time of marriage, parity, residency, monthly income, educational level and occupation). These variables were chosen carefully in this part that were believed to have influence on the women's knowledge, attitudes and practices.

Part Two: Women's Knowledge Regarding Contraceptive Methods. Instrument Description

By reviewing previous literatures knowledge scale has been constructed (Ghodsi and Hojjatoleslami, 2012; Pazol *et al.*, 2015; Kumar *et al.*, 2020; Antarini, 2021; Kim, 2023), it is consists of 14 items, and is a self-reported scale to measure the knowledge of women about contraceptive methods. Knowledge items are measures on a yes and no, yes takes 1 and no takes 0 except for the negative items which they are (Q3, Q4, and Q5) which there scoring is 1 for no and 0 for yes. Levels of Knowledge indicates as minimum score is 0 - maximum score is 14 (higher

score indicate higher level of knowledge) 0 – 5 = Poor knowledge, 6 – 10 = Fair knowledge, and 11– 14 = Good knowledge.

Part Three: Contraception Attitudes Scale (CAS)

Instrument Description

Contraception Attitude Scale (CAS) form involves 32 items 17 items are positive items and 15 item are negative items to which participants indicate their agreement or disagreement. It was originally generated by Brown in 1984 to measure attitudes toward contraceptive methods (Thao *et al.*, 2020). A modification has been made by deleting two items which they are cannot fit or accepted by the norms of the Iraqi people so the items become 30 items only. It is a self-reported and it is used commonly for contraception attitude. The CAS originally designed in English and after that it has been translated into many different languages because it was effective at measuring the intended construct. Items of the CAS Scale are measures on a 5-point Likert scale, starting with strongly disagree which is equal 1 and grading till strongly agree which is equal 7; except for the negative items (1, 2, 4, 7, 8, 9, 11, 13, 14, 15, 17, 24, and 29) which they are scored reversibly (strongly disagree which is equal 5) grading till (strongly agree which is equal 1), the higher scores indicating higher attitude level (Milhausen *et al.*, 2019). The scores that is minimum a student can get on the CAS is 30 and the maximum score is 150 points. Three attitude levels were identified among women (negative, neutral, and positive attitude). These levels were determined based on the sum of scores method (Maximum – Minimum/N "number of attitude levels"). Therefore, the attitude formula is (150 – 30 / 3); accordingly, the levels are identified as follow: 30 – 70 "negative attitudes"; 71 – 110 "neutral"; 111 – 150 "positive attitudes".

Part four: Women Practices

Instrument Description

After reviewing relevant papers practice scale is constructed, (Arbab, Bener and Abdulmalik, 2011; Marwah I. Al Ameen and Lamia Dhia Al Deen, 2016; Aldabbagh and Al-Qazaz, 2020; Dhakal *et al.*, 2020; Imtishal *et al.*, 2023)it contains 10 items. Their answer was yes and no, yes taking 1 and no taking 0, except for the negative items (item 2, item 5, item 9, and item 10), lower score indicates poor practice and higher score indicate good practice, minimum score is 0 and maximum score is 10 so practice levels are 0-5= poor practice, and 6 - 10 = good practice. In addition, two more questions were added to the practice part to investigate two information, first is to explore what is the contraceptive method used in the last unintended pregnancy, and the second question is to explore what is the reason that may prevent for women from using contraceptives both questions referred as a sociodemographic information but inserted in practice part to get in line with context of practice questions.

3.7. Validity and Reliability of the Study Instrument

1. Translation Step:

Questionnaire (knowledge, attitude, and practice) was originally in English language then it has been translated forward to Arabic language then backward tow English language again. The questionnaire has been translated to Arabic by two independent bilinguals; after that, the versions that is Arabic were translated back to English independently. The researcher uses the Arabic version that was closest to the original form when it was translated back to English. However, the attitudes scale was originally developed in Arabic and tested for its validity.

2. Validity of the Study:

To measure the ability of the instrument in measuring the purpose of its construction (women's knowledge, attitudes, and practices towards contraceptive methods), content validity has been used. Experts were selected to review and critique Arabic version of the instrument selected from different universities based on their expertise in the field of community health nursing and other relative fields (Appendix D). Questionnaire were given to eleven experts; they reviewed the questionnaires and give their opinions and correction notes. Experts are selected as follow:

- Two experts are specialized in community health nursing from University of Babylon / College of nursing .
- Two expert is specialized in Maternal and child health nursing from the University of Bagdad/ College of Nursing.
- One expert is specialized in maternal and child health nursing from University of Babylon / College of Nursing
- One expert is specialized in maternity and child health nursing from the University of Basra / College of Nursing.
- One expert is specialized in adult health nursing from the University of Bagdad/ College of Nursing.
- One expert is specialized in maternity and child health nursing from Najaf Technical Medical Institute
- One expert is specialized in maternity and child health nursing from the Al-Mustaqbal University College
- One expert is specialized in mental health nursing from University of Kufa/ College of Nursing.
- One expert is specialized in community health nursing from university of Bagdad/ College of Nursing.

3.8. Pilot Study

A purposive sample of (N= 40) women from were involved in the pilot study. Conduction of the pilot study, the periods was from October 5th ,2022 to October 7th ,2022. The participants were excluded from the general sample.

The aims of conducting the pilot study were:

1) To investigate processes feasibility, recruitment and assessment, that were designed to include large sample size.

2) To detect and discover if there is a modification needed in the study design

3) To check the exact time that is needed to collect data.

4) To determine study instrument reliability.

Results of the Pilot Study:

1. Pilot study results shows that the approach is feasible in terms of purposive sampling method with about 400 women.

2. There was no need to modify or change the design selected to guide the current study.

3. Time requires for each woman to full the questionnaire with full responses is about (15-20) minutes which is the average time.

4. All three parts show acceptable reliability values.

3.9. Reliability of the Study Instruments:

The Alpha Cronbach (or alpha coefficient) is the most common used measure for indicating the internal consistency and homogeneity of the variables composed of many subparts. The Alpha coefficient is similar to other reliability coefficients in that it has a standard range of values between (-1.00) through (.00) to (+ 1.00), with higher values suggesting greater internal consistency. Since it calculates the split-half association with all

conceivable ways to divide the calculation into two parts, the alpha coefficient is stronger than the split-half method (Polit and Beck, 2014).

The reliability analysis "Cronbach's Alpha" has been run to calculate the internal consistency of (knowledge, attitude and practice) The reliability analysis tested on 40 women the results showed that value of Cronbach's Alpha is (0.80) on the knowledge, a value of (0.91) on the attitude scale and a value of (0.88) on the practice (see table 3.2).

Table 3.1. Reliability Analysis of the Instrument Used in the Study

Scale	Questions Number	Value of Cronbach's Alpha	Accepted value	Reliable or not
Knowledge	**14**	**0.80**	**0.70**	**Accepted**
Attitude scale	**30**	**0.91**	**0.70**	**Accepted**
Practice	**10**	**0.88**	**0.7**	**Accepted**

Usually , the reliability coefficient ranges from (-1.00) to (.00) to (+ 1.00), with reliability coefficients above (0.70) considered satisfactory (Brouwaers *et al*., 2015).

3.10. Data Collection:

After obtaining all the official agreements all three health centers (Sayd Al Shuhada Healthcare Center, Al Rifai Healthcare Center, and al Hakeem Healthcare Center) have been given a copy of the agreement of the Thi- Qar health directory and they have given all the information they need that was at 9/11/2022. After that data collection started at 10/11/2022 by meeting the women and giving them the questionnaire to answer the questions by using the Arabic version of the questionnaire after telling them they are free in participation, free to leave any time if they didn't want to

complete the responses and after that they were inform by the study objects and how they answer will be helpful. Each woman needed about (15-20) minutes to fill the questionnaire. By spending about two weeks in each health center (Sayd Al Shuhada primary Healthcare Center, Al Rifai primary Healthcare Center, and al Hakeem primary Healthcare Center) the total time was about two months until 28/12/2022 to collect 404 married women. Some women didn't want to participate other didn't want to complete the responses and the final number was 404 with 4 questionnaires was filling by wrong way and they lack some information so the total number was 400 fully participants.

3.11. The Statistical Analysis:

Both of Microsoft Excel 2021 and The twenty seventh version of Statistical Package for Social Sciences (SPSS- 27) has been used for analyzing and investigating the collected information. Verity of statistical tests were used to describe and analyze study data in order to create best understanding about study hypothesis and to find the levels of each of knowledge, attitudes and practices. The statistical analyses are:

1. Descriptive Statistics

Statistics of Description has been used to describe women demographic information, as well as describing knowledge, attitudes, and practices levels as shown in tables: 4.1, 4.2, 4.3, 4.4, 4.5,4.6,4.7,4.8 and 4.9.

2. Correlation Analysis

Used to measure relationship between knowledge, attitudes, and practices as presented in table number 4.10.

3. Chi-square and Fisher Exact Test

Person Chi-Square analysis was applied to investigate the association between women's knowledge level with (Age, age at marriage, parity ,

residency, monthly income, educational level, occupation, contraceptive method uses during last unexpected pregnancy, and reason not using contraceptives) as revealed in tables: 4.11, 4.12, 4.13, 4.14, 4.15, 4.16, 4.17, 4.18, and 4.19.

Person Chi-Square analysis also used to find the relationship between attitude levels with (Age, age at marriage, parity , residency, monthly income, educational level, occupation, contraceptive method uses during last unexpected pregnancy, and reason not using contraceptives) as shown in tables: 4.20, 4.21, 4.22 and 4.23, 4.24, 4.25, 4.26, 4.27, and 4.28.

Finally, Chi-Square analysis also used to find the relationship between practice levels with (Age, age at marriage, parity , residency, monthly income, educational level, occupation, contraceptive method uses during last unexpected pregnancy, and reason not using contraceptives) as shown in tables: 4.29, 4.30, 4.31, 4.32, 4.33, 4.34, 4.35, 4.36, and 4.37.

Chapter Four

Results of the Study

Chapter Four

Results of the Study

Table 4.1. Distribution of the Studied Sample according to their Sociodemographic and Personal Characteristics (n=400)

Sociodemographic and Personal characteristics		f.	%
Age Groups	17 - 22	42	10.5
	23 - 28	169	42.3
	29 - 34	107	26.8
	35 - 40	48	12
	41 and older	34	8.5
	Total	400	100
	(M ± SD = 29 ± 6.02)		
Age at Marriage	19 years and less	144	36
	20 - 25 Year	226	56.5
	26 - 31 Year	27	6.8
	32 years and more	3	0.8
	Total	400	100
	(M ± SD = 20.7 ± 3.7)		
Parity	No Births	4	1
	1 - 3 Births	297	74.3
	4 - 6 Births	97	24.3
	More than 6 Births	2	0.5
	Total	400	100
	(M ± SD = 3 ± 1.5)		
Monthly Income	Not Enough	20	5
	Sometimes Enough	121	30.3
	Enough	259	64.8
	Total	400	100
Residency	Urban Area	57	14.3
	Rural Area	343	85.8
	Total	400	100

Education Levels	Doesn't Read and Write	55	13.8
	Read and write	76	19
	Primary Education	47	11.8
	Secondary Education	38	9.5
	Diploma Degree	84	21
	Bachelor Degree	86	21.5
	Postgraduate (Master or PhD.)	14	3.5
	Total	400	100
Occupation	Working	128	32
	Not Working	272	68
	Total	400	100

Table (4.1) shows the sociodemographic and personal characteristics of the married women (N=400). (42.3%) participated women were ages ranging from 23 to 28 with mean age about 29. Also, (56.5%) have married at age ranging from 20 to 25 with mean age 21 years old. About (74.3%) of the women have 1 to 3 children with mean of 3 children. In addition, the economic status as it is considered enough, sometimes enough or not enough per month for (64.8%) of them was enough per month. Moreover, (85.8%) of the women live in rural area with (21.5%) of them with bachelor degree as educational level followed by diploma degree with about (21%) of the total participants and (68%) are not working and have no job.

Table 4.2. Descriptive Statistics of Contraceptive Methods have been used with the Unexpected Pregnancy

Contraceptive method used	Frequency	Percent
Condom	5	1.3
Oral contraception pills	28	7
Contraceptive Injection	2	0.5
Natural methods	22	5.5
Withdraw	39	9.8
No method used	304	76
Total	400	100

Table (4.2) describes the contraceptive methods used by women in the last unexpected pregnancy which shows that withdraw method was the highest followed by oral contraception pills.

Table 4.3: Descriptive Statistics of Women's Opinion about the Reason that could Prevent Women from Using Contraceptives

The reason that could prevent women from using contraceptives	Frequency	Percent
Probably pregnancy can't happen with occasional sex	18	4.5
Methods of contraception are too expensive to buy	13	3.3
Thinking and worrying from the side effects	208	52
Didn't prepare contraceptives for the unexpected sex	13	3.3
Husband didn't want his wife to use a contraceptive method	84	21
There is no convenience in buying contraceptive methods	6	1.5
Enjoyment would be affected by using contraceptive methods	19	4.8
Don't know how to use contraceptive methods	39	9.8
Total	400	100

Table (4.3) shows women`s opinion about the reason that could prevent women from using contraceptives and the worried about the side effects was constitutes about 52% of the result followed by husband didn't want his wife to use a contraceptive method with (21%) of the total reasons.

Table 4.4: Knowledge Levels among Women

Item	**Mean**	**Assessment**
1. Do you know the types of contraceptive methods?	0.80	Good
2. Do birth control pills affect the regularity and pain of the menstrual cycle?	0.58	Fair
3. Do birth control pills make you gain weight ?	0.55	Fair
4. Does the contraceptive pill prevent unintended pregnancy for sure?	0.42	Fair
5. Do birth control pills protect against vaginal fungi?	0.42	Fair
6. Does the expiration date of condoms matter?	0.42	Fair

7. Is the most important criterion in choosing a method of pregnancy is safety?	0.40	Fair
8. are contraceptives available in government hospitals and primary health care?	0.27	Poor
9. Is condom a method of contraception?	0.42	Fair
10. Is the T-IUD a method of contraception?	0.40	Fair
11. Is surgical removal of the fallopian tubes (ligation) a method of contraception?	0.41	Fair
12. Is surgical vasectomy a method of contraception?	0.37	Fair
13. Are condoms the only form of contraception that protects you from HIV and STIs?	0.40	Fair
14. Did you have information about contraception available anywhere (TV, radio, newspaper, magazine for friends, relatives, health workers)?	0.80	Good

Table (4.4) summarizes the assessment of each question regarding women's knowledge of women toward contraceptive methods question 1 and 14 were good, question 8 was poor and other items 2,3,4,5,6,7,9,10,11,12 and 13 were fair.

Table 4.5: Descriptive Statistics of Women's Overall Knowledge

Knowledge Levels	Frequency	Percent
Poor Knowledge	127	31.8
Fair Knowledge	255	63.8
Good Knowledge	18	4.5
Total	400	100

Table (4.5) demonstrates the knowledge levels among the women about contraceptive methods which shows about (63.8%) of the women have fair knowledge followed by poor knowledge with percent (31.8).

Table 4.6: Attitudes Levels among Women

Item	**Mean**	**Assessment**
1. I believe that it is wrong to use contraceptive methods.	2.81	Neutral
2. Contraceptive methods reduce the sex drive.	2.17	Negative

3. Using contraceptive methods is much more desirable than having an abortion.	3.61	Neutral
4. Males who use contraceptive methods seem less masculine than males who do not.	3.37	Neutral
5. I encourage my friends to use contraceptive methods.	2.75	Neutral
6. I would not become sexually involved with my husband who did not accept contraception responsibility.	2.12	Negative
7. Contraceptive methods are not really necessary unless a wife and husband has engaged in intercourse more than once.	1.81	Negative
8. Contraceptive methods make sex seem less romantic.	2.16	Negative
9. Females who use contraceptive methods are promiscuous.	3.64	Neutral
10. I would not have intercourse if no contraceptive methods were available.	2.46	Neutral
11. I do not believe that contraceptive methods actually prevent pregnancy.	2.55	Neutral
12. Using contraceptive methods is a way of showing that you care about your husband.	1.76	Negative
13. I do not talk about contraception with my friends.	3.32	Neutral
14. I would feel embarrassed discussing contraception with my friends.	3.42	Neutral
15. Contraceptive methods are difficult to obtain.	3.44	Neutral
16. Contraceptive methods can actually make intercourse seem more pleasurable.	1.67	Negative
17. I feel that contraception is solely my husband's responsibility.	2.26	Negative
18. I feel more relaxed during intercourse if a contraceptive method is used.	3.09	Neutral
19. I prefer to use contraceptive methods during intercourse.	3.32	Neutral
20. In the future, I plan to use contraceptive methods any time I have intercourse.	3.16	Neutral
21. I would practice contraception even if my husband did not want me to.	2.11	Negative
22. It is no trouble to use contraceptive methods.	3.32	Neutral
23. Using contraceptive methods makes a relationship seem too permanent.	3.10	Neutral
24. Sex is not fun if a contraceptive method is used.	2.08	Negative
25. Contraceptive methods are worth using, even if the monetary cost is high.	2.80	Neutral

26. Contraceptive methods encourage intercourse.	2.93	Neutral
27. Wife and husband should talk about contraception before having intercourse.	3.44	Neutral
28. If I or my husband experienced negative side effects from a contraceptive method, we would use a different method.	3.47	Neutral
29. Contraceptive methods make intercourse seem too planned.	1.70	Negative
30. I feel better about myself when I use contraceptive methods.	3.27	Neutral

Table (4.6) shows the assessment of each question regarding women's attitude toward contraceptive methods which they are negative for items 2,6,7,8,12,16,17,21,24 and 29. While all other items (1,2,3,4,5,9,10,11,13,14,15,18,19,20,22,23,25,26,27,28 and 30) were neutral attitude.

Table 4.7: Descriptive Statistics of Women's Overall Attitudes Levels

Attitudes Levels	Frequency	Percent
Negative Attitudes	115	28.8
Neutral Attitudes	251	62.8
Positive Attitudes	34	8.5
Total	400	100.0

Table (4.7) reveals the attitude levels of women about contraceptive methods with neutral attitudes form (62.8%) of the total women followed by negative attitudes level with percent (28.8).

Table 4.8: Practices Levels among Women.

Item	**Mean**	**Assessment**
1. Have you used any contraceptive before?	0.11	Poor
2. Have you or your sex husband ever had unintended pregnancy ?	0.91	Good
3. Have you read or asked a health professional about the use of contraceptives?	0.80	Good
4. Do you think it is important to carefully choose an appropriate type of contraceptive method?	0.51	Poor

5. Did you choose the method of contraception yourself?	0.55	Poor
6. Is your reason for using contraceptives to improve your health and the health of your baby?	0.19	Poor
7. Is the reason for your use of contraceptives is to prevent unwanted pregnancy?	0.44	Poor
8. Is the reason for your use of contraceptives social and economic reasons?	0.38	Poor
9. Can you choose a contraceptive method that is different from the one that your health professional chooses for you?	0.42	Poor
10. Your personal conviction is the most important factor in choosing a contraceptive method?	0.34	Poor

Table (4.8) shows the assessment of each item level regarding practice of women toward contraceptive methods and the result shows that only two questions(2 and 3) are good practice level while all other items (1,4,5,6,7,8,9 and 10) are poor level practice.

Table 4.9: Women Overall Practices Levels.

Practices Levels	Frequency	Percent
Poor Practice	269	67.3
Good Practice	131	32.8
Total	400	100.0

Table (4.9) findings present the practice level of contraceptive methods among women. 67.3 percent is poor practice of the results.

Table 4.10: Relationship between Knowledge, Attitudes, and Practice

Correlations				
		Knowledge	Women Attitudes	Women Practices
Knowledge	Pearson Correlation	1	.131**	.058
	Sig. (2-tailed)		.009	.246
	N	400	400	400
Attitudes	Pearson Correlation	.131**	1	.152**
	Sig. (2-tailed)	.009		.002

	N	400	400	400
Practices	Pearson Correlation	.058	.152**	1
	Sig. (2-tailed)	.246	.002	
	N	400	400	400
**. Correlation is significant at the 0.01 level (2-tailed).				

Table (4.10) indicates the relationship between knowledge, attitudes and women practices. It reveals the significant relationship between women knowledge and their attitudes. In addition, women practices have a significant relationship with their attitudes, which means attitude and knowledge are affected by each other and practices with attitudes affected by each other too.

Table 4.11. Association between Knowledge Levels and Age.

		Knowledge Levels			Total	Pearson Chi-Square		
		Poor Knowledge	Fair Knowledge	Good Knowledge		Value	df	Exact Sig. (2-sided)
Age groups	17 - 22	16	25	1	42	8.068a	8	.427
	23 - 28	51	114	4	169			
	29 - 34	33	68	6	107			
	35 - 40	18	26	4	48			
	41 and older	9	22	3	34			
Total		127	255	18	400			

Table (4.11) Person Chi-Square analysis was used to find the association between knowledge levels women and age of women. The findings of table 11 indicates no relationship that is significant between women's age and knowledge levels. (p= > .05).

Table 4.12. Association between Knowledge Levels and Marriage Age

		Knowledge Levels			Total	Pearson Chi-Square		
		Poor Knowledge	Fair Knowledge	Good Knowledge		Value	df	Exact Sig. (2-sided)
Age at Marriage	Under 20 Years	53	87	4	144	4.669 a	6	.587
	20 - 25 Years	67	147	12	226			
	26 - 31 Years	6	19	2	27			
	More than 32 Years	1	2	0	3			
Total		127	255	18	400			

Table (4.12) Person Chi-Square analysis was run to find the association between women`s age at marriage and knowledge levels of women. The findings of table 12 indicates no significant relationship between age at marriage of women and knowledge levels of women (p= > .05).

Table 4.13. Association between Knowledge Levels and Parity

		Knowledge Levels			Total	Chi-Square of Pearson		
		Poor Knowledge	Fair Knowledge	Good Knowledge		Value	Degree of freedom	Exact Sig.
Parity	Null	2	2	0	4	3.200a	6	.783
	1 - 3 Births	94	192	11	297			
	4 - 6 Births	30	60	7	97			
	More than 6 Births	1	1	0	2			
Total		127	255	18	400			

Table (4.13) After using Person Chi-Square analysis to find the association between parity and knowledge levels of women. The findings of table 13 indicates no relationship that is significant between parity and knowledge levels (p= > .05).

Table 4.14. Association between Knowledge Levels and Residency

		Knowledge Levels			Total	Chi-Square of Pearson		
		Poor Knowledge	Fair Knowledge	Good Knowledge		Value	Degree of freedom	Exact Sig.
Residency	Urban Area	22	32	3	57	1.671a	2	.434
	Rural Area	105	223	15	343			
Total		127	255	18	400			

Table (4.14) Person Chi-Square analysis was used to find the association between residency and knowledge levels of women. The findings of table 14 indicates that there is no significant relationship between residency and knowledge levels of women (p= > .05).

Table 4.15. Association between Knowledge Levels and Monthly Income

		Knowledge Levels			Total	Chi-Square of Pearson		
		Poor Knowledge	Fair Knowledge	Good Knowledge		Value	Degree of freedom	Exact Sig.
Monthly Income	Not Enough	11	9	0	20	9.701a	4	.046
	Sometimes Enough	37	82	2	121			
	Enough	79	164	16	259			
Total		127	255	18	400			

Table (4.15) After using Person Chi-Square analysis to find the association between monthly income and knowledge levels of women. The findings of table 15 indicates showed there is a statistically significant association between monthly income and knowledge levels (p.05).

Table 4.16. Association between Knowledge Levels and Educational Level

		Knowledge Levels			Total	Pearson Chi-Square		
		Poor Knowledge	Fair Knowledge	Good Knowledge		Value	df	Exact Sig. (2-sided)
Education Levels	Doesn't Write and Read	31	24	0	55	27.433 a	12	.007

	write and read	20	50	6	76			
	Primary	18	28	1	47			
	Secondary	13	25	0	38			
	Diploma	20	59	5	84			
	Bachelor Degree	22	59	5	86			
	Postgraduate (Master or PhD.)	3	10	1	14			
Total		127	255	18	400			

Table (4.16) Person Chi-Square analysis used to find the association between educational level and knowledge levels of women. The findings of table 16 indicates that there is a significant relationship between educational level and knowledge levels ($p < .05$).

Table 4.17. Association between Knowledge Levels and Occupation

		Knowledge Levels			Total	Pearson Chi-Square		
		Poor Knowledge	Fair Knowledge	Good Knowledge		Value	Degree of freedom	(2-sided) Exact Sig.
Occupation	Working	36	82	10	128	5.372a	2	.068
	Not Working	91	173	8	272			
Total		127	255	18	400			

Table (4.17) Person Chi-Square analysis was used to find the association between occupation and knowledge levels of women. The findings of table 17 indicates that there is no significant relationship between occupation and knowledge levels of women ($p = > .05$).

Table 4.18. Association between Knowledge Levels and Contraceptive Method Use during Last Unexpected Pregnancy

		Knowledge Levels			Total	Pearson Chi-Square		
		Poor Knowledge	Fair Knowledge	Good Knowledge		Value	df	Exact Sig. (2-sided)
	Condom	3	2	0	5		10	.331

Used Contraceptive	Oral contraception pills	13	15	0	28	11.354 a		
	Contraceptive Injection	1	1	0	2			
	Natural methods	7	15	0	22			
	Withdraw	10	29	0	39			
	No method used	93	193	18	304			
Total		127	255	18	400			

Table (4.18) Person Chi-Square analysis was used to find the association between contraceptive method use during last unexpected pregnancy and knowledge levels of women. The findings of table 18 indicates that there is no significant relationship between contraceptive method use during last unexpected pregnancy and knowledge levels of women (p= > .05).

Table 4.19. Association between Knowledge Levels and Women's Opinion about the Reason that could Prevent Women from Using Contraceptives

		Knowledge Levels				Pearson Chi-Square		
		Poor Knowledge	Fair Knowledge	Good Knowledge	Total	Value	df	Exact Sig. (2-sided)
Reason not Using Contraceptive	Probably pregnancy can't happen with occasional sex	6	12	0	18	19.175a	14	.158
	Methods of contraception are too expensive to buy	5	8	0	13			
	Thinking and worrying from the side effects	69	131	8	208			
	Didn't prepare contraceptives for the unexpected sex	2	10	1	13			
	Husband didn't want his wife to use a contraceptive method	32	46	6	84			
	There is no convenience in buying contraceptive methods	0	5	1	6			

	Enjoyment would be affected by using contraceptive methods	6	11	2	19			
	Don't know how to use contraceptive methods	7	32	0	39			
Total		127	255	18	400			

Table (4.19) By using Person Chi-Square analysis to find the association between women`s opinion about the reason that could prevent women from using contraceptives the findings that shown in table 19 indicates that there is no significant relationship between Reason not Using Contraceptives and knowledge levels of women (p= > .05).

Table 4.20. Association between Attitudes Levels and Age groups

		Attitudes Levels			Total	Pearson Chi-Square		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	df	Exact Sig. (2-sided)
Age Groups	17-22	13	26	3	42	3.379a	8	.908
	23 - 28	50	102	17	169			
	29 - 34	32	69	6	107			
	35 - 40	13	30	5	48			
	41 and older	7	24	3	34			
Total		115	251	34	400			

Table (4.20) Person Chi-Square analysis was used to find the association between women`s age groups and attitudes levels of married women. The findings of table 20 indicates no significant relationship between age groups of women and levels of attitude (p= > .05).

Table 4.21. Association between Attitudes Levels and Age at Marriage

		Attitudes Levels			Total	Pearson Chi-Square		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	df	Exact Sig. (2-sided)
	19 years	43	87	14	144	4.959a	6	.549

Age at Marriage	old and less							
	From 20 to 25 Years old	60	146	20	226			
	From 26 to 31 Years old	11	16	0	27			
	Older than 32 Years old	1	2	0	3			
Total		115	251	34	400			

Table (4.21) By using Person Chi-Square analysis to find the association between attitudes levels and age at marriage the findings that shown in table 21 indicates there is no statistically significant link between attitude levels and age at marriage (p= >.05).

Table 4.22. Association between Attitudes Levels and Parity

		Attitudes Levels			Total	Chi-Square of Pearson		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	Degree of freedom	Exact Sig.
parity	Null	3	1	0	4	9.800a	6	.133
	1 - 3 Births	91	184	22	297			
	4 - 6 Births	21	64	12	97			
	More than 6 Births	0	2	0	2			
Total		115	251	34	400			

Table (4.22) After using Person Chi-Square analysis to find the association between parity and attitudes levels of women. The findings of table 22 indicates there is no statistically significant association between parity and attitude levels (p= >.05).

Table 4.23. Association between Attitudes Levels and Residency

		Attitudes Levels			Total	Chi-Square of Pearson		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	df	Exact Sig.
Residency	Urban Area	19	33	5	57	.741a	2	.690
	Rural Area	96	218	29	343			
Total		115	251	34	400			

Table (4.23) Person Chi-Square analysis was used to find the association between attitudes levels and residency of women. The findings of table 23 indicates that there is no significant relationship between attitude levels and residency of women (p= > .05).

Table 4.24. Association between Attitudes levels and monthly income

		Attitudes Levels			Total	Chi-Square		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	df	Exact Sig.
Monthly Income	Not Enough	9	11	0	20	7.773[a]	4	.100
	Sometimes Enough	40	74	7	121			
	Enough	66	166	27	259			
Total		115	251	34	400			

Table (4.24) After using Person Chi-Square analysis to find the association between attitudes Levels and monthly income of married women. The findings of table 24 indicates no relationship that is statistically significant between attitude levels and monthly income (p= > .05).

Table 4.25. Association between attitude levels and Educational Level

		Attitudes Levels			Total	Chi-Square		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	df	Exact Sig.
Education Levels	Doesn't Write and Read	19	34	2	55	15.549[a]	12	.213
	write and read	16	47	13	76			
	Primary	11	30	6	47			

	Secondary	12	24	2	38			
	Diploma	24	54	6	84			
	Bachelor Degree	29	52	5	86			
	Postgraduate (Master or PhD.)	4	10	0	14			
Total		115	251	34	400			

Table (4.25) Person Chi-Square analysis was used to find the association between attitudes Levels and educational level of women. The findings of table 25 indicates that there is no significant relationship between attitude levels and educational level of women (p= > .05).

Table 4.26. Association between Attitudes Levels and Occupation

		Attitudes Levels			Total	X^2		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	df	Exact Sig.
occupation	Working	37	83	8	128	1.254[a]	2	.534
	Not Working	78	168	26	272			
Total		115	251	34	400			

Table (4.26) After using Person Chi-Square analysis to find the association between attitudes Levels and occupation of women. The findings of table 26 indicates there is no statistically significant link between attitude levels and occupation (p= >.05).

Table 4.27. Association between Attitudes Levels and Contraceptive Methods Use in the Last Unexpected Pregnancy

		Attitudes Levels			Total	X^2		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	df	Exact Sig.
Used Contraceptive	Condom	2	2	1	5	9.554[a]	10	.480
	Oral pills of contraception	10	18	0	28			
	Contraceptive Injection	1	1	0	2			
	Natural method	5	17	0	22			
	Method of Withdraw	8	27	4	39			
	No method used	89	186	29	304			
Total		115	251	34	400			

Table (4.27) To find the association between attitudes levels and contraceptive methods use in the last unexpected pregnancy, Person Chi-Square analysis is used. The findings of table 27 indicates that there is no significant relationship between attitude Levels and contraceptive methods use in the last unexpected pregnancy (p= > .05).

Table 4.28. Association between Attitudes Levels and Women's Opinion about the Reason that could Prevent Married Women from Using Contraceptives

		Attitudes Levels			Total	X^2		
		Negative Attitudes	Neutral Attitudes	Positive Attitudes		Value	df	Exact Sig. (2-sided)
Reason not Using Contraceptive	Probably pregnancy can't happen with occasional sex	6	11	1	18	9.097[a]	14	.825
	Methods of contraception are too expensive to buy	3	9	1	13			
	Thinking and worrying from the side effects	55	137	16	208			
	Didn't prepare contraceptives for the unexpected sex	3	7	3	13			
	Husband didn't want his wife to use a contraceptive method	26	50	8	84			
	There is no convenience in buying contraceptive methods	2	4	0	6			
	Enjoyment would be affected by using contraceptive methods	7	9	3	19			
	Don't know how to use contraceptive methods	13	24	2	39			
Total		115	251	34	400			

Table (4.28) After using Person Chi-Square analysis to find the association between attitudes levels and women`s opinion about the reason that could prevent married women from using contraceptives. The findings of table 28 indicates that there is no significant relationship between attitude levels and reason for not using contraceptive methods. (p= > .05).

Table 4.29. Association between Practices Levels and Age Groups

		Practices Levels			χ^2		
		Poor Practice	Good Practice	Total	Value	df	Exact Sig.
Age Groups	17- 22	31	11	42	9.921a	4	.042
	23 – 28	118	51	169			
	29 – 34	74	33	107			
	35 – 40	31	17	48			
	41 and older	15	19	34			
Total		269	131	400			

Table (4.29) Person Chi-Square analysis used to find the association between practices levels and age groups of women. The findings of table 29 indicates there is a statistically significant link between practice levels and age groups (p<.05).

Table 4.30. Association between Practices Levels and Age at Marriage

		Practices Levels			χ^2		
		Poor Practice	Good Practice	Total	Value	df	Exact Sig.
Age at Marriage	19 years old and less	99	45	144	1.913[a]	3	.591
	From 20 to 25 Year	150	76	226			
	From 26 to 31 Year	17	10	27			
	32 years and more	3	0	3			
Total		269	131	400			

Table (4.30) After using Person Chi-Square analysis to find the association between practices levels and age at marriage. The findings of table 30 indicates s there is no significant link between practices levels and age at marriage (p>.05).

Table 4.31. Association between Practices Levels and Parity

		Practices Levels		Total	χ^2		
		Poor Practice	Good Practice		Value	df	Exact Sig.
parity	Null	4	0	4	3.220[a]	3	.359
	1 - 3 Births	203	94	297			
	4 - 6 Births	61	36	97			
	More than 6 Births	1	1	2			
Total		269	131	400			

Table (4.31) By using Person Chi-Square analysis to find the association between practices levels and parity. The findings that shown in table 31 indicates there is no statistically significant link between practice level and parity (p>.05).

Table 4.32. Association between Practice Level and Residency

		Practices Levels		Total	χ^2		
		Poor Practice	Good Practice		Value	df	Exact Sig. (2-sided)
Residency	Urban Area	40	17	57	.258[a]	1	.611
	Rural Area	229	114	343			
Total		269	131	400			

Table (4.32) After using Person Chi-Square analysis to find the association between practice level and residency . The findings of table 32 indicates that there is no significant relationship between practices levels and residency. (p > .05).

Table 4.33. Association between Practices Levels and Monthly income

		Practices Levels		Total	χ^2		
		Poor Practice	Good Practice		Value	df	Exact Sig. (2-sided)
Monthly Income	Not Enough	16	4	20	3.837[a]	2	.147

	Sometimes Enough	87	34	121			
	Enough	166	93	259			
Total		269	131	400			

Table (4.33) Person Chi-Square analysis was used to find the association between practices levels and monthly income. The findings of table 33 indicates there is no statistically significant link between practices level and monthly income (p>.05).

Table 4.34. Association between Practices Levels and Educational level

		Practices Levels		Total	X^2		
		Poor Practice	Good Practice		Value	df	Exact Sig. (2-sided)
Education Levels	Doesn't Write and Read	39	16	55			
	write and read	56	20	76			
	Primary	32	15	47			
	Secondary	25	13	38			
	Diploma	58	26	84	11.872[a]	6	.065
	Bachelor Degree	55	31	86			
	Postgraduate (Master or PhD.)	4	10	14			
Total		269	131	400			

Table (4.34) By using Person Chi-Square analysis to find the association between practices levels and educational level. The findings that shown in table 34 indicates that there is no significant relationship between practices levels and educational level (p= > .05).

Table 4.35. Association between Practices levels and Occupation

		Practices Levels		Total	X^2		
		Poor Practice	Good Practice		Value	df	Exact Sig. (2-sided)
occupation	Working	89	39	128	.445[a]	1	.505

	Not Working	180	92	272			
Total		269	131	400			

Table (4.35) After using Person Chi-Square analysis to find the association between practices levels and occupation. The findings of table 35 indicates showed there is no statistically significant association between practice levels and occupation(p= >.05).

Table 4.36. Association between Practices Levels and Contraceptive Methods Use in the Last Unexpected Pregnancy

		Practices Levels		Total	X^2		
		Poor Practice	Good Practice		Value	df	Exact Sig.
Used Contraceptive	Condom	5	0	5	4.283[a]	5	.509
	Oral pills	20	8	28			
	Contraceptive Injection	1	1	2			
	Natural methods	17	5	22			
	Withdraw method	25	14	39			
	No method used	201	103	304			
Total		269	131	400			

Table (4.36) Person Chi-Square analysis has been used to check association between practices levels and methods of contraception use in the last unexpected pregnancy. The findings of table 36 indicates that there is no significant relationship between practices levels and contraceptive methods use in the last unexpected pregnancy (p= > .05).

Table 4.37. Association between Women's Opinion about the Reason that could Prevent Married Women from Using Contraceptives

		Practices Levels		Total	Pearson Chi-Square		
		Poor Practice	Good Practice		Value	df	Exact Sig. (2-sided)
Reason not Using Contraceptive methods	Probably pregnancy can't happen with occasional sex	11	7	18	11.170[a]	7	.131
	Methods of contraception are too expensive to buy	9	4	13			
	Thinking and worrying from the side effects	148	60	208			
	Didn't prepare contraceptives for the unexpected sex	12	1	13			

	Husband didn't want his wife to use a contraceptive method	50	34	84			
	There is no convenience in buying contraceptive methods	4	2	6			
	Enjoyment would be affected by using contraceptive methods	9	10	19			
	Don't know how to use contraceptive methods	26	13	39			
Total		269	131	400			

Table (4.37) After using Person Chi-Square analysis to find the association between practices levels and women`s opinion about the reason that could prevent married women from using contraceptives. the findings of table 37 indicates no relationship that is significant between practices levels and reason not using contraceptive methods. (p= > .05).

Chapter Five

Discussion of the Study Results

Chapter Five

Discussion the Results of the Study

This study is an effort and a try to search in and explain married women's knowledge, attitudes and practices toward contraceptive methods and to draw a future step to deal with family planning in the right way by examining important aspects in married women (knowledge, attitude, practices) regarding contraceptive methods thus this chapter will systematically, explain and interpret the results` of the study by discussing them in a scientific and organized way with the provision of the available literatures.

Part One: The Descriptive Statistics of The Study Variables

5.1. The Descriptive Statistics of the Socio-Demographic and Personal Characteristic's Variables of the Women.

A total of (400) women were enrolled in this present study, Most age group among the participants is the (22-28) years old this result is agree with Al Basri et al., 2022 who did find that about 45% of the participated women were in age group (18-29) years. More than half of the married women in this study was married in age from (20-25) years and this result also agreed with (Sherpa, Sheilini and Nayak, 2013), which their results showed that about 60% of the their participated women had married at age (19-25). About two thirds of the women have 1 to 3 children this result agree with (Abd, 2017) which she did find that about 70% of the participants women have 1 to 3 children, another study of (Al Abedi, Arar and Alridh, 2020) which has been done at Al Amara city is also agreed with this study, while it did find that about (70%) of the participated women have 1 to 3 children. Women income per month was enough for about (64%) of them and this result as compare with (Zegeye *et al.*, 2021) study result we could find an agreement

as both studies shows that enough economic level is the highest group among the married women.

Furthermore, Most of the women in the study (85%) are living in rural areas, same result by the study of (Zegeye *et al.*, 2021) who they found that 82% of the participants are living in rural areas. Woman's educational level is bachelor degree for (21.5%) of them followed by diploma degree for (21%) of them, (Saied, 2021) study agree with the result of the educational level for the women of this study as he did revealed that educational level of the participated women in his study was diploma and bachelor degree for about (48%) of them.

Also this study indicates that about (68%) of the women are not working and have no job and this result resembling the result of (Mahfouz *et al.*, 2023) which has performed in Saudi Arabia and they did find that about (70%) of the women who participated in the study have no job and were not working and an governmental or private job.

In addition, as an attempt for exploring in a descriptive way the contraceptive method we can consider the least effective in preventing pregnancy, result shows that withdraw method was the highest contraceptive method used by women which it fails to prevent pregnancy and resulted in unexpected pregnancy, in fact, a study at 2021 by Bawah and his colleagues (Bawah *et al.*, 2021) about discontinuing and failure of contraceptive methods, they did find that most women in their study are inconvenient and they stopped using withdrawal method because it mostly doesn't prevent pregnancy and result in unexpected pregnancy. Actually, married people prefer withdrawal method and it is commonly used among them as it is const no money, it is completely free, have no side effect at all, it doesn't need doctors or any health care staff advise, and it needs no invasive procedure, all these reasons builds up the confidence among married couples to use these contraceptive methods despite the fact that it is the least effective

contraceptive method in preventing pregnancy.(Marwah I. Al Ameen and Lamia Dhia Al Deen, 2016)

According to women`s opinion about the reason that could prevent married women from using contraceptives or the fear from using it, this study shows that they are worried of the side effect same result by (Elamin *et al.*, 2022) who did find that most reason for refuse contraceptive method among women is the worried about side effect of the contraceptive methods. Another study of (Tilahun and Dinkinesh, 2021) did find same result when they did find that women afraid and worried of using contraceptive methods because of the side effects. The fear of side effects associated with contraceptives is a common concern among many women, including married women, hormonal contraceptives, have potential side effects that can vary in severity from person to person. Some women may experience physical side effects such as nausea, weight gain, headaches, and changes in libido. Additionally, some women may experience emotional side effects such as mood changes, depression, or anxiety. These side effects can be concerning and impact a woman's quality of life, leading to reluctance to use contraceptives.(Martell *et al.*, 2023)

There may be a lack of knowledge or misinformation regarding the safety of contraceptives. Some women may have heard stories of negative experiences with contraceptives from friends or family members, or read about them online. This can lead to fear and uncertainty about the potential risks and benefits of using contraceptives.(Le Guen *et al.*, 2021)

Societal and cultural norms may contribute to the fear of side effects of contraceptives. In some cultures, the use of contraceptives is stigmatized and may be viewed as harmful or immoral, leading to fear and hesitation among women to use them.(Kabagenyi *et al.*, 2016)

5.2 Description of Women's Knowledge Levels

The Level of Women`s knowledge was fair, about (63%) of women in this study have a fair knowledge regarding contraceptive methods, (Al Abedi, Arar and Alridh, 2020) also did found that more than half of women in Amara city who participated in their study have a moderate knowledge level regarding contraceptive methods. Also the study results of (Alameer *et al.*, 2022) dose power the result of this study as they find a good knowledge level among married women in Saudi Arabia regarding contraceptive methods.

Fair knowledge regarding contraceptive methods among women can be because of the women who have had access to comprehensive sexual education and health services are more likely to have a fair knowledge of contraceptive methods. This education can help them understand the various types of contraceptives available, how they work, their efficacy rates, and any potential side effects.(Cheedalla, Moreau and Burke, 2020)

Women who have access to reliable sources of information, such as healthcare providers, peer support groups, or government agencies, are more likely to have a fair understanding of contraceptive methods. These sources can provide accurate and up-to-date information on contraceptive options and address any misconceptions or myths.(Vogels-Broeke *et al.*, 2022)

women who have autonomy over their reproductive health and decision-making are more likely to have a fair knowledge of contraceptive methods. Empowerment can help them make informed decisions about their health and well-being, including their family planning choices.(Whidden *et al.*, 2021)

Some cultures, or communities, discussions around contraception may be more common, leading to greater knowledge and awareness of contraceptive methods.(Pazol *et al.*, 2015)

5.3 Description of Women Attitudes Levels

Women attitudes levels in this study is neutral, as about (62%) of women have this level among the participants, this result is don't agree with the result of Dhakal *et al.*, 2020 as they did find that positive attitude is common level among the participants, different reasons for the verity of results, it may due to the difference in scale have been used by Dhakal which it was constructed by the researcher and contains no negative quations, moreover, the geogarphicaal area and socity are different between these two studies.

Also, there are several potential reasons why some married women may have neutral attitudes towards contraceptive methods, Some women may not be familiar with the various types of contraceptives available to them and may not have had access to comprehensive sexual education.(Tsikouras *et al.*, 2020), Some women may have religious or cultural beliefs that prohibit the use of contraception or place restrictions on its use.(Obasohan, 2014)

The attitudes of a woman's partner towards contraception may also influence her own attitudes towards it.(Alspaugh *et al.*, 2020) Some women may prefer not to use contraception for personal reasons, such as concerns about side effects or a desire to have children.(Moreira *et al.*, 2019)

5.4 Description of Women Practices Levels

Women's practices in this study is poor for about two third of the total participants, in fact, fair knowledge and neutral attitude toward contraceptive methods could lead to this result, also more than half of the participants having low educational degree (below secondary educational level), while a studies like (Tilahun and Dinkinesh, 2021) which they found a good and safe practices among participated women, the knowledge of the women was good and attitudes levels were positive in addition, the sociodemographic

characteristics of the women was showing that about half of the women having an educational degree above secondary educational degree.

The reasons for poor contraceptive practices among women can be multifaceted and context-specific, Women may have limited access to contraceptive methods due to geographical, financial, or other barriers. This may result in a lack of consistent use or use of ineffective methods.(Dioubaté *et al.*, 2021), Women may have limited knowledge about the available contraceptive methods, how to use them effectively, and the potential risks and benefits of each option.(Kim, 2016), Certain cultural or religious beliefs may prohibit the use of contraception or make it difficult for women to access information and services related to reproductive health.(Arousell and Carlbom, 2016), In some cases, women may not have the power to negotiate contraceptive use with their partners, or may face pressure to have children despite not wanting to.(Harrington *et al.*, 2016)

Contraception use can still be stigmatized in some communities, and myths and misconceptions about contraception may persist, leading to incorrect use or avoidance.(Mbachu *et al.*, 2021)

5.5 Relationship between Knowledge, Attitudes, and Practices

By using correlation analysis to find out the relationship between knowledge, attitudes and practices, it turns out that there is a highly significant relationship between knowledge and attitudes and another highly significant relationship between practices and attitude while there is no relationship between knowledge and practice, a study of (Hameed *et al.*, 2019) also did find that there is a significant relationship between each of attitude with practices and knowledge with attitudes. studies have approves that better knowledge and better education leads to a better attitude. (Snow and Dibner, 2016)

The strong relationship between knowledge and attitudes regarding contraceptive methods among women may be explained, When women who have a better understanding of the benefits of contraceptive methods, such as spacing out births, improving maternal and child health, and promoting economic stability, they are more likely to have positive attitudes towards contraceptive methods.(Kavanaugh and Anderson, 2013) , When women have knowledge of the different types of contraceptive methods available, how they work, their effectiveness, and potential side effects, they are more likely to have positive attitudes towards using them.(Alameer *et al.*, 2022)

When women have accurate information about contraceptive methods, it can help to dispel any myths or misconceptions they may have had. This, in turn, can help to improve their attitudes towards using contraception.(Mwaisaka *et al.*, 2020), When women are empowered to make decisions about their reproductive health, they are more likely to have positive attitudes towards contraceptive methods. Empowerment can come from having access to accurate information, supportive healthcare providers, and a supportive partner or family.(Yaya *et al.*, 2018)

knowledge and attitudes regarding contraceptive methods are closely related among women. Improving knowledge about contraceptive methods can lead to more positive attitudes towards their use, which can, in turn, lead to better family planning outcomes and improved reproductive health. It is important to provide access to accurate information and resources to empower women to make informed decisions about their reproductive health.(Adegboyega, 2019)

The strong relationship between attitudes and practices regarding contraceptive methods among women is a complex and multifaceted one. Attitudes refer to the beliefs, opinions, and evaluations that individuals hold, while practices encompass the actual behaviors and actions, they engage in.(Samira M. Ebrahim, 2011)

Attitudes play a crucial role in shaping individuals' contraceptive practices. A positive attitude towards contraception indicates a willingness to adopt and use contraceptive methods effectively. Conversely, negative attitudes can lead to non-use or inconsistent use of contraception. Attitudes are influenced by a variety of factors, including cultural, religious, social, and personal beliefs.(Sidibé *et al.*, 2022)

Cultural and religious beliefs often play a significant role in shaping attitudes towards contraception. Some cultures and religions may have conservative views that discourage or prohibit the use of contraceptives. In such cases, women may hold negative attitudes towards contraception, considering it morally or religiously unacceptable. These attitudes can significantly impact their contraceptive practices, leading to non-use or reliance on traditional or less effective methods.(Alomair *et al.*, 2020)

Social factors, such as peer influence, family norms, and societal expectations, also affect attitudes towards contraception. If women perceive contraception as socially acceptable and encouraged by their immediate social circle, they are more likely to have positive attitudes and engage in consistent contraceptive practices. Conversely, societal stigma or pressure to conform to traditional gender roles may create negative attitudes towards contraception, resulting in lower usage.(Kane *et al.*, 2016)

Personal factors, including education, knowledge, and access to information, also influence attitudes and practices regarding contraceptive methods. Well-informed women with access to comprehensive sexual and reproductive health education are more likely to have positive attitudes towards contraception. They understand its benefits in terms of family planning, spacing pregnancies, and preventing sexually transmitted infections. In turn, they are more likely to adopt and use contraceptive methods consistently.(Bekele *et al.*, 2020)

However, it's important to note that attitudes alone do not always translate into actual practices. Various barriers and challenges can prevent women from using contraception consistently, even if they hold positive attitudes. These barriers may include limited access to contraceptive services, lack of information, financial constraints, fear of side effects, partner opposition, or inadequate support from healthcare providers.(Kassim and Ndumbaro, 2022)

To address the relationship between attitudes and practices, interventions and programs should focus on multiple levels. Comprehensive sexuality education, targeted awareness campaigns, and culturally sensitive counseling can help promote positive attitudes towards contraception. Efforts should also be made to improve access to a wide range of contraceptive methods, address social and cultural barriers, involve partners in decision-making, and provide ongoing support and follow-up to married women.(Chavula, Zulu and Hurtig, 2022)

attitudes play a significant role in shaping contraceptive practices among women. Positive attitudes are more likely to lead to consistent and effective use of contraception, while negative attitudes may result in non-use or reliance on less reliable methods. Understanding and addressing the complex interplay between attitudes and practices is crucial for promoting reproductive health and empowering married women to make informed decisions about contraception.(Adegboyega, 2019)

5.6 Association between Knowledge and Demographic Data

By running Chi square analysis to find out the relationship between knowledge level and demographic data, there was no relationship between knowledge levels with age, parity, residency, occupation, levels and contraceptive method use during last unexpected pregnancy and reason not using contraceptives. There were only two significant relationships first is

the significant relationship between knowledge level and monthly income and the second is the significant relationship between knowledge level and educational level.

Relationship between knowledge and income has been mentioned as significant in previous studies, knowledge leads to a better income and better income leads to a better knowledge, low income means low socioeconomic status and low socioeconomic status makes knowledge and education opportunities less comparing to higher economic level (Sumargo, 2018). A study in Qatar by Arbab, Bener and Abdulmalik, 2011 did find that there is a significant relationship between monthly income of married women and their knowledge about contraceptive methods, they also revealed that married women knowledge about contraceptive methods increases with high monthly income and decreases with low monthly income.

There may be a relationship between knowledge and income among married women regarding contraceptive methods due to the Women with higher incomes may have had access to better education, which could provide them with more information and knowledge about contraceptive methods.(Mutumba, Wekesa and Stephenson, 2018), Women with higher incomes may have better access to healthcare services, including family planning counseling and contraceptive services. This could lead to higher levels of knowledge about contraceptive methods.(Kumar *et al.*, 2020), Women with higher incomes may have more exposure to media and information sources that provide information about reproductive health and family planning.(Das *et al.*, 2021)

Women with higher incomes may have more financial resources to afford contraceptive methods and may be more likely to try different methods to find the one that works best for them.(Nethery *et al.*, 2019) Educational level is the main factor affecting knowledge, higher educational level resulting in higher knowledge level, higher educational level give

chance to gain more information and ease the access to better information.(Jammeh *et al.*, 2014)

Lower educational level sometimes related to a younger age and women in younger age have less knowledge regarding contraceptive methods as compared to an older age woman, in fact, the reason that make older women have a better knowledge which reflects the increment of experiences with age also those who were married young had poor knowledge which can be credited to delay of educational attainment for those young married women due to early marriage. (Jammeh *et al.*, 2014)

Important point, is that with better education comes a better understanding to the contraceptive mechanism and compliance, thus good contraceptive methods knowledge, this observation is in line with that from Qatar (Arbab, Bener and Abdulmalik, 2011)

5.7 Association between Attitudes Levels and Demographic Data

After using Chi Square to investigate the significant relationship between attitudes level and demographic data, there was no relationship between each demographic data and attitudes level.

It is possible that there may not be a relationship between attitudes level and demographic data among women regarding contraceptive methods, it may be due to a number of reasons that when the attitudes towards contraceptive methods are highly individualized and may vary from person to person regardless of demographic background. Some women may have positive attitudes towards contraceptive methods regardless of their age, education, religion, or culture, while others may have negative attitudes.(Sensoy *et al.*, 2018), Women from different demographic backgrounds may have similar attitudes towards contraceptive methods due to common misconceptions or lack of accurate information about how

different methods work and their effectiveness.(Sedgh, Singh and Hussain, 2014)

While culture and religion can influence attitudes towards contraceptive methods, there is a great deal of diversity within cultures and religions themselves. Therefore, it is possible that women from the same demographic group may hold different attitudes towards contraceptive methods.(Turner, 2021), Women's attitudes towards contraceptive methods can also be influenced by their social networks and the support they receive from their partners, family, and friends. Women with similar demographic backgrounds may have different attitudes due to variations in their social support systems.(Calhoun *et al.*, 2022)

5.8 Association between Practices Levels and Demographic Data

Regarding relationship between practices and demographic variables there was only one significant relationship as tested by chi square analysis, which it is between practices levels and age.

However, age have strong relationship with practice, two sides for this relationship, first, younger women tend to be less confident about contraceptive methods, and they are much more worried than older women to be pregnant or not, also it has been found that younger women need social support from older age women to use contraceptive methods, young women face very strong pressure to be pregnant and have children soon after marriage to prove their fertility potential, giving birth at an early age and in shorter intervals are well-known factors that compromise the well-being of mothers and their children. (Cornet, 2013; Godha, Hotchkiss and Gage, 2013; Dingeta *et al.*, 2021).

Study of (Arbab, Bener and Abdulmalik, 2011) also found that there is a significant relationship between women’s practices and their ages, older women tend to use contraceptive methods in ages 30 and above as they start

to have burden and have more experience about pregnancy and contraceptive method, because when they are younger and at the early in marriage the think that being pregnant is a matter of God and the number of children is something in God hand, and for that Arbab, Bener and Abdulmalik had recommended a counselling session (Arbab, Bener and Abdulmalik, 2011).

Another study proposing another idea, (Imtishal *et al.*, 2023) mentioned, the older age group had lower practice scores than the younger age group, which may be related to why they were pregnant again at an older age. A possible hypothesis is that older women may be more experienced in practicing contraceptive methods than younger women. Married women within age 40-49 years of age are four times more likely to use contraceptive methods. In addition, (Ismail, Al-Tawil and Hasan, 2014) concluded that contraception usage decreases after 40 years of age.

For the relationship between contraceptive practices levels and age among women, As women age, their fertility declines and their risk of complications during pregnancy and childbirth increases. This may make them more motivated to use contraceptive methods to avoid unintended pregnancies and protect their health. Additionally, older women may be more likely to choose long-acting reversible contraceptive methods (such as intrauterine devices or implants) that offer more reliable and convenient protection than short-acting methods (such as condoms or pills).(Jacqueline E. Darroch, 2017)

many societies, women are expected to delay childbearing until they have completed their education, established a career, or achieved financial stability. Therefore, older women may have more access to information and resources about contraception, as well as greater social support for using it effectively. On the other hand, younger women may face more barriers to accessing and using contraception due to cultural or religious beliefs, lack of knowledge, or stigma around sexuality.(Götmark and Andersson, 2020)

The decision to use contraception often involves negotiation and communication with a partner or spouse. Older women may be more likely to be in long-term, committed relationships where contraception use is an established norm, while younger women may be more likely to be in casual or unstable relationships where contraception use may be less consistent or less prioritized.(Weitzman, Barber and Kusunoki, 2019)

National family planning policies and programs may prioritize outreach and education to older women who are at higher risk of unintended pregnancy or complications. This may result in greater uptake of contraception among older women compared to younger women who may not be targeted as heavily by these initiatives.(Chandra-Mouli *et al.*, 2017)

Chapter Six

Conclusions and Recommendations

Chapter Six

Conclusions and Recommendations

This chapter summarizes and highlights the major concluded points in this study in systematic and clear way along with recommendations based on the conclusions and results of the study.

6.1. Conclusions

After collecting data, analyzing them and discussing the results, many conclusions point have been come to light as following:

1. Women's knowledge level of using contraceptive methods was fair, attitudes level regarding contraceptive methods is neutral and practices toward contraceptive methods were poor.
2. There is a strong significant relationship between knowledge with practices, and knowledge with attitudes.
3. There is a significant relationship between knowledge of studied sample with their educational level, and monthly income.
4. There is a significant relationship between practices towards women`s age.
5. Less effective contraceptive method used by participants is withdrawal method.
6. Most common reason among participated women in the study that prevent or decrease the intention of using contraceptive methods is worrying about side effects of using them.

6.2. Recommendations

After summarizing the main results of the study and conclusion the important points of the results, study recommend the following:

1. Preparation of additional and simple comprehensive and consistent educational sessions for client about the side effects of contraceptive methods.
2. Efforts should be made by the primary healthcare centers, specially to educate women to improve their knowledge level, which in turn will elevate their attitude as well.
3. women with lower educational level and lower income need to be in a place of interest in primary healthcare centers.
4. More analytic studies that searching in the relationships between different determinants of contraceptive methods use among married women need to be applied.
5. Increasing the use of mass media to generalize the thoughts of family planning methods and the advantages of using such methods.

References

المصادر العربية

القرآن الكريم، سورة الرعد، الجزء الثالث عشر، الآية ٨

References

Abd, A. Y. (2017). Knowledge and Practice of Using Contraception among Iraqi Child Bearing Age Females. *American Journal of Pharmacy and Pharmacology*, *4*(6), 45–49.

Abdi, B., Okal, J., Serour, G., & Temmerman, M. (2020). "children are a blessing from God"- A qualitative study exploring the socio-cultural factors influencing contraceptive use in two Muslim communities in Kenya. *Reproductive Health*, *17*(1), 1–11. https://doi.org/10.1186/s12978-020-0898-z

Abdul-Aziz, M., Mahdy, M. A. K., Abdul-Ghani, R., Alhilali, N. A., Al-Mujahed, L. K. A., Alabsi, S. A., Al-Shawish, F. A. M., Alsarari, N. J. M., Bamashmos, W., Abdulwali, S. J. H., Al Karawani, M., & Almikhlafy, A. A. (2019). Bacterial vaginosis, vulvovaginal candidiasis and trichomonal vaginitis among reproductive-aged women seeking primary healthcare in Sana'a city, Yemen. *BMC Infectious Diseases*, *19*(1), 1–10. https://doi.org/10.1186/s12879-019-4549-3

Abdulkareem Salman Khudhair. (2021). *Comparative study of nurses' knowledge regarding preventive measures and precautions of viral hepatitis B & C at hemodialysis units among southern provinces of iraq*. University of Babylon.

Abramova, I. O. (2022). The Population of Africa under the Conditions of Transformation of the World Order. *Herald of the Russian Academy of Sciences*, *92*(12), S1306–S1315. https://doi.org/10.1134/S1019331622200023

Adam Awabu. (2021). Factors Affecting The Acceptance And Usage Of Contraceptives Among Female Adolescents (15-19 years) IN SAGNARIGU MUNICIPALITY. In *Pesquisa Veterinaria Brasileira* (Vol. 26, Issue 2). http://www.ufrgs.br/actavet/31-1/artigo552.pdf

Adegboyega, L. O. (2019). Attitude of married women towards contraceptive use in Ilorin Metropolis, Kwara State, Nigeria. *African Health Sciences*, *19*(2), 1875–1880. https://doi.org/10.4314/ahs.v19i2.10

Akinyemi, A. I., Ikuteyijo, O. O., Mobolaji, J. W., Erinfolami, T., & Adebayo, S. O. (2022). Socioeconomic inequalities and family planning utilization among female adolescents in urban slums in Nigeria. *Frontiers in Global Women's Health*, *3*. https://doi.org/10.3389/fgwh.2022.838977

Al-Ridhwany, H., Aljawadi, A., & Abduljawad, M. (2018). Use of induced abortion for birth control by mothers in Iraq. *Eastern Mediterranean Health Journal*, *24*(7), 644–652. https://doi.org/10.26719/2018.24.7.644

Al-showaily, J. S. J. (2021). *The Effect of Positive Reappraisal Intervention Model on Students Attitudes toward Nursing Career*. University Of Babylon.

Al Abedi, G. A. H., Arar, A. A., & Alridh, M. S. A. (2020). Assessment of knowledge, attitude and practices for women's toward family planning in primary health care centers at Al-Amara City/ Iraq. *International Journal of Psychosocial Rehabilitation*, *24*(9), 1881–1886. https://doi.org/10.37200/IJPR/V24I9/PR290208

Al Basri, S. F., Al Abdali, J. A., Alzubaidi, H. M., Almarhabi, A. A., Alzubaidi, M. A., Al Qarni, G., Alzubaidi, N. Y., Aldabli, A.,

Almqaadi, A. K., Alamri, L. A., Alqarni, G. S., Alabdali, A. H., AlGhamdi, B. H., & AlNashri, Z. A. (2022). Knowledge of Reproductive Age Women About Oral Contraceptive Pills in Al-Qunfudah, Saudi Arabia. *Open Access Journal of Contraception*, *Volume 13*(May), 73–74. https://doi.org/10.2147/oajc.s374114

Alameer, M. I., Muqri, K. Y., Awlaqi, A. A., Azyabi, F. Y., Yaqoub, A. M., Suhail, H. M., Shabaan, S., Moafa, M. H., Alhazmi, M. A., & Alhazmi, A. (2022a). Knowledge, Attitude and Practices regarding Contraceptive Pill and Its Side Effects among Women in Jazan Region, Saudi Arabia. *MDPI*, *2022*(12), 268–275. https://doi.org/10.3390/clinpract12030032

Alameer, M. I., Muqri, K. Y., Awlaqi, A. A., Azyabi, F. Y., Yaqoub, A. M., Suhail, H. M., Shabaan, S., Moafa, M. H., Alhazmi, M. A., & Alhazmi, A. (2022b). Knowledge, Attitude and Practices regarding Contraceptive Pill and Its Side Effects among Women in Jazan Region, Saudi Arabia. *Clinics and Practice*, *12*(3), 268–275. https://doi.org/10.3390/clinpract12030032

Alano, A., & Hanson, L. (2018). Women's perception about contraceptive use benefits towards empowerment: A phenomenological study in Southern Ethiopia. *PLoS ONE*, *13*(9), 1–15. https://doi.org/10.1371/journal.pone.0203432

Aldabbagh, R. O., & Al-Qazaz, H. K. (2020). Knowledge and practice of contraception use among females of child-bearing age in Mosul, Iraq. *International Journal of Women's Health*, *12*, 107–113. https://doi.org/10.2147/IJWH.S231529

Alomair, N., Alageel, S., Davies, N., & Bailey, J. V. (2020). Factors influencing sexual and reproductive health of Muslim women: A systematic review. *Reproductive Health*, *17*(1), 1–15.

https://doi.org/10.1186/s12978-020-0888-1

Alsaedi, J. A., Alakel, S. M., & Alalmaei, A. Z. (2018). Assessment of Knowledge, Attitude and Practice towards Family Planning in Saudi Arabia, 2017. *The Egyptian Journal of Hospital Medicine*, *70*(2), 345–348. https://doi.org/10.12816/0043102

Alsammani, M., & Ahmed, S. (2015). Grand Multiparity: Risk Factors and Outcome in a Tertiary Hospital: a Comparative Study. *Materia Socio Medica*, *27*(4), 244. https://doi.org/10.5455/msm.2015.27.244-247

Alspaugh, A., Barroso, J., Reibel, M., & Phillips, S. (2020). Women's Contraceptive Perceptions, Beliefs, and Attitudes: An Integrative Review of Qualitative Research. *Journal of Midwifery and Women's Health*, *65*(1), 64–84. https://doi.org/10.1111/jmwh.12992

Amiri, M., El-Mowafi, I. M., Chahien, T., Yousef, H., & Kobeissi, L. H. (2020). An overview of the sexual and reproductive health status and service delivery among Syrian refugees in Jordan, nine years since the crisis: a systematic literature review. *Reproductive Health*, *17*(1), 1–20. https://doi.org/10.1186/s12978-020-01005-7

Amran, Y., Nasir, N. M., Dachlia, D., Yelda, F., Utomo, B., Ariawan, I., & Damayanti, R. (2019). Perceptions of contraception and patterns of switching contraceptive methods among family-planning acceptors in west nusa tenggara, indonesia. *Journal of Preventive Medicine and Public Health*, *52*(4), 258–264. https://doi.org/10.3961/JPMPH.18.198

Antarini, A. (2021a). Factors influencing the use of modern contraception among reproductive aged women in bangka belitung province, indonesia. *Pan African Medical Journal*, *39*(39), 1–12. https://doi.org/10.11604/pamj.2021.39.39.28870

Antarini, A. (2021b). Factors influencing the use of modern contraception

among reproductive aged women in bangka belitung province, indonesia. *Pan African Medical Journal*, *39*. https://doi.org/10.11604/pamj.2021.39.39.28870

Arbab, A. A., Bener, A., & Abdulmalik, M. (2011). Prevalence, awareness and determinants of contraceptive use in Qatari women. *Eastern Mediterranean Health Journal*, *17*(1), 11–18. https://pdfs.semanticscholar.org/b088/6212c0034a390d8af5a829823e910bd3a00e.pdf

Arousell, J., & Carlbom, A. (2016). Culture and religious beliefs in relation to reproductive health. *Best Practice and Research: Clinical Obstetrics and Gynaecology*, *32*, 77–87. https://doi.org/10.1016/j.bpobgyn.2015.08.011

As-Sanie, S., Mehedintu, C., Mathur, V., Soulban, G., Hunsche, E., Imm, S. J., & Giudice, L. C. (2022). Sustained Improvementin Physicalfunction And Quality Of Life In Women With Endome-Triosis-Associated Pain Treated With Relu- Golix Combination Therapy Over 104 Weeks: Spirit Long-Term Extension Study. *Fertility & Sterility*, *219*, 104–107. http://ci.nii.ac.jp/naid/40015810169/

Ashraf, Q. H., Weil, D. N., & Wilde, J. (2014). The Effect of Fertility Reduction on Economic Growth*. *NIH Public Access*, *39*((1)), 97–130. https://doi.org/10.1111/j.1728-4457.2013.00575.x.The

Asif, M. F., Pervaiz, Z., Afridi, J. R., Abid, G., & Lassi, Z. S. (2021). Role of husband's attitude towards the usage of contraceptives for unmet need of family planning among married women of reproductive age in Pakistan. *BMC Women's Health*, *21*(1), 1–7. https://doi.org/10.1186/s12905-021-01314-4

Balinska, M. A., Nesbitt, R., Ghantous, Z., Ciglenecki, I., & Staderini, N.

(2019). Reproductive health in humanitarian settings in Lebanon and Iraq: Results from four cross-sectional studies, 2014-2015. *Conflict and Health*, *13*(1), 1–10. https://doi.org/10.1186/s13031-019-0210-4

Bawah, A. A., Sato, R., Asuming, P., Henry, E. G., Agula, C., Agyei-Asabere, C., Canning, D., & Shah, I. (2021). Contraceptive method use, discontinuation and failure rates among women aged 15–49 years: evidence from selected low income settings in Kumasi, Ghana. *Contraception and Reproductive Medicine*, *6*(1), 1–10. https://doi.org/10.1186/s40834-021-00151-y

Bekele, D., Surur, F., Nigatu, B., Teklu, A., Getinet, T., Kassa, M., Gebremedhin, M., Gebremichael, B., & Abesha, Y. (2020). Knowledge and attitude towards family planning among women of reproductive age in emerging regions of ethiopia. *Journal of Multidisciplinary Healthcare*, *13*, 1463–1474. https://doi.org/10.2147/JMDH.S277896

Berglas, N. F., Kimport, K., Mays, A., Kaller, S., & Biggs, M. A. (2021). "It's Worked Well for Me": Young Women's Reasons for Choosing Lower-Efficacy Contraceptive Methods. *Journal of Pediatric and Adolescent Gynecology*, *34*(3), 341–347. https://doi.org/10.1016/j.jpag.2020.12.012

Beson, P., Appiah, R., & Adomah-Afari, A. (2018). Modern contraceptive use among reproductive-aged women in Ghana: Prevalence, predictors, and policy implications. *BMC Women's Health*, *18*(1), 1–8. https://doi.org/10.1186/s12905-018-0649-2

Bhatt, N., Bhatt, B., Neupane, B., Karki, A., Bhatta, T., Thapa, J., Basnet, L. B., & Budhathoki, S. S. (2021). Perceptions of family planning services and its key barriers among adolescents and young people in Eastern Nepal: A qualitative study. *PLoS ONE*, *16*(5 May), 1–16. https://doi.org/10.1371/journal.pone.0252184

Birhane, A., Alemayehu, M., Hadush, Z., Medhanyie, A. A., & Ahmed, M. (2018). Factors influencing contraceptive use among women of reproductive age from the pastoralist communities of Afar , Ethiopia : a community-based cross-sectional study. *Ethiop. J. Health Dev.*, *32*.

Bonfatti, A. R. J. and A. (2019). We are still here. *TLS - The Times Literary Supplement*, *5930*, 52pp. https://doi.org/10.7228/manchester/9780719037931.003.0002

Bongimpilo S. Zulu. (2019). *Factors Facilitating And Inhibiting Contraceptive Use Among White University Students In Durban South Africa* (Issue February). University of KwaZulu-Natal Durban.

Britton, L. E., Alspaugh, A., Greene, M. Z., & Mclemore, M. R. (2020). *An Evidence-Based Update on Contraception*. *120*(2), 22–33. https://doi.org/10.1097/01.NAJ.0000654304.29632.a7.An

Brouwaers, L. A. M., Engels, J. A., Heerkens, Y. F., & van der Beek, A. J. (2015). Development of a Vitality Scan related to workers' sustainable employability: a study assessing its internal consistency and construct validity. *BMC Public Health*, *15*(1), 1–8.

Burke, H. M., Ridgeway, K., Murray, K., Mickler, A., Thomas, R., & Williams, K. (2022). Reproductive empowerment and contraceptive self-care: a systematic review. *Sexual and Reproductive Health Matters*, *29*(2). https://doi.org/10.1080/26410397.2022.2090057

Caetano, C., Bliekendaal, S., Engler, Y., & Lombardo, M. (2020). From awareness to usage of long-acting reversible contraceptives: Results of a large European survey. *International Journal of Gynecology and Obstetrics*, *151*(3), 366–376. https://doi.org/10.1002/ijgo.13363

Cahill, N., Sonneveldt, E., Stover, J., Weinberger, M., Williamson, J., Wei, C., Brown, W., & Alkema, L. (2018). Modern contraceptive use, unmet

need, and demand satisfied among women of reproductive age who are married or in a union in the focus countries of the Family Planning 2020 initiative: a systematic analysis using the Family Planning Estimation Tool. *The Lancet*, *391*(10123), 870–882. https://doi.org/10.1016/S0140-6736(17)33104-5

Calhoun, L. M., Mirzoyants, A., Thuku, S., Benova, L., Delvaux, T., van den Akker, T., McGuire, C., Onyango, B., & Speizer, I. S. (2022). Perceptions of peer contraceptive use and its influence on contraceptive method use and choice among young women and men in Kenya: a quantitative cross-sectional study. *Reproductive Health*, *19*(1), 1–12. https://doi.org/10.1186/s12978-022-01331-y

Cavallaro, F. L., Benova, L., Owolabi, O. O., & Ali, M. (2020). A systematic review of the effectiveness of counselling strategies for modern contraceptive methods: what works and what doesn't? *BMJ Sexual and Reproductive Health*, *46*(4), 254–269. https://doi.org/10.1136/bmjsrh-2019-200377

Celik, L. D. C. (2016). *Access to contraceptives in Uganda : Approachability , acceptability , and users' abilities*. *60*(August), 1–43. http://haiweb.org/wp-content/uploads/2016/11/Colliander-Celik-2016-Access-to-Contraceptives-in-Uganda.pdf

Challa, S., Delong, S. M., Carter, N., Johns, N., Shakya, H., Boyce, S. C., Vera-Monroy, R., Aliou, S., Ibrahima, F. A., Brooks, M. I., Corneliess, C., Moodie, C., Nouhou, A. M., Souley, I., Raj, A., & Silverman, J. G. (2019). Protocol for cluster randomized evaluation of reaching married adolescents - A gender-synchronized intervention to increase modern contraceptive use among married adolescent girls and young women and their husbands in Niger. *Reproductive Health*, *16*(1), 1–12. https://doi.org/10.1186/s12978-019-0841-3

Chanchal Goyal, S. 'E.' (2020). *Indian Council of Medical Research*.

Chandra-Mouli, V., & Akwara, E. (2020a). Improving access to and use of contraception by adolescents: What progress has been made, what lessons have been learnt, and what are the implications for action? *Best Practice and Research: Clinical Obstetrics and Gynaecology*, *66*, 107–118. https://doi.org/10.1016/j.bpobgyn.2020.04.003

Chandra-Mouli, V., & Akwara, E. (2020b). Improving access to and use of contraception by adolescents: What progress has been made, what lessons have been learnt, and what are the implications for action? *Best Practice and Research: Clinical Obstetrics and Gynaecology*, *66*, 107–118. https://doi.org/10.1016/j.bpobgyn.2020.04.003

Chandra-Mouli, V., McCarraher, D. R., Phillips, S. J., Williamson, N. E., & Hainsworth, G. (2014). Contraception for adolescents in low and middle income countries: Needs, barriers, and access. *Reproductive Health*, *11*(1), 1–8. https://doi.org/10.1186/1742-4755-11-1

Chandra-Mouli, V., Parameshwar, P. S., Parry, M., Lane, C., Hainsworth, G., Wong, S., Menard-Freeman, L., Scott, B., Sullivan, E., Kemplay, M., & Say, L. (2017). A never-before opportunity to strengthen investment and action on adolescent contraception, and what we must do to make full use of it. *Reproductive Health*, *14*(1), 1–13. https://doi.org/10.1186/s12978-017-0347-9

Chappell, B. T., Griffin, B. L., & Howard, B. (2022). Mechanisms of action of currently available woman-controlled, vaginally administered, non-hormonal contraceptive products. *Therapeutic Advances in Reproductive Health*, *16*, 263349412211071. https://doi.org/10.1177/26334941221107120

Chavula, M. P., Zulu, J. M., & Hurtig, A. K. (2022). Factors influencing

the integration of comprehensive sexuality education into educational systems in low- and middle-income countries: a systematic review. *Reproductive Health*, *19*(1), 1–25. https://doi.org/10.1186/s12978-022-01504-9

Cheedalla, A., Moreau, C., & Burke, A. E. (2020). Sex education and contraceptive use of adolescent and young adult females in the United States: an analysis of the National Survey of Family Growth 2011–2017. *Contraception: X*, *2*, 0–5. https://doi.org/10.1016/j.conx.2020.100048

Claar, C. (2013). *The adoption of computer security: an analysis of home personal computer user behavior using the health belief model*. 149. http://digitalcommons.usu.edu/etd/878/

Cleland, J., Conde-Agudelo, A., Peterson, H., Ross, J., & Tsui, A. (2012). Contraception and health. *The Lancet*, *380*(9837), 149–156. https://doi.org/10.1016/S0140-6736(12)60609-6

Coleman-Minahan, K., & Potter, J. E. (2019). Quality of postpartum contraceptive counseling and changes in contraceptive method preferences. *Contraception*, *100*(6), 492–497. https://doi.org/10.1016/j.contraception.2019.08.011

Cornet, A. (2013). Current challenges in contraception in adolescents and young women. *Current Opinion in Obstetrics and Gynecology*, *25*(SUPPL. 1), 1–10. https://doi.org/10.1097/GCO.0b013e32835e06fd

Dadi, D., Bogale, D., Minda, Z., & Megersa, S. (2020). *Decision-Making Power of Married Women on Family Planning Use and Associated Factors in*. 15–23.

Daniels, K., & Abma, J. C. (2020). Current Contraceptive Status Among Women Aged 15-49: United States, 2017-2019. *NCHS Data Brief*, *388*,

1–8.

Danna, K., Jaworski, G., Rahaivondrafahitra, B., Rasoanirina, F., Nwala, A., Nqumayo, M., Smith, G., Moon, P., Jackson, A., Thurston, S., & Kalamar, A. (2022). Introducing the hormonal Intrauterine Device in Madagascar, Nigeria, and Zambia: results from a pilot study. *Reproductive Health*, *19*(1), 1–12. https://doi.org/10.1186/s12978-021-01300-x

Darney, B. G., Aiken, A. R. A., & Küng, S. (2017). Access to contraception in the context of zika: Health system challenges and responses. *Obstetrics and Gynecology*, *129*(4), 638–642. https://doi.org/10.1097/AOG.0000000000001914

Das, P., Samad, N., Al Banna, H., Sodunke, T. E., Hagan, J. E., Ahinkorah, B. O., & Seidu, A.-A. (2021). Association between media exposure and family planning in Myanmar and Philippines: evidence from nationally representative survey data. *Contraception and Reproductive Medicine*, *6*(1), 1–12. https://doi.org/10.1186/s40834-021-00154-9

de Jonge, H. C. C., Azad, K., Seward, N., Kuddus, A., Shaha, S., Beard, J., Costello, A., Houweling, T. A. J., & Fottrell, E. (2014). Determinants and consequences of short birth interval in rural Bangladesh: A cross-sectional study. *BMC Pregnancy and Childbirth*, *14*(1), 1–7. https://doi.org/10.1186/s12884-014-0427-6

Dehlendorf, C., Krajewski, C., & Borrero, S. (2014). Contraceptive counseling: Best practices to ensure quality communication and enable effective contraceptive use. *Clinical Obstetrics and Gynecology*, *57*(4), 659–673. https://doi.org/10.1097/GRF.0000000000000059

Dehlendorf, C., Reed, R., Fox, E., Seidman, D., Hall, C., & Steinauer, J. (2018). Ensuring our research reflects our values: The role of family

planning research in advancing reproductive autonomy. *Contraception*, *98*(1), 4–7. https://doi.org/10.1016/j.contraception.2018.03.015

Department of Labor. (2022). *FAQs About Families First Coronavirus Response Act and Coronavirus Aid, Relief, and Economic Security Act Implementation Part 43*. 1–16. https://www.dol.gov/sites/dolgov/files/EBSA/about-ebsa/our-activities/resource-center/faqs/aca-part-51.pdf

Desai, S., Jones, R. K., & Castle, K. (2018). Estimating abortion provision and abortion referrals among United States obstetrician-gynecologists in private practice. *Contraception*, *97*(4), 297–302.

Dhakal, U., Shrestha, R. B., Bohara, S. K., & Neupane, S. (2020). Knowledge, Attitude and Practice on Family Planning among Married Muslim Women of Reproductive Age. *Journal of Nepal Health Research Council*, *18*(2), 238–242. https://doi.org/10.33314/jnhrc.v18i2.2244

Dingeta, T., Oljira, L., Worku, A., & Berhane, Y. (2021). Low contraceptive utilization among young married women is associated with perceived social norms and belief in contraceptive myths in rural Ethiopia. *PLoS ONE*, *16*(2 February), 1–15. https://doi.org/10.1371/journal.pone.0247484

Dioubaté, N., Manet, H., Bangoura, C., Sidibé, S., Kouyaté, M., Kolie, D., Ayadi, A. M. El, & Delamou, A. (2021). Barriers to Contraceptive Use Among Urban Adolescents and Youth in Conakry, in 2019, Guinea. *Frontiers in Global Women's Health*, *2*(July), 1–11. https://doi.org/10.3389/fgwh.2021.655929

Dombola, G. M., Manda, W. C., & Chipeta, E. (2021). Factors influencing

contraceptive decision making and use among young adolescents in urban Lilongwe, Malawi: a qualitative study. *Reproductive Health*, *18*(1), 1–11. https://doi.org/10.1186/s12978-021-01259-9

Dragoman, M. V. (2014). The combined oral contraceptive pill- recent developments, risks and benefits. *Best Practice and Research: Clinical Obstetrics and Gynaecology*, *28*(6), 825–834. https://doi.org/10.1016/j.bpobgyn.2014.06.003

Durowade, K. A., Omokanye, L. O., Elegbede, O. E., Adetokunbo, S., Olomofe, C. O., Ajiboye, A. D., Adeniyi, M. A., & Sanni, T. A. (2017). Barriers to Contraceptive Uptake among Women of Reproductive Age in a Semi-Urban Community of Ekiti State, Southwest Nigeria. *Ethiopian Journal of Health Sciences*, *27*(2), 121–128. https://doi.org/10.4314/ejhs.v27i2.4

Ebrahim, N. B., & Atteraya, M. S. (2018). Structural correlates of modern contraceptive use among Ethiopian women. *Health Care for Women International*, *39*(2), 208–219. https://doi.org/10.1080/07399332.2017.1383993

Elamin, H. M., Gadir, I. A., Alhazmi, M. A., & Owisi, N. (2022). The prevalence and factors affecting the use of contraceptive methods among Saudi women in Sabya, Jazan, Saudi Arabia. *Saudi Journal for Health Sciences*, *11*(1), 48. https://doi.org/10.4103/sjhs.sjhs_135_21

Elmusharaf, K., Byrne, E., & O'Donovan, D. (2017). Social and traditional practices and their implications for family planning: A participatory ethnographic study in Renk, South Sudan. *Reproductive Health*, *14*(1), 1–11. https://doi.org/10.1186/s12978-016-0273-2

Ezenwaka, U., Mbachu, C., Ezumah, N., Eze, I., Agu, C., Agu, I., & Onwujekwe, O. (2020). Exploring factors constraining utilization of

contraceptive services among adolescents in Southeast Nigeria: An application of the socio-ecological model. *BMC Public Health*, *20*(1), 1–11. https://doi.org/10.1186/s12889-020-09276-2

Ferenczy, T., & A. (2020). Contraceptive Methods in the United States: the Question of Abortive Mechanisms. *Angewandte Chemie International Edition, 6(11), 951–952.*, *13*, 10–27.

Ghodsi, Z., & Hojjatoleslami, S. (2012). A survey on use of methods & knowledge about contraceptive in married women. *Procedia-Social and Behavioral Sciences*, *46*, 3031–3035.

Godha, D., Hotchkiss, D. R., & Gage, A. J. (2013). Association between child marriage and reproductive health outcomes and service utilization: A multi-country study from south asia. *Journal of Adolescent Health*, *52*(5), 552–558. https://doi.org/10.1016/j.jadohealth.2013.01.021

Gosavi, A., Ma, Y., Wong, H., & Singh, K. (2016). Knowledge and factors determining choice of contraception among Singaporean women. *Singapore Medical Journal*, *57*(11), 610–615. https://doi.org/10.11622/smedj.2015181

Götmark, F., & Andersson, M. (2020). Human fertility in relation to education, economy, religion, contraception, and family planning programs. *BMC Public Health*, *20*(1), 1–17. https://doi.org/10.1186/s12889-020-8331-7

Gottschalk, L. B., & Ortayli, N. (2014). Interventions to improve adolescents' contraceptive behaviors in low- and middle-income countries: A review of the evidence base. *Contraception*, *90*(3), 211–225. https://doi.org/10.1016/j.contraception.2014.04.017

Güney, T. (2017). *Developed-Developing Countries : an Iv (2Sls)*

Approach GeİşmiŞ -GelİŞmekte Olan Ülkelerde Nüfus Artişi VeSürdürülebi Lİ R Kalkinma : Bİ R Iv (2Sls) Yaklaşimi. 1255–1277.

Guthrie, K. M., Rosen, R. K., Guillen, M., Ramirez, J. J., Vargas, S. E., Fava, J. L., Ham, A. S., Katz, D. F., Cu-Uvin, S., Tumilty, S., Smith, K. A., Buckheit, K. W., & Buckheit, R. W. (2022). Designing Dual Compartment HIV Prevention Products: Women's Sensory Perceptions and Experiences of Suppositories for Rectal and Vaginal Use. *AIDS Research and Human Retroviruses*, *38*(7), 601–610. https://doi.org/10.1089/aid.2021.0038

Guure, C., Maya, E. T., Dery, S., Da-Costa Vrom, B., Alotaibi, R. M., Rezk, H. R., & Yawson, A. (2019). Factors influencing unmet need for family planning among Ghanaian married/union women: A multinomial mixed effects logistic regression modelling approach. *Archives of Public Health*, *77*(1), 1–12. https://doi.org/10.1186/s13690-019-0340-6

Hall, K. S., Morhe, E., Manu, A., Harris, L. H., Ela, E., Loll, D., Kolenic, G., Dozier, J. L., Challa, S., Zochowski, M. K., Boakye, A., Adanu, R., & Dalton, V. K. (2018). Factors associated with sexual and reproductive health stigma among adolescent girls in Ghana. *PLoS ONE*, *13*(4), 1–16. https://doi.org/10.1371/journal.pone.0195163

Halwani, R. A., Hashem, A. A. L., Alhusseini, Y. B., Assaggaf, H. A., Hadadi, M. H., Alsayegh, S. A., Althawab, F. H., Alhawal, R. A., Albarakati, S. Y., Alenazi, A. H., & Alghamdi, A. A. (2021). An Overview 0n Family Planning, Methods and Latest Updates. *International Journal Of Pharmaceutical Research And Allied Sciences*, *10*(1), 60–66. https://doi.org/10.51847/gfhh_nr

Hameed, S., Haq, N. U., Haque, N., Nasim, A., Riaz, S., Tahir, M., Saood, M., Yasmin, R., & Zarak, M. S. (2019). Knowledge, Attitude and

Practices (KAP) Regarding Family Planning Services among Married Women of Quetta Pakistan. *International Journal of Research and Reports in Gynaecology*, *2*(1), 1–12. http://www.sdiarticle3.com/review-history/48080

Hamidi, O. P., Deimling, T., Lehman, E., Weisman, C., & Chuang, C. (2018). High Self-Efficacy Is Associated with Prescription Contraceptive Use. *National of Health Institutes*, *28*(6), 139–148. https://doi.org/10.1016/j.whi.2018.04.006.High

Hancock, N. L., Stuart, G. S., Tang, J. H., Chibwesha, C. J., Stringer, J. S. A., & Chi, B. H. (2016). Renewing focus on family planning service quality globally. *Contraception and Reproductive Medicine*, *1*(1), 1–6. https://doi.org/10.1186/s40834-016-0021-6

Haque, I., & Das, D. N. (2018). Book of Abstracts: The 15th Congress of the European Society of Contraception and Reproductive Health. *The European Journal of Contraception & Reproductive Health Care : The Official Journal of the European Society of Contraception*, *23*(April), 1–143. https://doi.org/10.1080/13625187.2018.1442911

Harcourt, H. M. (2016). *American Heritage: Dictionary of the English Language* (Fifth Edit). Houghton Mifflin Harcourt.

Harrington, E. K., Dworkin, S., Withers, M., Onono, M., Kwena, Z., & Newmann, S. J. (2016). Gendered power dynamics and women's negotiation of family planning in a high HIV prevalence setting: a qualitative study of couples in western Kenya. *Culture, Health and Sexuality*, *18*(4), 453–469. https://doi.org/10.1080/13691058.2015.1091507

Harris, M. L., Feyissa, T. R., Bowden, N. A., Gemzell-Danielsson, K., & Loxton, D. (2022). Contraceptive use and contraceptive counselling

interventions for women of reproductive age with cancer: a systematic review and meta-analysis. *BMC Medicine*, *20*(1), 1–15. https://doi.org/10.1186/s12916-022-02690-w

Higgins, J. A., & Smith, N. K. (2016). The Sexual Acceptability of Contraception: Reviewing the Literature and Building a New Concept. *Journal of Sex Research*, *53*(4–5), 417–456. https://doi.org/10.1080/00224499.2015.1134425

Hopkins, J. (2018). *Family Planning A GLOBAL HANDBOOK FOR PROVIDERS* (4th ed.).

Hubacher, D., & Trussell, J. (2015). A definition of modern contraceptive methods. *Contraception*, *92*(5), 420–421. https://doi.org/10.1016/j.contraception.2015.08.008

Huda, F. A., Robertson, Y., Chowdhuri, S., Sarker, B. K., Reichenbach, L., & Somrongthong, R. (2017). Contraceptive practices among married women of reproductive age in Bangladesh: a review of the evidence. *Reproductive Health*, *14*(1), 1–9. https://doi.org/10.1186/s12978-017-0333-2

Ijarotimi, A., Bakare, B., Badejoko, O., Fehintola, A., Loto, O., Orji, E., & Adegoke, A. (2015). Contraceptive uptake among women attending family planning clinic in a Nigerian tertiary health facility: a 6 year review. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, *4*(3), 721–724. https://doi.org/10.18203/2320-1770.ijrcog20150080

Imtishal, M., Mohammadnezhad, M., Baker, P., & Khan, S. (2023). Predictors of Knowledge, Attitude, and Practice (KAP) Towards Family Planning (FP) Among Pregnant Women in Fiji. *Maternal and Child Health Journal*, 1–10. https://doi.org/10.1007/s10995-023-

03618-3

Ismael, A. S., & Sabir Zangana, J. M. (2012). Knowledge, attitudes and practice of condom use among males aged (15-49) years in Erbil Governorate. *Global Journal of Health Science*, *4*(4), 27–36. https://doi.org/10.5539/gjhs.v4n4p27

Ismael, W. I., & Farhood, H. F. (2020). *Evaluation of the Quality of Maternal Health Services in Primary Health-Care Centers by Using Service Provision Assessment*. 117–121. https://doi.org/10.4103/MJBL.MJBL

Ismail, Z., Al-Tawil, N., & Hasan, S. (2014). Knowledge, attitudes, and practices regarding family planning among two groups of women in Erbil. *Zanco Journal of Medical Sciences*, *18*(2), 710–717. https://doi.org/10.15218/zjms.2014.0022

Iwelunmor, J., Blackstone, S., Nwaozuru, U., Obiezu-Umeh, C., Uzoaru, F., Mason, S., Gbaja-Biamila, T., Oladele, D., Ezechi, O., & Airhihenbuwa, C. (2022). Social Enterprises for Child and Adolescent Health in Sub-Saharan Africa: A Realist Evaluation. *Child Behavioral Health in Sub-Saharan Africa: Towards Evidence Generation and Policy Development*, 317–332.

Jaccard, J., & Levitz, N. (2013). Counseling adolescents about contraception: towards the development of an evidence-based protocol for contraceptive counselors. *Journal of Adolescent Health*, *52*(4), S6–S13.

Jacobstein, R., & Polis, C. B. (2014). Progestin-only contraception: Injectables and implants. *Best Practice and Research: Clinical Obstetrics and Gynaecology*, *28*(6), 795–806. https://doi.org/10.1016/j.bpobgyn.2014.05.003

Jacqueline E. Darroch, E. S. and A. B. (2017). Adding It Up: Investing in Contraception and Maternal and Newborn Health, 2017—Supplementary Tables. *Guttmacher Institute*, *April 2019*, 1–4.

Jain, A., Ismail, H., Tobey, E., & Erulkar, A. (2019). Stigma as a barrier to family planning use among married youth in Ethiopia. *Journal of Biosocial Science*, *51*(4), 505–519. https://doi.org/10.1017/S0021932018000305

Jalalvandi, E., Jafari, H., Amorim, C. A., Petri, D. F. S., Nie, L., & Shavandi, A. (2021). Vaginal administration of contraceptives. *Scientia Pharmaceutica*, *89*(1), 1–17. https://doi.org/10.3390/scipharm89010003

Jammeh, S. S. S., Liu, C. Y., Cheng, S. F., & Lee-Hsieh, J. (2014). Community based study on married couples' family planning knowledge, attitude and practice in rural and urban Gambia. *African Health Sciences*, *14*(2), 273–280. https://doi.org/10.4314/ahs.v14i2.1

Johnston, D. S., & Goldberg, E. (2020). Preclinical contraceptive development for men and women. *Biology of Reproduction*, *103*(2), 147–156. https://doi.org/10.1093/biolre/ioaa076

Jonas, K., Duby, Z., Maruping, K., Dietrich, J., Slingers, N., Harries, J., Kuo, C., & Mathews, C. (2020). Perceptions of contraception services among recipients of a combination HIV-prevention interventions for adolescent girls and young women in South Africa: A qualitative study. *Reproductive Health*, *17*(1), 1–14. https://doi.org/10.1186/s12978-020-00970-3

Jones, C. L., Jensen, J. D., Scherr, C. L., Brown, N. R., Christy, K., & Weaver, J. (2015). The Health Belief Model as an Explanatory Framework in Communication Research: Exploring Parallel, Serial,

and Moderated Mediation Christina. *Physiology & Behavior*, *176*(1), 139–148. https://doi.org/10.1080/10410236.2013.873363.The

Kabagenyi, A., Reid, A., Ntozi, J., & Atuyambe, L. (2016). Socio-cultural inhibitors to use of modern contraceptive techniques in rural Uganda: a qualitative study. *Pan African Medical Journal*, *25*, 1–12. https://doi.org/10.11604/PAMJ.2016.25.78.6613

Kane, S., Kok, M., Rial, M., Matere, A., Dieleman, M., & Broerse, J. E. (2016). Social norms and family planning decisions in South Sudan. *BMC Public Health*, *16*(1), 1–12. https://doi.org/10.1186/s12889-016-3839-6

Kaneshiro, B., & Aeby, T. (2010). Long-term safety, efficacy, and patient acceptability of the intrauterine Copper T-380A contraceptive device. *International Journal of Women's Health*, *2*(1), 211–220. https://doi.org/10.2147/ijwh.s6914

Kantorová, V., Wheldon, M. C., Ueffing, P., & Dasgupta, A. N. Z. (2020). Estimating progress towards meeting women's contraceptive needs in 185 countries: A Bayesian hierarchical modelling study. *PLoS Medicine*, *17*(2). https://doi.org/10.1371/JOURNAL.PMED.1003026

Karl, J. A., Fischer, R., Druică, E., Musso, F., & Stan, A. (2022). Testing the Effectiveness of the Health Belief Model in Predicting Preventive Behavior During the COVID-19 Pandemic: The Case of Romania and Italy. *Frontiers in Psychology*, *12*(January). https://doi.org/10.3389/fpsyg.2021.627575

Karthikeyan, S. K., & Kalimuthu, K. (2019). A study on awareness about temporary contraceptive methods among women in reproductive age group. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, *8*(11), 4414.

https://doi.org/10.18203/2320-1770.ijrcog20194866

Kassim, M., & Ndumbaro, F. (2022). Factors affecting family planning literacy among women of childbearing age in the rural Lake zone, Tanzania. *BMC Public Health*, *22*(1), 1–11. https://doi.org/10.1186/s12889-022-13103-1

Kavanaugh, M. L., & Anderson, R. M. (2013). Contraception and beyond: The health benefits of services provided at family planning centers. *Guttmacher Institute*, *July*, 1–39. http://www.guttmacher.org/

Kc, H., Shrestha, M., Pokharel, N., Niraula, S. R., Pyakurel, P., & Parajuli, S. B. (2021). Women's empowerment for abortion and family planning decision making among marginalized women in Nepal: a mixed method study. *Reproductive Health*, *18*(1), 28. https://doi.org/10.1186/s12978-021-01087-x

Khan, M. N., & Islam, M. M. (2022). Women's experience of unintended pregnancy and changes in contraceptive methods: evidence from a nationally representative survey. *Reproductive Health*, *19*(1), 1–11. https://doi.org/10.1186/s12978-022-01492-w

Kim, J. (2023). Female education and its impact on fertility. *IZA World of Labor*, *2*(February), 1–10. https://doi.org/10.15185/izawol.228

Klutse, C. A. (2021). *Contraceptive Use Among Female Adolescents In Twifo Praso Senior Secondary School In The Twifo Atti-Mokwa District In Central Region Of Ghana* (Issue 10402283).

Kreitzer, R. J., Smith, C. W., Kane, K. A., & Saunders, T. M. (2021). Affordable but inaccessible? Contraception deserts in the US states. *Journal of Health Politics, Policy and Law*, *46*(2), 277–304.

Kumar, A., Jain, A. K., Ram, F., Acharya, R., Shukla, A., Mozumdar, A., & Saggurti, N. (2020). Health workers' outreach and intention to use

contraceptives among married women in India. *BMC Public Health*, *20*(1), 1–9. https://doi.org/10.1186/s12889-020-09061-1

Laar, R. A., Shi, S., Ashraf, M. A., Khan, M. N., Bibi, J., & Liu, Y. (2020). Impact of physical activity on challenging obesity in pakistan: A knowledge, attitude, and practice (KAP) study. *International Journal of Environmental Research and Public Health*, *17*(21), 1–15. https://doi.org/10.3390/ijerph17217802

Lam, W. W.-C., Loke, K. S.-H., Loi, H. Y., & Padhy, A. K. (2011). Pancreatic metastasis detected by F-18 FDG PET/CT in a patient with breast cancer. *Clinical Nuclear Medicine*, *36*(6), 479–480.

Lanre, O. (2011). Factors influencing the choice of family planning among couples in Southwest Nigeria. *International Journal of Medicine and Medical Sciences*, *3*(7), 227–232. http://www.academicjournals.org/ijmms

Lassi, Z. S., Dean, S. V., Mallick, D., & Bhutta, Z. A. (2014). Preconception care: Delivery strategies and packages for care. *Reproductive Health*, *11*(3), 1–17. https://doi.org/10.1186/1742-4755-11-S3-S7

Lauring, J. R., Lehman, E. B., Deimling, T. A., Legro, R. S., & Chuang, C. H. (2016). Combined hormonal contraception use in reproductive-age women with contraindications to estrogen use. *American Journal of Obstetrics and Gynecology*, *215*(3), 330.e1-330.e7. https://doi.org/10.1016/j.ajog.2016.03.047

Le Guen, M., Schantz, C., Régnier-Loilier, A., & de La Rochebrochard, E. (2021). Reasons for rejecting hormonal contraception in Western countries: A systematic review. *Social Science and Medicine*, *284*(July). https://doi.org/10.1016/j.socscimed.2021.114247

Lee, A. C. C., Quaiyum, M. A., Mullany, L. C., Mitra, D. K., Labrique, A.,

Ahmed, P., Uddin, J., Rafiqullah, I., DasGupta, S., Mahmud, A., Koumans, E. H., Christian, P., Saha, S., & Baqui, A. H. (2015). Screening and treatment of maternal genitourinary tract infections in early pregnancy to prevent preterm birth in rural Sylhet, Bangladesh: A cluster randomized trial. *BMC Pregnancy and Childbirth*, *15*(1), 1–14. https://doi.org/10.1186/s12884-015-0724-8

Li, Z., Patton, G., Sabet, F., Zhou, Z., Subramanian, S. V., & Lu, C. (2020). Contraceptive Use in Adolescent Girls and Adult Women in Low- And Middle-Income Countries. *JAMA Network Open*, *3*(2), 1–15. https://doi.org/10.1001/jamanetworkopen.2019.21437

Limbu, Y. B., Gautam, R. K., & Pham, L. (2022). The Health Belief Model Applied to COVID-19 Vaccine Hesitancy: A Systematic Review. *Vaccines*, *10*(6), 1–13. https://doi.org/10.3390/vaccines10060973

Loewenberg Weisband, Y., Keder, L. M., Keim, S. A., & Gallo, M. F. (2017). Postpartum intentions on contraception use and method choice among breastfeeding women attending a university hospital in Ohio: a cross-sectional study. *Reproductive Health*, *14*(1), 1–8. https://doi.org/10.1186/s12978-017-0307-4

Machiyama, K., Casterline, J. B., Mumah, J. N., Huda, F. A., Obare, F., Odwe, G., Kabiru, C. W., Yeasmin, S., & Cleland, J. (2017). Reasons for unmet need for family planning, with attention to the measurement of fertility preferences: protocol for a multi-site cohort study. *Reproductive Health*, *14*(1), 1–11. https://doi.org/10.1186/s12978-016-0268-z

Machiyama, K., Huda, F. A., Ahmmed, F., Odwe, G., Obare, F., Mumah, J. N., Wamukoya, M., Casterline, J. B., & Cleland, J. (2018). Women's attitudes and beliefs towards specific contraceptive methods in Bangladesh and Kenya. *Reproductive Health*, *15*(1), 1–15.

https://doi.org/10.1186/s12978-018-0514-7

MacQuarrie, K. L. D., & Aziz, A. (2022). Women's decision-making and contraceptive use in Pakistan: an analysis of Demographic and Health Survey data. *Sexual and Reproductive Health Matters*, *29*(2), 1–2. https://doi.org/10.1080/26410397.2021.2020953

Mahfouz, M. S., Elmahdy, M., Ryani, M. A., Abdelmola, A. O., Kariri, S. A. A., Alhazmi, H. Y. A., Almalki, S. H. M., Adhabi, O. M., Ali Hindi, S. M., Muqri, N. M., & Towhary, B. A. (2023). Contraceptive Use and the Associated Factors among Women of Reproductive Age in Jazan City, Saudi Arabia: A Cross-Sectional Survey. *International Journal of Environmental Research and Public Health*, *20*(1). https://doi.org/10.3390/ijerph20010843

Marfatia, Y., Pandya, I., & Mehta, K. (2015). Condoms: Past, present, and future. *Indian Journal of Sexually Transmitted Diseases*, *36*(2), 133–139. https://doi.org/10.4103/0253-7184.167135

Martell, S., Marini, C., Kondas, C. A., & Deutch, A. B. (2023). Psychological side effects of hormonal contraception: a disconnect between patients and providers. *Contraception and Reproductive Medicine*, *8*(1), 1–11. https://doi.org/10.1186/s40834-022-00204-w

Marwah I. Al Ameen, & Lamia Dhia Al Deen. (2016). Knowledge, Attitudes and Practices of Family Planning among a Sample of Women Attending Primary Health Care Centers in Al-Karkh. *Iraqi Med J*, *62*(2), 115–124.

Masuda, C., Oreglia, E., Ly, S., McLaren, M., Free, C., Tijamo, C., Ou, A., van Velthoven, M. H., Williamson, A., & Smith, C. (2020). Family planning practices of women working in the Cambodian garment industry: a qualitative study. *Contraception and Reproductive*

Medicine, *5*(1), 1–11. https://doi.org/10.1186/s40834-020-00116-7

Mbachu, C. O., Agu, I. C., Obayi, C., Eze, I., Ezumah, N., & Onwujekwe, O. (2021). Beliefs and misconceptions about contraception and condom use among adolescents in south-east Nigeria. *Reproductive Health*, *18*(1), 1–8. https://doi.org/10.1186/s12978-020-01062-y

Mboane, R., & Bhatta, M. P. (2015). Influence of a husband's healthcare decision making role on a woman's intention to use contraceptives among Mozambican women. *Reproductive Health*, *12*(1), 1–8. https://doi.org/10.1186/s12978-015-0010-2

Mekonnen, A. G., Bayleyegn, A. D., Aynalem, Y. A., Adane, T. D., Muluneh, M. A., & Asefa, M. (2020). Level of knowledge, attitude, and practice of family planning and associated factors among disabled persons, north-shewa zone, Amhara regional state, Ethiopia. *Contraception and Reproductive Medicine*, *5*(1), 1–7. https://doi.org/10.1186/s40834-020-00111-y

Milhausen, Sakaluk, R. R. and, Fisher, J. K. and, Davis, T. D. and, Yarber, C. M. and, & L, W. (2019). *Sexuality-Related Measures* (Fourth). Routledge.

Montano, D. E., & Kasprzyk, D. (2015). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. *Health Behavior: Theory, Research and Practice*, *70*(4), 231.

Moradi, Z., Tavafian, S. S., & Kazemi, S. S. (2022). Educational intervention program based on health belief model and neck pain prevention behaviors in school teachers in Tehran. *BMC Public Health*, *22*(1), 1–9. https://doi.org/10.1186/s12889-022-13873-8

Moreira, L. R., Ewerling, F., Barros, A. J. D., & Silveira, M. F. (2019). Reasons for nonuse of contraceptive methods by women with demand

for contraception not satisfied: An assessment of low and middle-income countries using demographic and health surveys. *Reproductive Health*, *16*(1), 1–15. https://doi.org/10.1186/s12978-019-0805-7

Mosadeghrad, A. M. (2014). Factors influencing healthcare service quality. *International Journal of Health Policy and Management*, *3*(2), 77–89. https://doi.org/10.15171/ijhpm.2014.65

Mozumdar, A., Gautam, V., Gautam, A., Dey, A., Uttamacharya, Saith, R., Achyut, P., Kumar, A., Aruldas, K., Chakraverty, A., Agarwal, D., Verma, R., Nanda, P., Krishnan, S., & Saggurti, N. (2019). Choice of contraceptive methods in public and private facilities in rural India. *BMC Health Services Research*, *19*(1), 1–10. https://doi.org/10.1186/s12913-019-4249-0

Munakampe, M. N., Zulu, J. M., & Michelo, C. (2018). Contraception and abortion knowledge, attitudes and practices among adolescents from low and middle-income countries: A systematic review. *BMC Health Services Research*, *18*(1), 1–13. https://doi.org/10.1186/s12913-018-3722-5

Mustafa, G., Azmat, S. K., Hameed, W., Ali, S., Ishaque, M., Hussain, W., Ahmed, A., & Munroe, E. (2015). Family Planning Knowledge, Attitudes, and Practices among Married Men and Women in Rural Areas of Pakistan: Findings from a Qualitative Need Assessment Study. *International Journal of Reproductive Medicine*, *2015*, 1–8. https://doi.org/10.1155/2015/190520

Mutumba, M., Wekesa, E., & Stephenson, R. (2018). Community influences on modern contraceptive use among young women in low and middle-income countries: A cross-sectional multi-country analysis. *BMC Public Health*, *18*(1), 1–9. https://doi.org/10.1186/s12889-018-5331-y

Mwaisaka, J., Gonsalves, L., Thiongo, M., Waithaka, M., Sidha, H., Agwanda, A., Mukiira, C., & Gichangi, P. (2020). Exploring contraception myths and misconceptions among young men and women in Kwale County, Kenya. *BMC Public Health*, *20*(1), 1–10. https://doi.org/10.1186/s12889-020-09849-1

Nair, L., & Adetayo, O. A. (2019). Cultural Competence and Ethnic Diversity in Healthcare. *Plastic and Reconstructive Surgery - Global Open*, *7*(5), E2219. https://doi.org/10.1097/GOX.0000000000002219

Namasivayam, A., Schluter, P. J., Namutamba, S., & Lovell, S. (2022). Understanding the contextual and cultural influences on women's modern contraceptive use in East Uganda: A qualitative study. *PLOS Global Public Health*, *2*(8), e0000545. https://doi.org/10.1371/journal.pgph.0000545

Nations, U. (2015). World Population Prospects The 2015 Revision. *Department of Economic and Social Affairs Population Division ESA/P/WP.241*. https://www.ptonline.com/articles/how-to-get-better-mfi-results

Ndayizigiye, M., Fawzi, M. C. S., Lively, C. T., & Ware, N. C. (2017). Understanding low uptake of contraceptives in resource-limited settings: a mixed-methods study in rural Burundi. *BMC Health Services Research*, *17*(1), 1–12. https://doi.org/10.1186/s12913-017-2144-0

Nelson, D. B., Moniz, M. H., & Davis, M. M. (2018). Population-level factors associated with maternal mortality in the United States, 1997-2012. *BMC Public Health*, *18*(1), 1–7. https://doi.org/10.1186/s12889-018-5935-2

Nethery, E., Schummers, L., Maginley, K. S., Dunn, S., & Norman, W. V.

(2019). Household income and contraceptive methods among female youth: a cross-sectional study using the Canadian Community Health Survey (2009-2010 and 2013-2014). *CMAJ Open*, *7*(4), E646–E653. https://doi.org/10.9778/cmajo.20190087

Newmann, S. J., Zakaras, J. M., Dworkin, S. L., Withers, M., Ndunyu, L., Gitome, S., Gorrindo, P., Bukusi, E. A., & Rocca, C. H. (2021). Measuring Men's Gender Norm Beliefs Related to Contraception: Development of the Masculine Norms and Family Planning Acceptance Scale. *Archives of Sexual Behavior*, *50*(6), 2691–2702. https://doi.org/10.1007/s10508-021-01941-w

Obasohan, P. (2014). Religion, Ethnicity and Contraceptive Use among Reproductive age Women in Nigeria. *International Journal of MCH and AIDS (IJMA)*, *3*(1), 63–73. https://doi.org/10.21106/ijma.39

Ochako, R., Mbondo, M., Aloo, S., Kaimenyi, S., Thompson, R., Temmerman, M., & Kays, M. (2015). Barriers to modern contraceptive methods uptake among young women in Kenya: A qualitative study Global Health. *BMC Public Health*, *15*(1), 1–9. https://doi.org/10.1186/s12889-015-1483-1

Opare-Addo, M. N. A., Osei, F. A., Buabeng, K. O., Marfo, A. F., Nyanor, I., Amuzu, E. X., Ansong, D., & Owusu-Dabo, E. (2020). Healthcare services utilisation among patients with hypertension and diabetes in rural Ghana. *African Journal of Primary Health Care and Family Medicine*, *12*(1), 1–8. https://doi.org/10.4102/PHCFM.V12I1.2114

P, H. (2014). Department of health and human services. *Journal of Emergency Nursing*, *26*(3), 242–246. https://doi.org/10.1067/men.2000.106173

Patel, R., Babady, E., Theel, E. S., Storch, G. A., Pinsky, B. A., St. George,

K., Smith, T. C., & Bertuzzi, S. (2020). Report from the American Society for Microbiology COVID-19 International Summit, 23 March 2020: value of diagnostic testing for SARS–CoV-2/COVID-19. In *MBio* (Vol. 11, Issue 2, pp. 10–1128). Am Soc Microbiol.

Pawłowska, P., Ozga-Stachurska, A., & Wójcik-Grudzień, J. (2022). *Contraception - methods, effectiveness and safety Paulina Pawłowska*. 0–2.

Pazol, K., Zapata, L. B., Tregear, S. J., Mautone-Smith, N., & Gavin, L. E. (2015). Impact of Contraceptive Education on Contraceptive Knowledge and Decision Making: A Systematic Review. *American Journal of Preventive Medicine*, *49*(2), S46–S56. https://doi.org/10.1016/j.amepre.2015.03.031

Polit, D. F., & Beck, C. T. (2014). Ethics in research. *Essentials of Nursing Research: Appraising Evidence for Nursing Practice*, *84*.

Prata, N., Bell, S., Fraser, A., Carvalho, A., Neves, I., & Nieto-Andrade, B. (2019). Partner support for family planning and modern contraceptive use in Luanda, Angola. *African Journal of Reproductive Health*, *23*(1), 35–48.

Prata, N., Fraser, A., Huchko, M. J., Gipson, J. D., Withers, M., Lewis, S., Ciaraldi, E. J., & Upadhyay, U. D. (2017). Women's empowerment and family planning: A review of the literature. *Journal of Biosocial Science*, *49*(6), 713–743. https://doi.org/10.1017/S0021932016000663

Program, fedral employ. (2022). internal condom. *Pharmacy and Medical Policy Committee*.

Rademacher, K. H., Sergison, J., Glish, L., Maldonado, L. Y., Mackenzie, A., Nanda, G., & Yacobson, I. (2018). Menstrual bleeding changes are normal: Proposed counseling tool to address common reasons for non-

use and discontinuation of contraception. *Global Health Science and Practice*, *6*(3), 603–610. https://doi.org/10.9745/GHSP-D-18-00093

Rakhi, J., & Sumathi, M. (2011). Contraceptive methods: Needs, options and utilization. *Journal of Obstetrics and Gynecology of India*, *61*(6), 626–634. https://doi.org/10.1007/s13224-011-0107-7

Rana, M. J., Gautam, A., Goli, S., Uttamacharya, Reja, T., Nanda, P., Datta, N., & Verma, R. (2019). Planning of births and maternal, child health, and nutritional outcomes: recent evidence from India. *Public Health*, *169*, 14–25. https://doi.org/10.1016/j.puhe.2018.11.019

Ranatunga, I. D. J. C., & Jayaratne, K. (2020). Proportion of unplanned pregnancies, their determinants and health outcomes of women delivering at a teaching hospital in Sri Lanka. *BMC Pregnancy and Childbirth*, *20*(1), 1–15. https://doi.org/10.1186/s12884-020-03259-2

Rattan, S., Kalia, M., Rohilla, R., Grover, P. K., Dandona, S., Sharma, M. K., Bhandari, P., Dalal, M., & Goel, N. K. (2022). *Contraceptive awareness and practices in reproductive age couples : A study from urban slums of Punjab*. https://doi.org/10.4103/jfmpc.jfmpc

Regidor, P. A. (2018). The clinical relevance of progestogens in hormonal contraception: Present status and future developments. *Oncotarget*, *9*(77), 34628–34638. https://doi.org/10.18632/oncotarget.26015

Saied, N. H. (2021). Family Planning Methods Knowledge, Attitude And Usage Among Married Women In Reproductive Age In Mosul City. *Systematic Reviews in Pharmacy*, *12*(1), 891–896.

Samira M. Ebrahim, N. K. M. (2011). Knowledge, Attitude And Practice Of Family Planning Among Women In Basrah City South Of Iraq. *The Medical Journal Of Basrahh University Knowledge*, *29*(2011), 1–2.

Sánchez-Borrego, R., & Sánchez-Prieto, M. (2021). What are the

mechanisms of action of the different contraceptive methods to reduce the risk of ovarian cancer? *European Journal of Contraception and Reproductive Health Care*, *26*(1), 79–84. https://doi.org/10.1080/13625187.2020.1849617

Sawhill, I., Karpilow, Q., & Venator, J. (2014). The Impact of Unintended Childbearing on Future Generations. *Centre on Children and Families at Brookings*, *September*, 1–30. https://www.brookings.edu/wp-content/uploads/2016/06/12_impact_unintended_childbearing_future_sawhill.pdf

Schrumpf, L. A., Stephens, M. J., Nsarko, N. E., Akosah, E., Baumgartner, J. N., Ohemeng-Dapaah, S., & Watt, M. H. (2020). Side effect concerns and their impact on women's uptake of modern family planning methods in rural Ghana: A mixed methods study. *BMC Women's Health*, *20*(1), 1–8. https://doi.org/10.1186/s12905-020-0885-0

Schwartz, J. L., Weiner, D. H., Lai, J. J., Frezieres, R. G., Creinin, M. D., Archer, D. F., Bradley, L., Barnhart, K. T., Poindexter, A., Kilbourne-Brook, M., Callahan, M. M., & Mauck, C. K. (2015). Contraceptive efficacy, safety, fit, and acceptability of a single-size diaphragm developed with end-user input. *Obstetrics and Gynecology*, *125*(4), 895–903. https://doi.org/10.1097/AOG.0000000000000721

Sedgh, G., Singh, S., & Hussain, R. (2014). Intended and unintended pregnancies worldwide in 2012 and recent trends. *Studies in Family Planning*, *45*(3), 301–314. https://doi.org/10.1111/j.1728-4465.2014.00393.x

Sedlander, E., Dahal, M., Bingenheimer, J. B., Puri, M. C., Rimal, R. N., Granovsky, R., & Diamond-Smith, N. G. (2023). Adapting and Validating the G-NORM (Gender Norms Scale) in Nepal: An Examination of How Gender Norms Are Associated with Agency and

Reproductive Health Outcomes. *Studies in Family Planning*, *54*(1), 181–200.

Sedlander, E., & Rimal, R. N. (2019). Beyond individual-level theorizing in social norms research: how collective norms and media access affect adolescents' use of contraception. *Journal of Adolescent Health*, *64*(4), S31–S36.

Semachew Kasa, A., Tarekegn, M., & Embiale, N. (2018). Knowledge, attitude and practice towards family planning among reproductive age women in a resource limited settings of Northwest Ethiopia. *BMC Research Notes*, *11*(1), 7–12. https://doi.org/10.1186/s13104-018-3689-7

Sensoy, N., Korkut, Y., Akturan, S., Yilmaz, M., Tuz, C., & Tuncel, B. (2018). Factors Affecting the Attitudes of Women toward Family Planning. *Family Planning*. https://doi.org/10.5772/intechopen.73255

Shabana, A., P.m., D., & mahadeo Shinde. (2014). Knowledge of Contraceptives Methods and\nAppraisal of Health Education among Married \nWoman. *International Journal Of Science And Research*, *3*(3), 584–590. httpwww.ijsr.netarchivev3i3MDIwMTMxMjQ3.pdf

Shabila, N. P., Ahmed, H. M., & Yasin, M. Y. (2014). Women's views and experiences of antenatal care in Iraq: A Q methodology study. *BMC Pregnancy and Childbirth*, *14*(1). https://doi.org/10.1186/1471-2393-14-43

Shah, A. M., Lee, K., & Mir, J. N. (2021). Exploring readiness for birth control in improving women health status: Factors influencing the adoption of modern contraceptives methods for family planning practices. *International Journal of Environmental Research and Public Health*, *18*(22). https://doi.org/10.3390/ijerph182211892

Shan, S., Xu, F., Hirschfeld, M., & Brenig, B. (2021). Sperm lipid markers of male fertility in mammals. *International Journal of Molecular Sciences*, *22*(16). https://doi.org/10.3390/ijms22168767

Sherpa, S. Z., Sheilini, M., & Nayak, A. (2013). Knowledge, attitude, practice and preferences of contraceptive methods in udupi district, karnataka. *Journal of Family & Reproductive Health*, *7*(3), 115–120. http://www.ncbi.nlm.nih.gov/pubmed/24971113%0Ahttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC4064783

Shoupe, D. (2016). LARC methods: entering a new age of contraception and reproductive health. *Contraception and Reproductive Medicine*, *1*(1), 1–9. https://doi.org/10.1186/s40834-016-0011-8

Sidibé, S., Kolié, D., Grovogui, F. M., Kourouma, K., Camara, B. S., Delamou, A., & Kouanda, S. (2022). Knowledge, attitudes, and practices of health providers regarding access to and use of contraceptive methods among adolescents and youth in urban Guinea. *Frontiers in Public Health*, *10*. https://doi.org/10.3389/fpubh.2022.953806

Silumbwe, A., Nkole, T., Munakampe, M. N., Milford, C., Cordero, J. P., Kriel, Y., Zulu, J. M., & Steyn, P. S. (2018). Community and health systems barriers and enablers to family planning and contraceptive services provision and use in Kabwe District, Zambia. *BMC Health Services Research*, *18*(1), 1–11. https://doi.org/10.1186/s12913-018-3136-4

Snow, C. E., & Dibner, K. A. (2016). Science literacy: Concepts, contexts, and consequences. In *Science Literacy: Concepts, Contexts, and Consequences*. https://doi.org/10.17226/23595

Staveteig, S. (2017). Fear, opposition, ambivalence, and omission: Results

from a follow-up study on unmet need for family planning in Ghana. *PLoS ONE*, *12*(7), 1–28. https://doi.org/10.1371/journal.pone.0182076

Steinberg, J. R., Marthey, D., Xie, L., & Boudreaux, M. (2021). Contraceptive method type and satisfaction, confidence in use, and switching intentions. *Contraception*, *104*(2), 176–182. https://doi.org/10.1016/j.contraception.2021.02.010

Stephen Searle, E. (2014). The intrauterine device and the intrauterine system. *Best Practice and Research: Clinical Obstetrics and Gynaecology*, *28*(6), 807–824. https://doi.org/10.1016/j.bpobgyn.2014.05.004

Stifani, B. M., Smith, A., Avila, K., Boos, E. W., Ng, J., Levi, E. E., & Benfield, N. C. (2020). *Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on Elsevier Connect , the company ' s public news and information . January*.

Strasser, J., Borkowski, L., Couillard, M., Allina, A., & Wood, S. (2016). *Bridging the Divide White Paper: Long-Acting Reversible Contraception (LARC) in the United States*. 1–74. http://hsrc.himmelfarb.gwu.edu/sphhs_centers_jacobs%5Cnhttp://hsrc.himmelfarb.gwu.edu/sphhs_centers_jacobs/7

Sumargo, B. (2018). Comparing Better Environmental Knowledge Based on Education and Income Using the Odds Ratio. *Procedia Computer Science*, *135*(2018), 105–112. https://doi.org/10.1016/j.procs.2018.08.155

Syeda, H. B., Syed, M., Sexton, K., Syed, S., Begum, S., Syed, F., & Yu, F. (2020). *The Role of Machine Learning Techniques to Tackle*

COVID- 19 Crisis : A Systematic Review .

Tanabe, M., Myers, A., Bhandari, P., Cornier, N., Doraiswamy, S., & Krause, S. (2017). Family planning in refugee settings: findings and actions from a multi-country study. *Conflict and Health*, *11*(1), 1–12. https://doi.org/10.1186/s13031-017-0112-2

Thao, C., Perez, M. A., Thao, T., & Vue, K. (2020). Contraceptive attitudes and beliefs among hmong young adults. *Revista de La Facultad de Medicina Humana*, *20*(2), 29–36. https://doi.org/10.25176/rfmh.v20i2.2915

Tilahun, W., & Dinkinesh, B. (2021). Assessment of Knowledge, Attitude and Practice of Contraceptive Use among Postpartum Women in Jimma University Medical Center, Jimma Town, South West Ethiopia. *International Journal of Women's Health and Wellness*, *7*(2), 1–11. https://doi.org/10.23937/2474-1353/1510130

Tsikouras, P., Galazios, G., Anthoulaki, X., Chalkidou, A., Deuteraiou, T., Koutsogiannis, M., Babageorgaka, I., Gaitatzi, F., Nikolettos, K., Zervoudis, S., & Nikolettos, N. (2020). Family Planning Laboratory Review of Factors Affecting the Choice of Contraceptive Methods in Three Teenagers Populations in Thrace, Greece. *Archives of Obstetrics and Gynaecology*, *1*(1), 13–22. https://doi.org/10.33696/gynaecology.1.003

Tull, K. (2020). *Barriers to family planning in Iraq and KRI*.

Turner, N. (2021). *Influence of Religion and Religiosity on Fertility and Contraceptive Use in Continental Sub-Saharan Africa: A Comprehensive Review*. *June*.

Vogels-Broeke, M., Daemers, D., Budé, L., de Vries, R., & Nieuwenhuijze, M. (2022). Sources of information used by women during pregnancy

and the perceived quality. *BMC Pregnancy and Childbirth*, *22*(1), 1–12. https://doi.org/10.1186/s12884-022-04422-7

Vouking, M. Z., Evina, C. D., & Tadenfok, C. N. (2014). Male involvement in family planning decision making in sub-Saharan Africa- what the evidence suggests. *Pan African Medical Journal*, *19*, 1–5. https://doi.org/10.11604/pamj.2014.19.349.5090

Weitzman, A., Barber, J., & Kusunoki, Y. (2019). Sexual Concurrency and Contraceptive Use Among Young Adult Women. *Demography*, *56*(2), 549–572. https://doi.org/10.1007/s13524-019-00762-w

Whidden, C., Keita, Y., Treleaven, E., Beckerman, J., Johnson, A., Cissé, A., Liu, J., & Kayentao, K. (2021). Women's empowerment, intrahousehold influences, and health system design on modern contraceptive use in rural Mali: a multilevel analysis of cross-sectional survey data. *Reproductive Health*, *18*(1), 1–16. https://doi.org/10.1186/s12978-020-01061-z

White, W., Brenman, S., Paradis, E., Goldsmith, E. S., Lunn, M. R., Obedin-Maliver, J., Stewart, L., Tran, E., Wells, M., & Chamberlain, L. J. (2015). Lesbian, gay, bisexual, and transgender patient care: medical students' preparedness and comfort. *Teaching and Learning in Medicine*, *27*(3), 254–263.

Williams, S. M. (2019). *Strategic and Subversive: The Case of the Disappearing Diaphragm and Women's Information Practices*. https://ir.lib.uwo.ca/etd/6437

Wiyeh, A. B., Mome, R. K. B., Mahasha, P. W., Kongnyuy, E. J., & Wiysonge, C. S. (2020). Effectiveness of the female condom in preventing HIV and sexually transmitted infections: A systematic review and meta-analysis. *BMC Public Health*, *20*(1), 1–17.

https://doi.org/10.1186/s12889-020-8384-7

Wong, M. C. S., Wong, E. L. Y., Huang, J., Cheung, A. W. L., Law, K., Chong, M. K. C., Ng, R. W. Y., Lai, C. K. C., Boon, S. S., Lau, J. T. F., Chen, Z., & Chan, P. K. S. (2021). Acceptance of the COVID-19 vaccine based on the health belief model: A population-based survey in Hong Kong. *Vaccine*, *39*(7), 1148–1156. https://doi.org/10.1016/j.vaccine.2020.12.083

World Blank Group. (2017). *Iraq Systematic Country Diagnostic*. *112333*, 79.

Wulifan, J. K., Brenner, S., Jahn, A., & De Allegri, M. (2016). A scoping review on determinants of unmet need for family planning among women of reproductive age in low and middle income countries. *BMC Women's Health*, *16*(1). https://doi.org/10.1186/s12905-015-0281-3

Wulifan, J. K., Mazalale, J., Kambala, C., Angko, W., Asante, J., Kpinpuo, S., & Kalolo, A. (2019). Prevalence and determinants of unmet need for family planning among married women in Ghana-a multinomial logistic regression analysis of the GDHS, 2014. *Contraception and Reproductive Medicine*, *4*(1), 1–14. https://doi.org/10.1186/s40834-018-0083-8

Yao, C., Feng, K., & Hubacek, K. (2015). Driving forces of CO2 emissions in the G20 countries: An index decomposition analysis from 1971 to 2010. *Ecological Informatics*, *26*(P1), 93–100. https://doi.org/10.1016/j.ecoinf.2014.02.003

Yaya, S., Uthman, O. A., Ekholuenetale, M., & Bishwajit, G. (2018). Women empowerment as an enabling factor of contraceptive use in sub-Saharan Africa: A multilevel analysis of cross-sectional surveys of 32 countries. *Reproductive Health*, *15*(1), 1–12.

https://doi.org/10.1186/s12978-018-0658-5

Yazdkhasti, M., Pourreza, A., Pirak, A., & Abdi, F. (2015). Unintended pregnancy and its adverse social and economic consequences on health system: A narrative review article. *Iranian Journal of Public Health*, *44*(1), 12–21.

Yee, L., & Simon, M. (2010). The role of the social network in contraceptive decision-making among young, African American and Latina Women. *Journal of Adolescent Health*, *47*(4), 374–380. https://doi.org/10.1016/j.jadohealth.2010.03.014

Zegeye, B., Ahinkorah, B. O., Idriss-Wheeler, D., Olorunsaiye, C. Z., Adjei, N. K., & Yaya, S. (2021). Modern contraceptive utilization and its associated factors among married women in Senegal: a multilevel analysis. *BMC Public Health*, *21*(1), 1–13. https://doi.org/10.1186/s12889-021-10252-7

Zimmerman, L. A., Sarnak, D. O., Karp, C., Wood, S. N., Moreau, C., Kibira, S. P. S., & Makumbi, F. (2021). Family Planning Beliefs and Their Association with Contraceptive Use Dynamics: Results from a Longitudinal Study in Uganda. *Studies in Family Planning*, *52*(3), 241–258. https://doi.org/10.1111/sifp.12153

Appendices

Appendix – A: Ethical Approval

Appendix – B1: College Approval

Appendix – B2: Health Directorate Approval

Appendix – C: Questionnaire of The Study

Appendix – D: Panel of Experts

Appendix – E: Linguistic Certification

Appendix A: Ethical Approval

1. The official Ethical approval from College of Nursing/ University of Babylon:

University of Babylon
College of Nursing
Research Ethics Committee

جـامـعة بـابـل
كـلية التمريـض
لجنة اخلاقيات البحث العلمي

Issue No:
Date: / /2022

Approval Letter

To,

ISRAA DHEYAA MOHAMMED

The Research Ethics committee at the **University of Babylon, College of Nursing** has reviewed and discussed your application to conduct the research study entitled **" knowledge, Attitude and Practices Towards Contraceptive Methods Among Married Women in AL RifaiCity "**

The Following documents have been reviewed and approved:

1. Research protocol
2. Research instrument/s
3. Participant informed consent

Committee Decision.

The committee approves the study to be conducted in the presented form. The Research Ethics committee expects to be informed about any changes occurring during the study, any revision in the protocol and participant informed consent.

Prof. Dr. Salma K. Jehad
Chair Committee
College of Nursing
Research Ethical Committee
10 /8/2022

Appendix B1: College Approval

Official Approval from College of Cursing/ University of Babylon:

Ministry of Higher Education and Scientific Research
وزارة التعليم العالي والبحث العلمي
University of Babylon
College of Nursing
جامعة بابل
كلية التمريض
لجنة الدراسات العليا

العدد : ٣٢٢٦
التاريخ : ٢٠٢٢/٩/٢٦

Ref. No. :
Date: / /

الى / دائرة صحة ذي قار
م/ تسهيل مهمة

تحية طيبة :
يطيب لنا حسن التواصل معكم ويرجى تفضلكم بتسهيل مهمة طالبة الدكتوراه (اسراء ضياء محمد) لغرض جمع عينة دراسة الدكتوراه والخاصة بالبحث الموسوم :

معارف واتجاهات وممارسات طرق منع الحمل عند النساء المتزوجات في مدينة الرفاعي .

Knowledge, Attitude and Practices towards contraceptive methods among married women in AL-Rifai city

مع الاحترام ...

كلية التمريض
المعاون العلمي

ا. د. نهاد محمد قاسم الدوري
معاون العميد للشؤون العلمية والدراسات العليا
2022 /9/ 26

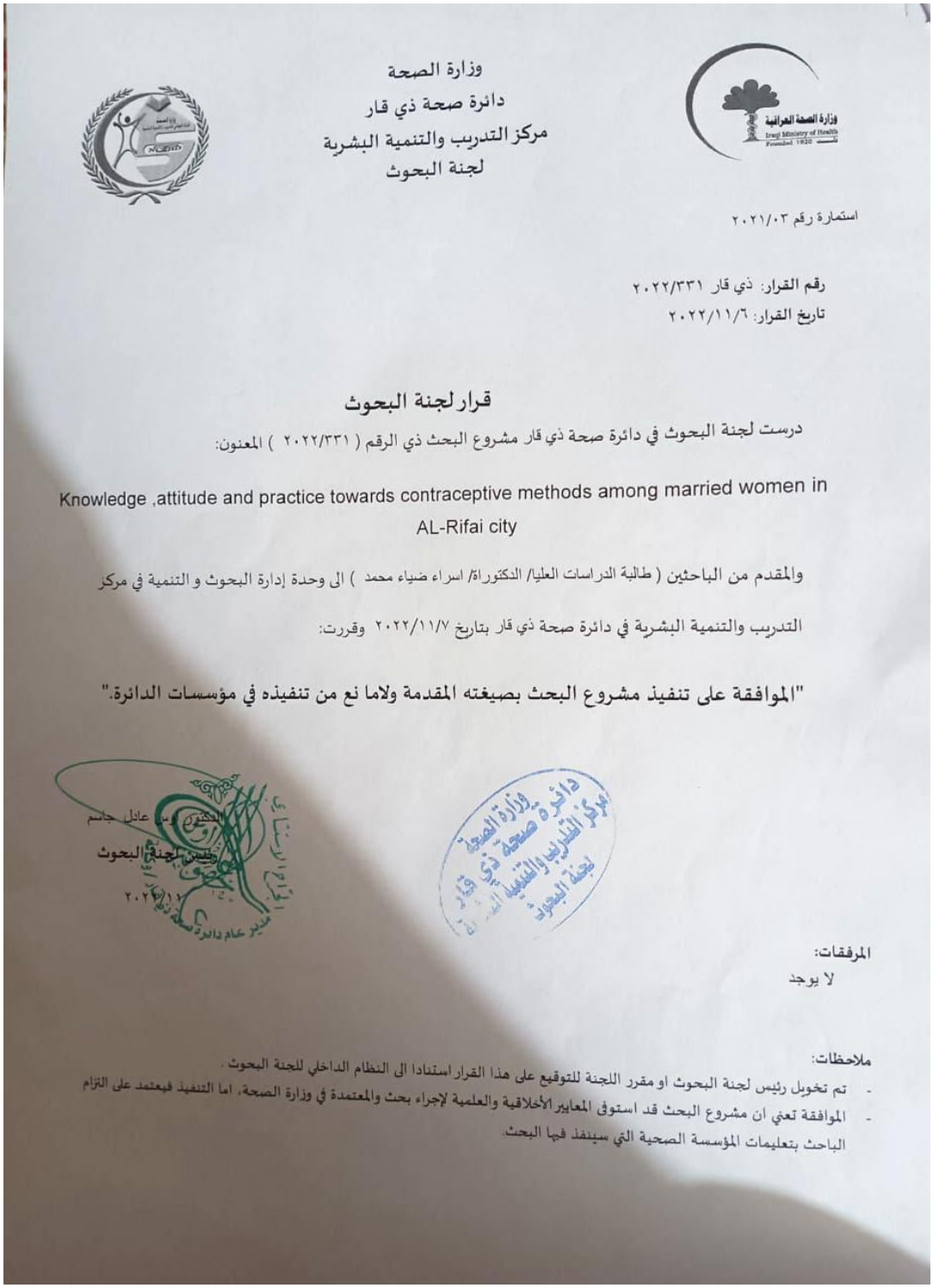
المرفقات //
- بروتوكول.
- استبانة.

صورة عنه الى //
- مكتب السيد العميد للتفضل بالاطلاع مع الاحترام .
- لجنة الدراسات العليا
- الصادرة .

E-mail:nursing@uobabylon.edu.iq
STARS
وطني 07711632208
المكتب 009647711632208
www.uobabylon.edu.iq

Appendix B2: College Approval

1. Official approval from Thi-Qar health directorate



وزارة الصحة
دائرة صحة ذي قار
مركز التدريب والتنمية البشرية
لجنة البحوث

وزارة الصحة العراقية
Iraqi Ministry of Health
Founded 1920

استمارة رقم ٢٠٢١/٠٣

رقم القرار: ذي قار ٢٠٢٢/٣٣١
تاريخ القرار: ٢٠٢٢/١١/٦

قرار لجنة البحوث

درست لجنة البحوث في دائرة صحة ذي قار مشروع البحث ذي الرقم (٢٠٢٢/٣٣١) المعنون:

Knowledge ,attitude and practice towards contraceptive methods among married women in AL-Rifai city

والمقدم من الباحثين (طالبة الدراسات العليا/ الدكتوراة/ اسراء ضياء محمد) الى وحدة إدارة البحوث و التنمية في مركز التدريب والتنمية البشرية في دائرة صحة ذي قار بتاريخ ٢٠٢٢/١١/٧ وقررت:

"الموافقة على تنفيذ مشروع البحث بصيغته المقدمة ولاما نع من تنفيذه في مؤسسات الدائرة."

الدكتور وسن عادل جاسم
رئيس لجنة البحوث
٢٠٢٢/١١/٦
مدير عام دائرة صحة ذي قار

دائرة صحة ذي قار
مركز التدريب والتنمية البشرية
لجنة البحوث

المرفقات:
لا يوجد

ملاحظات:
- تم تخويل رئيس لجنة البحوث او مقرر اللجنة للتوقيع على هذا القرار استنادا الى النظام الداخلي للجنة البحوث.
- الموافقة تعني ان مشروع البحث قد استوفى المعايير الأخلاقية والعلمية لإجراء بحث والمعتمدة في وزارة الصحة، اما التنفيذ فيعتمد على التزام الباحث بتعليمات المؤسسة الصحية التي سينفذ فيها البحث.

Appendix B2: College Approval

وزارة الصحة العراقية
Iraqi Ministry of Health
Founded 1920

وزارة الـــصحـــــــة
دائـــــرة صحـــــة ذي قـــــار
قسم الـــتدريب و التنمية البشريـــــة
شعبة ادارة البحوث والمعرفة
العدد / ٧٨١
التاريخ ٨/١١/٢٠٢٢

الـى / مركز الحكيم الصحي

مركز الرفاعي الصحي النموذجي- مركز سيد الشهداء الصحي

م/ تسهيل مهمة

تحية طيبة..

اشارة الى كتاب جامعة بابل/ كلية التمريض/ لجنة الدراسات العليا ذي العدد ٣٢٢٦ بتاريخ ٢٠٢٢/٩/٢٦، وبناءً على موافقتكم المبدئية على استمارة مشروع البحث المقدمة من قبل الباحث ، تم عرض الاستمارة على لجنة البحوث في دائرتنا خلال جلستها الاسبوعية وكان قرار اللجنة :

" الموافقة على تنفيذ مشروع البحث بصيغته المقدمة ولا مانع من تنفيذه في مؤسسات الدائرة "

نرفق لكم ربطا قرار لجنه البحوث ذي العدد (٣٣١/ ٢٠٢٢) ولا مانع لدينا من تسهيل مهمته، على ان لا تتحمل دائرتنا اي تبعات مالية او قانونية وان يلتزم الباحث بالاعتبارات الاخلاقية اثناء اجراء البحث..

...للتفضل بالاطلاع مع الاحترام...

المرفقات// قرار لجنة البحوث

لطبيب الاختصاص
مـــشعل زوري جـــبار
مدير قـــسم الـــتدريب والتنـمية البشرية
٨/١١/٢٠٢٢

دائرة صحة ذي قار
قسم التدريب والتنمية البشرية

نسخة منه الى//

- قسم التدريب والتنمية البشرية/ شعبة ادارة البحوث والمعرفة... مع الاوليات

Appendix C: The Questionnaire of The Study

Knowledge, Attitudes and Practices of Women regarding Contraceptives Methods

Part One: Sociodemographic and Personal characteristics

- Age ☐
- Age at marriage ☐
- Parity ☐
- Residency ☐ Urban ☐ Rural
- monthly Income ☐ Not Enough ☐ Sometimes enough ☐ Enough
- Educational level
  - ☐ Unable to read and write
  - ☐ Read and write
  - ☐ Primary
  - ☐ Secondary
  - ☐ Institute
  - ☐ Baccalaureate
  - ☐ Master or higher degree
- Occupation ☐ Working ☐ Not Working
- What method of contraception used in your last unintended pregnancy?
  - ☐ Condom
  - ☐ Oral contraception pills
  - ☐ Contraceptive Injection
  - ☐ Natural methods
  - ☐ Withdraw
  - ☐ Intrauterine device
  - ☐ Norplant
  - ☐ No method used
- According to your opinion about the reason that could prevent married women from using contraceptives (multiple choice）?
  - ☐ Thought the occasional sex could not lead to pregnancy
  - ☐ Thought contraceptive methods were too expensive to buy
  - ☐ Worried about the side effects

- ☐ Didn't prepare the pills or tools for the unplanned sex
- ☐ Husband didn't want (me) to use a method
- ☐ Thought contraceptive methods were inconvenient to buy
- ☐ Thought the delight would be affected by methods
- ☐ Don't know how to use

Part Two: Knowledge of Married Women about Contraceptive Methods

N	Statements	yes	No
1	Do you know the types of contraceptive methods?		
2	Do birth control pills affect the regularity and pain of the menstrual cycle?		
3	Do birth control pills make you gain weight?		
4	Does the contraceptive pill prevent unintended pregnancy for sure?		
5	Do birth control pills protect against vaginal fungi?		
6	Does the expiration date of condoms matter?		
7	Is the most important criterion in choosing a method of pregnancy is safety?		
8	are contraceptives available in government hospitals and primary health care?		
9	Is condom a method of contraception?		
10	Is the IUD a method of contraception?		
11	Is surgical removal of the fallopian tubes (ligation) a method of contraception?		
12	Is surgical vasectomy a method of contraception?		
13	Are condoms the only form of contraception that protects you from HIV and STIs?		
14	Did you have information about contraception available anywhere (TV, radio, newspaper, magazine for friends, relatives, health		

	workers)?		

Part Three: Attitude of Married Women about Contraceptive Methods

N	Statements	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1.	I believe that it is wrong to use contraceptive methods.					
2.	Contraceptive methods reduce the sex drive.					
3.	Using contraceptive methods is much more desirable than having an abortion.					
4.	Males who use contraceptive methods seem less masculine than males who do not.					
5.	I encourage my friends to use contraceptive methods.					
6.	I would not become sexually involved with my husband who did not accept contraception responsibility.					
7.	Contraceptive methods are not really necessary unless a wife and husband has engaged in intercourse more than once.					
8.	Contraceptive methods make sex seem less romantic.					
9.	Females who use contraceptive methods are promiscuous.					

10	I would not have intercourse if no contraceptive methods were available.					
11	I do not believe that contraceptive methods actually prevent pregnancy.					
12	Using contraceptive methods is a way of showing that you care about your husband.					
13	I do not talk about contraception with my friends.					
14	I would feel embarrassed discussing contraception with my friends.					
15	Contraceptive methods are difficult to obtain.					
16	Contraceptive methods can actually make intercourse seem more pleasurable.					
17	I feel that contraception is solely my husband's responsibility.					
18	I feel more relaxed during intercourse if a contraceptive method is used.					
19	I prefer to use contraceptive methods during intercourse.					
20	In the future, I plan to use contraceptive methods any time I have intercourse.					

21	I would practice contraception even if my husband did not want me to.					
22	It is no trouble to use contraceptive methods.					
23	Using contraceptive methods makes a relationship seem too permanent.					
24	Sex is not fun if a contraceptive method is used.					
25	Contraceptive methods are worth using, even if the monetary cost is high.					
26	Contraceptive methods encourage intercourse.					
27	Wife and husband should talk about contraception before having intercourse.					
28	If I or my husband experienced negative side effects from a contraceptive method, we would use a different method.					
29	Contraceptive methods make intercourse seem too planned.					
30	I feel better about myself when I use contraceptive methods.					

Part Four: Practice of Married Women about Contraceptive Methods

1. Have you used any contraceptive before?
   - □ Yes
   - □ No

2. Have you or your sex husband ever had unintended pregnancy?
   - ☐ Yes
   - ☐ No
3. Have you read or asked a health professional about the use of contraceptives?
   - ☐ Yes
   - ☐ No
4. It is important to carefully choose an appropriate type of contraceptive method?
   - ☐ Yes
   - ☐ No
5. Did you choose the method of contraception yourself?
   - ☐ Yes
   - ☐ No
6. Using contraceptives to improve your health and the health of your baby?
   - ☐ Yes
   - ☐ No
7. Use of contraceptives is to prevent unwanted pregnancy?
   - ☐ Yes
   - ☐ No
8. Use of contraceptives social and economic reasons?
   - ☐ Yes
   - ☐ No
9. Can you choose a contraceptive method that is different from the one that your health professional chooses for you?
   - ☐ Yes
   - ☐ No
10. Your personal conviction is the most important factor in choosing a contraceptive method?
    - ☐ Yes
    - ☐ No

For knowledge scale references are :(Ghodsi and Hojjatoleslami, 2012; Pazol *et al.*, 2015; Kumar *et al.*, 2020; Antarini, 2021; Kim, 2023),

Attitude scale reference :(Thao *et al.*, 2020).

Practice scale references are :(Arbab, Bener and Abdulmalik, 2011; Marwah I. Al Ameen and Lamia Dhia Al Deen, 2016; Aldabbagh and Al-Qazaz, 2020; Dhakal *et al.*, 2020; Imtishal *et al.*, 2023)

Appendix C: The Questionnaire of The Study

معارف واتجاهات وممارسات النساء فيما يتعلق بوسائل منع الحمل

الجزء الأول: المعلومات الديموغرافية والخصائص الشخصية:

- العمر ☐
- العمر عند الزواج ☐
- عدد الولادات ☐
- السكن ☐ ريف ☐ حضر
- الدخل الشهري ☐ لايكفي ☐ يكفي الى حد ما ☐ يكفي
- المستوى التعليمي
  - ☐ لا تقرأ ولا تكتب
  - ☐ تقرأ وتكتب
  - ☐ ابتدائية
  - ☐ ثانوية
  - ☐ معهد
  - ☐ بكالوريوس
  - ☐ ماجستير او اعلى
- الوظيفة ☐ تعمل ☐ لا تعمل
- ما هي طريقة منع الحمل التي قمت باستخدامها في اخر حمل غير مقصود؟
  - ☐ واقي ذكري (الفلاش)
  - ☐ حبوب منع الحمل
  - ☐ ابرة منع الحمل
  - ☐ الطرق الطبيعية (عن طريق حساب أيام قبل او بعد الدورة الشهرية او عن طريق فتره الرضاعة)
  - ☐ سحب (خارجي)
  - ☐ (اللولب) جهاز داخل الرحم
  - ☐ شريحة منع الحمل (توضع في الكتف تحت الجلد)
  - ☐ لم يتم استخدام أية طريقة

Appendix C: The Questionnaire of The Study

- **حسب رأيكِ، ماهي الأسباب التي من الممكن ان تمنع النساء المتزوجات من استخدام وسائل منع الحمل؟**
  - □ **اعتقد أن ممارسة الجنس العرضي لا يمكن أن تؤدي إلى الحمل**
  - □ **اعتقد أن وسائل منع الحمل كانت باهظة الثمن**
  - □ **اقلق من الأعراض الجانبية**
  - □ **ليس لدي الوقت لتجهيز الحبوب أو الأدوات للجنس غير المخطط له**
  - □ **لم يكن الزوج يريد (مني) استخدام طريقة**
  - □ **اعتقد أن وسائل منع الحمل غير ملائمة للشراء**
  - □ **اعتقد أن البهجة ستتأثر بالطرق**
  - □ **لم أكن أعرف كيفية الاستخدام**

الجزء الثاني: معارف النساء المتزوجات حول طرائق منع الحمل

ت	العبارات	نعم	لا
1	هل تعرفين أنواع وسائل منع الحمل؟		
2	هل تؤثر حبوب منع الحمل على انتظام والام الدورة الشهرية؟		
3	هل حبوب منع الحمل تزيد من وزنك؟		
4	هل تمنع حبوب منع الحمل حدوث حمل غير مقصود بصورة اكيدة؟		
5	هل حبوب منع الحمل تحمي من الفطريات المهبلية؟		
6	هل تاريخ انتهاء صلاحية الواقي الذكري مهم؟		
7	هل المعيار الأهم في اختيار وسيلة الحمل هو الأمان؟		
8	هل تتوفر وسائل منع الحمل في المستشفيات الحكومية والرعاية الصحية الأولية؟		
9	هل الواقي الذكري(الفلاش) هو وسيلة لمنع الحمل؟		
10	هل اللولب هو وسيلة لمنع الحمل؟		
11	هل استئصال قناة فالوب جراحياً (الربط) هو وسيلة لمنع الحمل؟		
12	هل قطع قناة المني الدافقة جراحياً هو وسيلة لمنع الحمل؟		

13	هل الواقي الذكري(الفلاش) هو الشكل الوحيد لمنع الحمل الذي يحميك من الإصابة بفيروس نقص المناعة البشرية والأمراض المنقولة بالاتصال الجنسي؟		
14	هل توفرت لكِ المعلومات حول وسائل منع الحمل في أي مكان (تلفزيون، راديو، جريدة، مجلة الأصدقاء والأقارب والعاملين الصحيين)؟		

الجزء الثالث: موقف المرأة المتزوجة من وسائل منع الحمل

ت	العبارات	أوافق بشدة	اوافق	غير متأكد	لا اوافق	لا اوافق بشدة
1	أعتقد أنه من الخطأ استخدام وسائل منع الحمل.					
2	تقلل وسائل منع الحمل من الدافع الجنسي.					
3	إن استخدام وسائل منع الحمل مرغوب فيه أكثر بكثير من الإجهاض.					
4	يبدو أن الرجال الذين يستخدمون وسائل منع الحمل أقل رجولية من الرجال الذين لا يستخدمونها.					
5	أشجع أصدقائي على استخدام وسائل منع الحمل.					
6	لن أتورط جنسيًا مع زوجي الذي لا يقبل مسؤولية منع الحمل.					
7	إن وسائل منع الحمل ليست ضرورية حقًا إلا إذا انخرط الزوج والزوجة في الجماع أكثر من مرة.					
8	تجعل وسائل منع الحمل الجنس يبدو أقل رومانسية.					
9	الإناث اللواتي يستخدمن وسائل منع الحمل ليس لديهن اخلاق.					
10	لن أمارس الجماع إذا لم تتوفر وسائل منع الحمل.					
11	لا أعتقد أن وسائل منع الحمل تمنع الحمل بالفعل.					
12	استخدام وسائل منع الحمل هو وسيلة لإظهار اهتمامك بزوجك.					

Appendix C: The Questionnaire of The Study

13	أنا لا أتحدث عن وسائل منع الحمل مع صديقاتي.					
14	كنت سأشعر بالحرج من مناقشة وسائل منع الحمل مع صديقاتي.					
15	يصعب الحصول على وسائل منع الحمل.					
16	يمكن أن تجعل وسائل منع الحمل الجماع أكثر متعة.					
17	أشعر أن مسؤولية منع الحمل تقع على عاتق زوجي وحده.					
18	أشعر براحة أكبر أثناء الجماع إذا تم استخدام وسيلة منع الحمل.					
19	أنا أفضل استخدام وسائل منع الحمل أثناء الجماع.					
20	في المستقبل، أخطط لاستخدام وسائل منع الحمل في أي وقت أمارس فيه الجماع.					
21	كنت أمارس وسائل منع الحمل حتى لو كان زوجي لا يريد ذلك.					
22	لا توجد مشكلة في استخدام وسائل منع الحمل.					
23	استخدام وسائل منع الحمل يجعل العلاقة تبدو دائمة للغاية.					
24	الجنس ليس ممتعًا إذا تم استخدام وسيلة منع الحمل.					
25	طرق منع الحمل تستحق الاستخدام، حتى لو كانت التكلفة المالية عالية.					
26	تشجع وسائل منع الحمل على الجماع.					
27	يجب على الزوجة والزوج التحدث عن وسائل منع الحمل قبل الجماع.					
28	إذا عانيت أنا أو زوجي من آثار جانبية سلبية من إحدى وسائل منع الحمل، فسنستخدم طريقة مختلفة					
29	تجعل وسائل منع الحمل الجماع يبدو مخططًا للغاية.					
30	أشعر بتحسن تجاه نفسي عندما أستخدم وسائل منع الحمل.					

Appendix C: The Questionnaire of The Study

الجزء الرابع: ممارسة المرأة المتزوجة حول وسائل منع الحمل

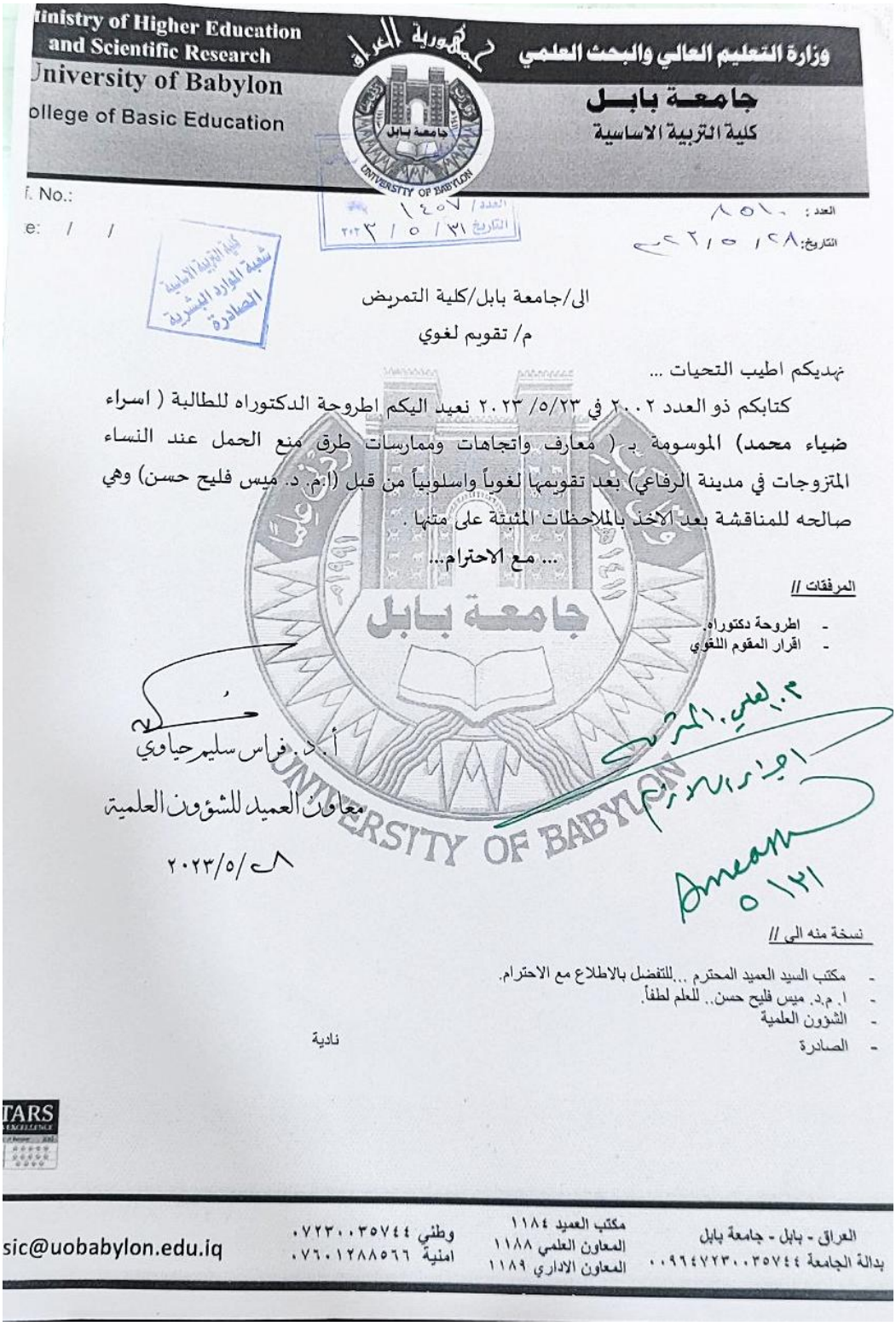
1. هل استخدمت أي من وسائل منع الحمل من قبل؟
   - ☐ نعم
   - ☐ لا
2. هل تعرضت انت وزوجك من قبل لحمل غير مقصود؟
   - ☐ نعم
   - ☐ لا
3. هل قرأتِ او قمتِ بسؤال أحد المختصين بالصحة عن استخدام موانع الحمل؟
   - ☐ نعم
   - ☐ لا
4. من المهم التدقيق في اختيار نوع مناسب من أنواع وسائل منع الحمل؟
   - ☐ نعم
   - ☐ لا
5. هل قمتِ باختيار وسيلة منع الحمل بنفسك؟
   - ☐ نعم
   - ☐ لا
6. استخدامك لوسائل منع الحمل هو لتحسين صحتك وصحة طفلك؟
   - ☐ نعم
   - ☐ لا
7. استخدام وسائل منع الحمل هو لمنع الحمل غير المرغوب فيه؟
   - ☐ نعم
   - ☐ لا
8. استخدام وسائل منع الحمل لأسباب اجتماعية واقتصادية؟
   - ☐ نعم
   - ☐ لا
9. هل يمكن ان تقومي باختيار وسيلة منع حمل تختلف عن التي يختارها لكِ الأخصائي الصحي؟
   - ☐ نعم
   - ☐ لا
10. قناعتك الشخصية هي العامل الأهم في اختيارِكِ لوسيلة منع الحمل؟
    - ☐ نعم
    - ☐ لا

Appendix D: List of experts

خبراء تحكيم استمارة الاستبيان

ت	اسم الخبير	اللقب العلمي	سنوات الخدمة	مكان العمل	الشهادة	الاختصاص
.1	ا.د. اقبال مجيد عباس	استاذ متمرس	45 سنة	جامعة بغداد /كلية التمريض	دكتوراه	تمريض صحة الام والوليد
.2	ا.د. شكريه شدهان جياد	أستاذ	43 سنة	جامعة الفرات الاوسط /الكلية التقنية	دكتوراه	تمريض صحة الام والوليد
.3	ا.د. سعدية هادي حميدي	استاذ	43 سنة	جامعة المستقبل /كلية التمريض	دكتوراه	تمريض صحة الام والوليد
.4	ا.د. سلمى كاظم جهاد	أستاذ	38 سنة	جامعة بابل /كلية التمريض	دكتوراه	تمريض صحة مجتمع
.5	ا.د. امين عجيل الياسري	استاذ	38 سنة	جامعة بابل/ كلية التمريض	دكتوراه	تمريض صحة مجتمع
.6	ا.د. هاله سعدي عبد الواحد	استاذ	28 سنة	جامعة بغداد /كلية التمريض	دكتوراه	تمريض صحة مجتمع
.7	أ.م. د. سندس باقر	أستاذ مساعد	31 سنة	جامعة البصرة/ كلية التمريض	دكتوراه	تمريض صحة الام والوليد
.8	أ.م. د. وفاء احمد	أستاذ مساعد	30 سنة	جامعة بابل / كلية التمريض	دكتوراه	تمريض صحة الام والوليد
.9	أ.م. د. حيدر حمزة علي	أستاذ مساعد	25 سنة	جامعة الكوفة / كلية التمريض	دكتوراه	تمريض صحة نفسية
.10	أ.م. د. حوراء حسين غافل	أستاذ مساعد	16 سنة	جامعة بغداد / كلية التمريض	دكتوراه	تمريض صحة الام والوليد
.11	أ.م. د. وفاء عبد علي حطاب	أستاذ مساعد	15 سنة	جامعة بغداد / كلية التمريض	دكتوراه	تمريض بالغين

Appendix F: Linguistic Certification



وزارة التعليم العالي والبحث العلمي
جامعة بابل
كلية التربية الاساسية

Ministry of Higher Education and Scientific Research
University of Babylon
College of Basic Education

جمهورية العراق

العدد : ١٤٥٧
التاريخ: ٢٠٢٣/٥/٣١

العدد : ٨٥٦
التاريخ: ٢٠٢٣/٥/٢٨

كلية التربية الاساسية
شعبة الوارد والصادرة

الى/جامعة بابل/كلية التمريض
م/ تقويم لغوي

تهديكم اطيب التحيات ...

كتابكم ذو العدد ٢٠٠٢ في ٢٠٢٣/٥/٢٣ نعيد اليكم اطروحة الدكتوراه للطالبة (اسراء ضياء محمد) الموسومة بـ (معارف واتجاهات وممارسات طرق منع الحمل عند النساء المتزوجات في مدينة الرفاعي) بعد تقويمها لغوياً واسلوبياً من قبل (ا.م. د. ميس فليح حسن) وهي صالحه للمناقشة بعد الاخذ بالملاحظات المثبتة على متنها .

... مع الاحترام...

المرفقات //
- اطروحة دكتوراه.
- اقرار المقوم اللغوي

جامعة بابل

أ.د. فراس سليم حياوي
معاون العميد للشؤون العلمية
٢٠٢٣/٥/٢٨

UNIVERSITY OF BABYLON

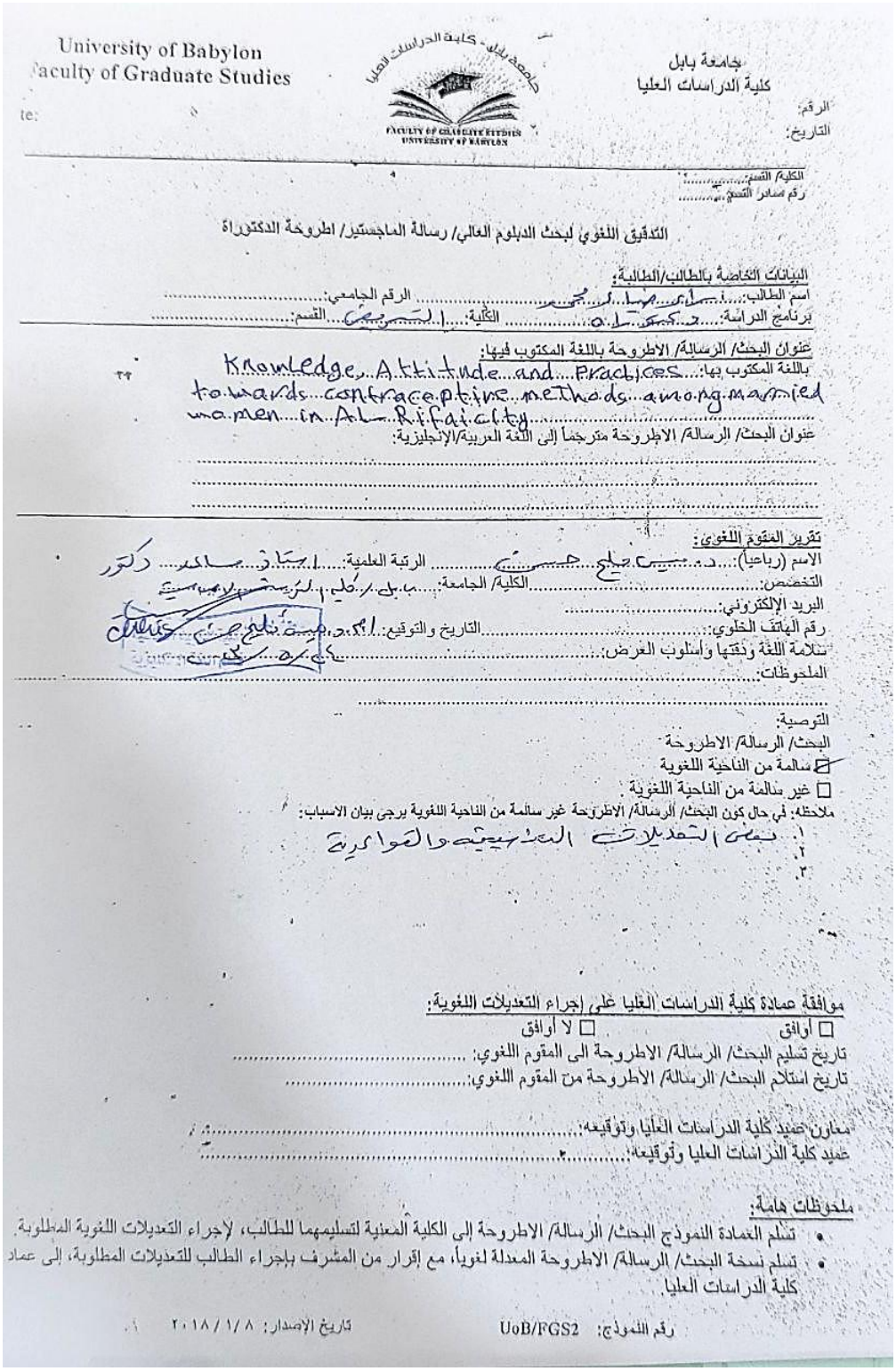
نسخة منه الى //
- مكتب السيد العميد المحترم ...للتفضل بالاطلاع مع الاحترام.
- ا. م.د. ميس فليح حسن.. للعلم لطفاً.
- الشؤون العلمية
- الصادرة

نادية

TARS

العراق - بابل - جامعة بابل
بدالة الجامعة ٠٠٩٦٤٧٢٣٠٠٣٥٧٤٤
مكتب العميد ١١٨٤
المعاون العلمي ١١٨٨
المعاون الاداري ١١٨٩
وطني ٠٧٢٣٠٠٣٥٧٤٤
امنية ٠٧٦٠١٢٨٨٥٦٦
sic@uobabylon.edu.iq

Appendix F: Linguistic Certification



University of Babylon
Faculty of Graduate Studies

جامعة بابل
كلية الدراسات العليا

الرقم:
التاريخ:

الكلية/ القسم:
رقم صادر القسم:

التدقيق اللغوي لبحث الدبلوم العالي/ رسالة الماجستير/ اطروحة الدكتوراة

البيانات الخاصة بالطالب/الطالبة:
اسم الطالب: ... الرقم الجامعي: ...
برنامج الدراسة: ... الكلية: ... القسم: ...

عنوان البحث/ الرسالة/ الاطروحة باللغة المكتوب فيها:
باللغة المكتوب بها: Knowledge, Attitude and Practices towards contraceptive methods among married women in Al-Rifai city
عنوان البحث/ الرسالة/ الاطروحة مترجماً إلى اللغة العربية/الإنجليزية:

تقرير المقوم اللغوي:
الاسم (رباعياً): ... الرتبة العلمية: ... دكتور
التخصص: ... الكلية/ الجامعة: ...
البريد الإلكتروني: ...
رقم الهاتف الخلوي: ... التاريخ والتوقيع: ...
سلامة اللغة ودقتها وأسلوب العرض: ...
الملحوظات: ...

التوصية:
البحث/ الرسالة/ الاطروحة
☑ سالمة من الناحية اللغوية
☐ غير سالمة من الناحية اللغوية
ملاحظة: في حال كون البحث/ الرسالة/ الاطروحة غير سالمة من الناحية اللغوية يرجى بيان الاسباب:
١. ... التعديلات البحثية والقواعدية
٢.
٣.

موافقة عمادة كلية الدراسات العليا على إجراء التعديلات اللغوية:
☐ أوافق ☐ لا أوافق
تاريخ تسليم البحث/ الرسالة/ الاطروحة الى المقوم اللغوي: ...
تاريخ استلام البحث/ الرسالة/ الأطروحة من المقوم اللغوي: ...

معاون عميد كلية الدراسات العليا وتوقيعه: ...
عميد كلية الدراسات العليا وتوقيعه: ...

ملحوظات هامة:
- تسلم العمادة النموذج البحث/ الرسالة/ الاطروحة إلى الكلية المعنية لتسليمهما للطالب، لإجراء التعديلات اللغوية المطلوبة.
- تسلم نسخة البحث/ الرسالة/ الاطروحة المعدلة لغوياً، مع إقرار من المشرف بإجراء الطالب للتعديلات المطلوبة، إلى عماد كلية الدراسات العليا.

رقم النموذج: UoB/FGS2 تاريخ الإصدار: ٢٠١٨/١/٨

الخلاصة

خلفية الأطروحة: يعد استكشاف المعرفة والمواقف والممارسات تجاه وسائل منع الحمل بين النساء مسعى حاسما متأصلا في تقاطع الرعاية الصحية وعلم الاجتماع والسياسة العامة. في العديد من المجتمعات، تكون الديناميكيات المحيطة بوسائل منع الحمل متأصلة بعمق في السياقات الثقافية والدينية والاجتماعية والاقتصادية. تهدف هذه الدراسة إلى قياس مستوى معارف واتجاهات وممارسات النساء فيما يتعلق بوسائل منع الحمل.

المنهجية: تم تصميم الدراسة الارتباطية الوصفية من كانون الاول 2021 حتى ايلول 2023. وتم تنفيذها في مراكز الرعاية الصحية الأولية في الرفاعي (مركز سيد الشهداء للرعاية الصحية الأولية، مركز الرفاعي للرعاية الصحية الأولية، ومركز الرعاية الصحية الأولية الحكيم). وعلى إجمالي (400) امرأة متزوجة، تم استخدام طريقة العينة غير الاحتمالية (الغرضية). ولقياس متغيرات البحث تم استخدام استبانة تتكون من ثلاث اجزاء (مقياس توجهات وسائل منع الحمل ومقياسين تم انشاؤهما من قبل الباحث من خلال مراجعة الدراسات السابقة ذات الصلة)

النتائج: توصلت الدراسة إلى أن مستويات المعرفة لدى النساء المتزوجات حول وسائل منع الحمل أظهرت أن حوالي ثلثي النساء (63.8%) لديهن معرفة عادلة تليها معرفة ضعيفة بنسبة (31.8%)، ومستويات اتجاهات النساء المتزوجات حول وسائل منع الحمل بنسبة (31.8%) مع وجود نسبة معرفة متوسطة لدى النساء المتزوجات حول وسائل منع الحمل بنسبة (31.8%). وشكلت الاتجاهات المحايدة (62.8%) من إجمالي النساء، يليها مستوى الاتجاهات السلبية بنسبة (28.8%)، ثم مستوى ممارسة وسائل منع الحمل لدى النساء المتزوجات. النسبة الأعلى هي الممارسة السيئة التي تشكل حوالي ثلثي النتائج. ومن المؤكد تجريبيا أن هناك علاقة ذات دلالة عالية بين المعرفة والاتجاهات وعلاقة أخرى ذات دلالة عالية بين الممارسة والمعرفة في حين لا توجد علاقة بين الاتجاه والممارسة.

الاستنتاجات: استنتجت الدراسة وجود علاقة مؤثرة ذات دلالة إحصائية بين المعرفة والممارسات، والمعرفة والتوجهات وكان مستوى معرفة النساء باستخدام وسائل منع الحمل متوسطاً، ومستوى المواقف تجاه وسائل منع الحمل محايد ومستويات الممارسات تجاه وسائل منع الحمل كانت ضعيفة.

التوصيات: إعداد جلسات تثقيفية إضافية وبسيطة وشاملة ومتسقة للنساء حول الآثار الجانبية لوسائل منع الحمل حتى لا يكون لديهم أي سبب للخوف من وسائل منع الحمل. كما ويجب أن تكون النساء ذوات المستوى التعليمي المنخفض والدخل المنخفض في مكان تركيز واهتمام في مراكز الرعاية الصحية الأولية.

جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة بابل / كلية التمريض

معارف واتجاهات وممارسات النساء فيما يتعلق بوسائل منع الحمل

أطروحة مقدمه من قبل

اسراء ضياء محمد

الى مجلـــس كلية التمريـــض /جامعه بابل كجزء من متطلبات نيل درجة الدكتوراه - فلسفة في التمريض

بإشراف

الأستاذ الدكتور منى عبد الوهاب خليل

ذي القعدة /١٤٤٤ هجرية **أيار/ ٢٠٢٣ ميلادية**