Sexual and Reproductive Health of Women in Saudi Arabia: Needs, Perceptions, and Experiences

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DECLARATION

I, Noura Alomair, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis

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ABSTRACT

Background

There is no formal sexual and reproductive health (SRH) education currently offered in Saudi Arabia. Lack of knowledge and misconceptions can lead to negative SRH experiences and poor health outcomes. The aim of this thesis is to explore the SRH needs, perceptions and experiences of Saudi women.

Methods

I conducted a systematic review exploring factors influencing Muslim women's SRH worldwide and two qualitative studies using semi-structured interviews with 28 Saudi women of reproductive age and 16 stakeholders including healthcare providers, religious scholars, and policymakers in Saudi Arabia.

Findings

Saudi women lacked SRH knowledge including puberty and menstruation, sex and reproduction, contraception, and sexually transmitted infections (STIs). Lack of knowledge contributed greatly to negative experiences both in childhood and adulthood. Access to SRH information and services is a complex matter that is affected by interrelated factors including personal, family, socio-cultural, religious, institutional factors, and national policies and regulations. Being unmarried posed a significant barrier to accessing SRH information and services. Saudi women interviewed were highly educated and exhibited control over fertility choices, affirming that education played a fundamental role in their reproductive autonomy. However, socio-cultural factors and community pressures still impacted women's reproductive choices. All research participants believed in the importance of SRH education in Saudi Arabia. Women and stakeholders agreed that education should be introduced gradually. SRH education as premarital counselling was viewed as the best way for gradually introducing sex education in the country.

Conclusions

There is a substantial unmet need for SRH education and services for women in Saudi Arabia. My findings provide recommendations for the development of culturally and religiously sensitive SRH interventions for Muslims worldwide. Overall, my research highlights the lack of sexual health data and research in Saudi Arabia. Efforts to encourage and support research and training within this field are highly needed.

IMPACT STATEMENT

This is the first qualitative research to explore in-depth Saudi women's SRH and provide a comprehensive understanding of the factors influencing their sexual and reproductive wellbeing. My research revealed that there are multiple levels of factors that influence Muslim women's sexual and reproductive wellbeing. Poor sexual health knowledge and practices among Muslim women is a complex matter that is affected by personal, community, cultural, religious factors and national policies and regulations. My research also revealed many similarities among Muslim women living in Muslim and non-Muslim countries, highlighting the important influence of socio-cultural and religious factors on SRH beliefs, practices, and experiences.

My findings provide the first steps for the planning and development of premarital SRH education in Saudi Arabia. A key implication from my thesis is providing comprehensive SRH education, particularly at school, while working with religious leaders, parents, and teachers. More public health efforts should also be directed towards increasing sexual health awareness using mass media channels and the Internet to reach individuals with no access to formal education.

My findings could be useful to healthcare providers in non-Muslim countries. Certain beliefs and practices that are unique to Muslim women have direct impact on SRH, health seeking behaviours, and overall wellbeing. By understanding the unique perceptions and beliefs of Muslim women, healthcare providers have an opportunity to provide tailored care that respond to Muslim women's needs.

My findings are likely to be of interest to countries in the MENA region, particularly the Gulf Council Countries, where political systems and cultural norms are similar. The findings can also be useful for international organizations in formulating general guidelines for SRH education programmes. The findings could also be of assistance to the development of culturally and religiously competent SRH interventions for Muslims worldwide, particularly in countries where culturally sensitive content is lacking. My findings are likely to be of use to policymakers in Saudi Arabia, more specifically, the Ministry of Health and the Ministry of Education, for the formulation of SRH education in the country and identifying anticipated barriers to implementation.

My findings show that taboos around sexual health topics act as a barrier to accessing knowledge and information. Future research needs to explore ways to overcome those barriers in Muslim societies to provide recommendations on changing societal views towards SRH information and discussions, particularly for unmarried youth.

The findings of this thesis have been disseminated via publications in scientific journals and conference presentations. The work in this thesis has also received media attention in Saudi Arabia. I was approached by Thmanyah, a podcast and documentary producing company, they requested to do an interview with me where I discuss the findings and implications of my research. The interview was published in March 2021.

DISSEMINATION OF WORK

PUBLISHED WORK/ CONFERENCE PROCEEDINGS

Alomair, N., Alageel, S., Davies, N., Bailey V, J. 2020. Factors influencing sexual and reproductive health of Muslim women: a systematic review. *Reproductive Health*.

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MEDIA

A Look into Sexual Health Awareness in Saudi Arabia - Fenjan podcast | Thmanyah production

AWARDS

- IEHC annual PhD poster competiton in 2017 “Factors influencing sexual and reproductive health of Muslim women: a systematic review” at UCL’s IEHC annual PhD poster competiton in 2017. https://www.ucl.ac.uk/epidemiology-health-care/news/2017/dec/iehc-phd-poster-competition-winners
- The Research Department of Primary Care and Population Health Research Paper of the Year 2020.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CASP	Critical Appraisal skills programme
CEBM	Centre for Evidence Based Management
CRD	Centre for Reviews and Dissemination
DALY	Disability adjusted life years
EC	Emergency contraception
FGD	Focus Group Discussions
FWCW	Fourth World Conference on Women
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
ICPD	International Conference on Population and Development
IUD	Intrauterine Device
IVF	In-Vitro Fertilization
KSU	King Saud University
MENA	Middle East and Northern Africa
MoE	Ministry of Education
MoH	Ministry of Health
OCP	Oral Contraceptive Pills
PHC	Primary Healthcare centres
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
UAE	United Arab Emirates
UK	United Kingdom
US	United States of America
WHO	World Health Organization

CHAPTER ONE - INTRODUCTION

CHAPTER OVERVIEW

This chapter is an introduction to my thesis. I provide a summary and comparison of the different definitions and concepts of Sexual health and Reproductive health, and the terms I use throughout my thesis. I outline a brief background about the country of Saudi Arabia including the healthcare system, current sexual and reproductive health issues and practices in Saudi Arabia and other Islamic countries. Finally, I discuss the religious views on women's SRH, and the policies related to women's rights and health in Saudi Arabia.

1.1. DEFINING SEXUAL AND REPRODUCTIVE HEALTH

Reproductive health and sexual health affect the lives of all from conception to birth, and adolescence to old age. It includes the attainment of the highest possible levels of good sexual and reproductive health (SRH) and prevention of ill health (1). Although the terms 'sexual and reproductive health' are terms that are commonly seen together, they still do not have an encompassing and comprehensive definition. And even though there are definitions for 'sexual health' and 'reproductive health', these definitions are usually separate.

Below is a brief overview of the available working definitions of the terms 'reproductive health' and 'sexual health'.

1.1.1. DEFINITION OF REPRODUCTIVE HEALTH

The International Conference on Population and Development (ICPD) programme for action developed a definition of **reproductive health (2)**:

"It is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy

and childbirth and provide couples with the best chance of having a healthy infant”

The definition highlighted several important aspects of reproductive health and incorporated sexual health into their definition of reproductive health, and for the first time, with international agreement, provided a definition for *reproductive rights*. It re-enforces the notion that ‘sexual health’ and ‘reproductive health’ overlap and are closely related as one cannot achieve good reproductive health without good sexual health. Therefore, in addition to physiological functions such as pregnancy and childbirth, the term includes harm reduction resulting from sexual activity and procreation. It also involves enabling all women to have safe and satisfying sexual relations by removing obstacles such as gender inequalities, disparities in access to health services, policies and law restricting women’s freedom of choice, and sexual violence.

Consistent with this definition, reproductive health services should include:

- Family planning counselling, education, information and services
- Education services for prenatal, safe delivery and post-natal care, especially breastfeeding and infant and women’s health care
- Prevention and treatment of infertility
- Safe and accessible post-abortion care and, where legal, access to safe abortion services
- Prevention and treatment of sexually transmitted infections and other reproductive health conditions
- Education and counselling on human sexuality
- Active discouragement of harmful practices such as violence against women and girls, including torture (i.e., female genital mutilation)
- Sexual health information, education, and counselling, to enhance personal relationships and quality of life.

REPRODUCTIVE RIGHTS

“Reproductive rights rest on the recognition of the human rights of all couples and individuals to decide freely and responsibly the number, spacing, and timing of their children, to have the information and means to do so, and the right to attain the highest standard of reproductive health.

They also include:

- The right to make decisions concerning reproduction free of discrimination, coercion, and violence
- The right to privacy, confidentiality, respect, and informed consent
- The right to mutually respectful and equitable gender relations" (3).

In general, when referring to reproductive health, there's a large emphasis on women's reproductive health. The reason is that women and girls have specific health requirements that result from certain conditions that only women go through, which might have some negative health implications for them. These conditions, including pregnancy and childbirth, are not in themselves diseases, but normal physiological and social processes that most women experience that can carry health risks and require medical care (4).

The ICPD programme for action (1994), and the Fourth World Conference on Women (FWCW) in 1995 in Beijing, resulted in dramatic global improvements recognizing the significance of SRH and providing definitions for reproductive rights (5). They did not however define or use the term sexual rights. More recent global policies related to sexual health comprehensively reaffirms that both SRH and rights must be achieved to meet public health goals.

1.1.2. Definition of Sexual Health

The term 'sexual health' has many different working definitions. While some might refer to sexual health as the physical and social aspects of human interactions, others define it as encompassing physical, psychological, social, cultural, and emotional relationships that women have as women's 'sexual health'. And some might refer to women's sexual health as designing programmes to protect women from acquiring sexually transmitted infections (STIs) such as HIV and other STIs. It could also be defined to encompass women's ability to deal with conditions such as cervical and breast cancers, sexual dysfunction, menopause and sexual violence (6).

1.1.3. World Health Organization Working Definitions of Sexual Health

"Sexual health is a state of physical, emotional, mental and social wellbeing in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion,

discrimination, and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled."

SEXUAL RIGHTS

"Sexual rights embrace human rights that are already recognized in national laws, international human rights documents and other consensus statements. They include the right of all persons, free of coercion, discrimination, and violence, to:

- The highest attainable standard of sexual health, including access to sexual and reproductive health care services.
- Seek, receive and impart information related to sexuality.
- Sexuality education.
- Respect for bodily integrity.
- Choose their partner.
- Decide to be sexually active or not.
- Consensual sexual relations.
- Consensual marriage.
- Decide whether or not and when to have children.
- Pursue a satisfying, safe, and pleasurable sexual life.

The responsible exercise of human rights requires that all persons respect the rights of others." (7)

I focused on the following aspects of SRH in my thesis:

The physical, psychological, social, cultural, and emotional relationships that women have as women's 'sexual health'; women's right to seek, receive and impart information related to sexuality and sexual health; access to sex education; access to safe, effective, affordable birth control methods, women's right to choose whether or not they want to have children; the rights of women to be informed about sexually transmitted infections (STIs), and how to protect themselves women from acquiring STIs.

1.1.4. CONTRACEPTION AND FAMILY PLANNING

Family planning allows individuals to have the desired number of children, if any, and allows them to determine the spacing between pregnancies. Family planning is attained by

using contraceptive methods (defined as any measure able to prevent pregnancy) and infertility treatments (8).

Contraceptive effect can be achieved through permanent and temporary methods. There are many types of temporary contraceptive methods, with different levels of effectiveness including natural methods (e.g., withdrawal, lactational amenorrhea), hormonal methods (e.g., pills, implants, patches, and vaginal rings), intrauterine devices (IUD), emergency contraception, and condoms. Permanent methods include male and female sterilization (8).

In my thesis, I use the term contraception to describe both traditional and modern methods of contraception unless a clear distinction is made between traditional and modern methods.

1.2. The influence of Culture and religion on sexual and reproductive health

Culture can be defined as the set of characteristics and ideas for a particular group of people defined by language, religion, social habits and more. Religion is defined a set of beliefs, values, rules, norms, and practices carried out by its followers (9).

To this day, researchers have yet to agree on a definition for culture and religion or provide a clear distinction between the two terms (9, 10). It is conceptually difficult to distinguish between culture and religion as they are considered interdependent and influenced by one another. According to croucher et al., *"Religion and culture are inseparable, as beliefs and practices are uniquely cultural"* (9). Saroglou & Cohen stated about the relationship between culture and religion: "*Religion is often, but not always, an element that, in combination with descent, language, territory, and/or common history, contributes to defining cultural entities"* (10).

In Muslim cultures, religious beliefs are often used to legitimise certain cultural beliefs and practices. For example, Islam does not reject nor disapprove of SRH education; it is merely a cultural issue. Islam places a huge emphasis on celibacy (11, 12), which is one of the reasons why SRH related topics are considered taboo subjects. Another example is the Islamic views regarding family planning that are inconsistent among Muslims. Makhlouf-Obermeyer debated in his paper using case studies on reproductive choice in Iran and Tunisia: *"The variability in indicators of reproductive choice in the Middle East*

contradicts the notion of a uniform effect of Islam on reproduction. As the cases of Tunisia and Iran illustrate, the conditions that affect women's options are the outcome of political strategies rather than the result of implementing a religious code. Like other religious doctrines, Islam has been used to legitimate conflicting positions on gender and reproductive choice." (12)

1.3. SAUDI ARABIA - COUNTRY PROFILE

The kingdom of Saudi Arabia is an Arab country in Southwest Asia and occupies about 80% of the Arabian Peninsula. Saudi Arabia is known for being the birthplace of Islam and is the home of two of the religion's most sacred mosques (Masjid al-Haram, in Mecca, destination of the annual Hajj pilgrimage, and Medina's Masjid an-Nabawi, burial site of the prophet Muhammad).

Saudi Arabia is an Islamic country where the governance and constitution are based on *'Shariah'* (Islamic law). The basis of *Sharia* law is founded on the *Quran* (Islamic Holy Book) and *Sunnah* (Prophet Mohammed's sayings and traditions). The political context in Saudi Arabia is based on an absolute monarchy. The King is the head of state and the government and has full authority over legislative, executive, and judicial systems (13). The council of senior scholars (Council of Senior Ulama) is the country's supreme religious body providing *Fatwas*[1] (religious legal opinion) and performs as an advising body to the King (14).

Saudi Arabia is one of the world's largest oil exporters with roughly 75% of budget revenues and 90% of export earnings come from the oil industry. The gross domestic product (GDP) per capita is estimated to be 23,411 USD; categorising Saudi Arabia as a high-income country (15). In 2016, the Crown Prince Mohammed Bin Salman announced 'Saudi Vision 2030' that aims to reduce the country's dependency on oil by expanding its economic resources and developing public service sectors including healthcare, education, recreation and tourism infrastructure (16).

The total population in Saudi Arabia is over 34 million people, with women making up about half of the Saudi population. The life expectancy in Saudi Arabia is estimated as 74.2 years, with a crude birth rate of 14.3/1000 (17). The total Fertility rate in Saudi Arabia

[1] A nonbinding legal opinion on a point of Islamic law (*sharia*) given by a qualified jurist in response to a question posed by a private individual, judge, or government. A jurist issuing fatwas is called a *mufti* and the act of issuing fatwas is called *ifta'*.

declined drastically from 7.2 births per woman in the 1980s to 2.2 in 2019, with a maternal mortality rate of 11.9 per 100,000 births (18) .

1.4. HEALTHCARE SYSTEMS

The healthcare system in Saudi Arabia is made up of two main sectors: governmental sector and private sector. National healthcare coverage is provided free of charge to all Saudi nationals and foreign residents who are working within the government sectors. Private insurance plans are provided for all Saudis and foreign residents working in the private sectors (19), and all residents receive healthcare in emergency cases regardless of nationality.

The Ministry of Health (MoH) is the main governmental agency responsible for supervising healthcare services and hospitals and controls about 60% of hospitals. It is responsible for providing primary, secondary, and tertiary healthcare services for the population. The Ministry of Defence and Aviation, the Saudi Arabian National Guard, and the Ministry of Interior finances 20% of health services that are delivered through designated hospitals to armed forces, security personnel and their families. Private hospitals and healthcare centres account for The remaining 20% (20).

Primary Healthcare centres (PHC) are available in most cities and provide healthcare services to all residents of the allocated district (21). In recent years, the MoH is trying to move towards preventative healthcare. Increased efforts have been made to provide health education services aiming to improve the public's awareness mainly focusing on non-communicable diseases (22). Yet, despite the increased attention on primary care services and public health, the majority of the health expenditure in Saudi Arabia is still on disease and injury treatment and care (23). This highlights the importance of improving public health services and interventions in Saudi Arabia in order to reduce the burden on the healthcare system. Plans to privatise the healthcare system in Saudi Arabia have been announced as a part of the Saudi Vision 2030; aiming to increase privately controlled healthcare from 20% to 30% (24).

1.5. SEXUAL AND REPRODUCTIVE HEALTH IN SAUDI ARABIA

1.5.1. SEXUAL HEALTH

There are no formal sexual health services or education in Saudi Arabia. Sexual health is not taught in any formal setting and the only mention of sexual intercourse is in the Islamic

jurisprudence books in schools. Sex is taught as a spousal right, if practiced within marriage, but a sinful and forbidden act if done outside of marriage. It is also taught that extra-marital relations are the primary cause of STI, and there is no information provided on preventive measures except abstaining from sexual relations (25).

Lack of knowledge about STIs among Saudis has been consistently reported (26). As sexual relations outside of marriage are forbidden in Islam, it is assumed that people are abstaining from sexual relationships until marriage. However, this is not the case with many young adults engaging in pre/extra-marital sexual relations (26-28). The public are commonly unaware of the extent of risk behaviours and the measures of prevention (27).

STIs are one of the most under-recognized health problems in Saudi Arabia. Information on STIs in Saudi Arabia, as with many Islamic countries, is notably limited (29). It is assumed that the rates of STIs are low because of the cultural and religious intolerance of extra-marital sex (30). Yet, according to the recent global burden of diseases report, HIV/AIDS and other STIs were ranked in the top 20 leading causes of disability adjusted life years (DALYs) in Saudi Arabia with HIV and STIs rising in rank from 22nd in 1990 to 20th leading cause of DALYs in 2017 (31).

According to the latest report by the MoH, the total number of people living with HIV in Saudi Arabia by the end of 2017 was 6,256 (76.5% males, 31.3% females, and 2.2% children). The epidemic among Saudi nationals continues to be predominated by men with 80% of all diagnosed infections are among men, as well as 82.5% of newly reported HIV infections in 2017(32).

Men are more likely to engage in extra-marital relations. Additionally, men with an STI can also transmit the infection to their wives who become victims to their husband's lack of knowledge (26, 27). This has been reported about Muslim men in Saudi Arabia and elsewhere, and more tolerant views towards premarital sex for men were consistently reported (25, 28). For example, a study explored Muslim adolescents' views on sexuality and revealed that Muslim adolescents said that sex outside marriage is 'haram' (forbidden), and this standard applies to both males and females. However, the analysis revealed a 'double standard' regarding sexual relations before marriage. Male Muslims did not comply with this rule of celibacy even though they agreed that sex before marriage is a sin and believed that they should be allowed to have more freedom than Muslim women. Interestingly, Muslim men were not held accountable for this transgression. Muslim women seemed to be uncritical and accepting of this double morality, and stated that they would

protect their virginity for the sake of Muslim men who themselves did not seem to place the same value on their own virginity (28).

In a study from Saudi Arabia, 31% of male university students reported engaging in premarital sexual relations. However, only 51% reported using condoms to prevent STIs (33). In another study of male high school students in Riyadh, 38% of students reported engaging in premarital sexual activity, and more than 72% believed that most Saudi men experience sexual intercourse before marriage (34). In the same study, almost 86% of the sample believed that adolescents in Saudi Arabia require sex education, with 92% agreeing that sex education is an effective strategy to prevent STIs and establish healthy sexual behaviours (34).

1.5.2. Family Planning in Saudi Arabia

There are no family planning programmes currently implemented in Saudi Arabia. Despite contraception being available over the counter in Saudi Arabia; the latest demographic health survey by the General Authority for statistics reported that only 32 % of fertile married Saudi women use family planning methods (35).

Contraception

Contraception is believed to be acceptable in Islam for birth spacing, it has been debated whether it is permitted for limiting the number of children. The majority of Muslim scholars agree that withdrawal was practiced in prophet Mohammad's time, and is only allowable with the wife's consent (36). Jabir ibn Abdullah[2] has said about the use of contraception in prophet Mohammad's (PBUH) time: *"We used to engage in contraception `azl [coitus interruptus] while the Quran was being revealed. Had it been something that was interdicted, the Quran would have forbidden it."* [Bukhari (5209); Muslim (4220)].

Many Muslims believe that contraception is permitted in Islam, they believe that God is merciful and does not intend for Muslims to suffer, and they should only have the number of children that they are able to provide for. The Quran states:

> *"Allah desire for you ease; he desires no hardship for you"* (Al-Baqarah, 2:185)

Some scholars however believe that contraception use is forbidden regardless of the purposes of use. This is mainly because many people have different interpretations for the

[2] A prominent companion of Prophet Mohammad peace be upon him

Quran and hadith[3]. Many Muslim scholars firmly believe that a woman cannot use any form of contraception without the permission of her husband. Permanent methods are forbidden in Islam and are only permissible in cases of absolute necessity where there is great danger to the mother. In Saudi Arabia, in cases where abortion or permanent methods (i.e., tubal ligation, hysterectomy) are needed, both the woman and the husband must agree in order for such procedure to be done in any healthcare facility.

According to the Permanent Committee for Scholarly Research and Ifta[4] in Saudi Arabia:

> *"Birth control is impermissible in general. Contraception is impermissible when done because of fearing poverty, as Allah is the All-Provider and Possessor of Strength and there is no creature on earth, but Allah grants its provision. On the other hand, it is permissible in cases of necessity, such as if the pregnant woman will have to give birth in a manner other than that which is usual, and she will have to undergo surgery to deliver the child. In cases where there is a benefit for the couple from delaying pregnancy for a period of time, contraception is also permitted."*

The Quranic verse cited above by the council to conclude that contraception is forbidden in Islam is: *"And do not kill your children for fear of poverty. We provide for them and for you. Indeed, their killing is ever a great sin."* Al-Isra 17:3. However, according to some scholars, it refers to the pre-Islamic period, where people of ignorance killed their children, fearing poverty. And in other interpretations, it referred to the killing of daughters, in a period where having a daughter was considered shameful, and the killing of female children was highly prevalent in the pre-Islamic period. There are many conflicting interpretations for this verse and many others, leading to contradictory views on contraception. Consensus among Muslim scholars is yet to be achieved with regards to contraception and family planning.

Abortion

Abortion is forbidden in Islam; however, most schools of thought agree that it is permissible before 40 days of pregnancy to abort for any reason. Abortion is permitted after the first 40 days only in exceptional circumstances where continuing a pregnancy would be harmful to the mother or in case of foetal death (37). Rape and incest are also

[3] A collection of the traditions and sayings of the prophet Mohammad, constitute the major source of religious laws and moral guidance for Muslims apart from the Quran.

[4] Islamic organization in Saudi Arabia established by the King that issues rulings in Islamic jurisprudence and prepares research papers for the Council of Senior Scholars, which advises the king on religious matters. The issuance of fatwa in Saudi Arabia is limited to members of the Council of Senior Scholars and a few other clerics

legitimate reasons for abortion. After 120 days from conception, where the 'soul develops' it is not permissible to abort and is against the law. In cases where terminating a pregnancy is crucial to save a mother's life, two requirements must be met. Firstly, a panel of three specialist doctors and the hospital director must sign and agree that the continuation of the pregnancy would kill the mother, or if all measures to save the foetus have been exhausted. The second requirement is the permission of her husband. Legally sanctioned abortions can only be performed in governmental hospitals (38).

The Islamic scholar and Grand Mufti[5] of Saudi Arabia Sheikh Binbaz stated on the matter of abortion:

> *"If it is in the first forty, then the matter is more lenient if there is a need for abortion. Because she has young children and pregnancy is difficult or because she is sick or has a difficult pregnancy there is nothing wrong with aborting in the first forty. As for the second forty, after the embryo is developed, she cannot abort except for severe excuse and the specialist decides that the pregnancy will harm her, there is no objection to aborting when it is to prevent greater harm. As for after the soul has been breathed into it, after the fourth month, it is not permissible to abort at all. She must be patient and endure until she gives birth, God willing, unless two or more trained doctors decide that his [foetus] survival would kill her, then there is nothing wrong with terminating the pregnancy to save her life because her life matters more."*

1.5.3. GENDER NORMS, ROLES AND RULES IN SAUDI ARABIA

Marriage in Saudi Arabia follows Islamic law. To get married, women require the approval of their father or legal male guardian that is usually the closest male next of kin. Polygamy is permissible and legal for men in Saudi Arabia, and they are allowed to marry up to four women at a time. Muslim women can only marry Muslim men, whereas Muslim men can marry women from other non-Muslim faiths. Traditional marriages are not usually forced, couples can communicate and interact before marriage, and the couple can decide whether they want to proceed with engagement and marriage. However, interactions, particularly physical interactions, of any kind, between couples are usually limited until marriage. The general marriage rate for the Saudi population reached 9.60 per 1000 Saudi national in 2020 (39).

[5] The Grand Mufti of Saudi Arabia is the most senior and most influential Muslim religious and legal authority in Saudi Arabia. The holder of the position is appointed by the King. The Grand Mufti is the head of the Permanent Committee for Islamic Research and Issuing Fatwas.

Any sexual interaction outside of marriage *Zina*[6] زنى is forbidden and punishable by law. The punishment is death for married individuals, and 100 lashes for unmarried. However, for *Zina* to be proven and for legal action to be taken, the person must admit to adultery in front of a judge, or if pregnancy occurs for unmarried women, or if four adult men testify that they have witnessed, in person, the act of vaginal penetration (40). If someone accuses another person of adultery without any proof, the accuser is prosecuted for slander. This, along with the requirement of four witnesses, makes proving *Zina* almost impossible.

In Saudi Arabia, and many Arab and Muslim cultures, marriage is viewed as a 'social necessity' and divorce is a failure that brings dishonour to the woman's family (41, 42). Almost universally, divorced women face more stigma compared to men (43-45). Due to the culture of holding women accountable for all marital problems, women are often pressured to 'make their marriage work' which makes them solely responsible for marital success or failure. Divorce can be extremely challenging for women, and they are often blamed for the dissolution of marriage regardless of the reasons. Women are often encouraged to stay in the marriage even in situations where it is unsafe for her (42, 45).

Divorce in Saudi Arabia is permitted within a man's power, and a man can divorce his wife without requiring the court's permission (45, 46). However, laws and policies are unfavourable to women in case of divorce. If the woman wants a divorce, she needs to ask her husband to divorce her, if he refuses, she must file a case in court. This is another form of divorce called *khul'* خلع which requires a judge's approval, where the woman must present the judge with legitimate reasons for divorce and give back her dowry. The decision to grant divorce is ultimately in the judge's hands. However, if the husband refuses to show up in court, divorce can be very difficult to obtain (46). This by itself makes it extremely challenging for women to ask for divorce, and many women choose to stay in unfavourable marriages due to the challenges involved in the divorce process. In 2020, the divorce rates for Saudi nationals reached 3.64 per 1000 marriages, with a growth rate of 13% compared to 2019.

1.5.4. LAWS AND REGULATIONS

In recent years, the Saudi government made drastic changes to laws and regulations that

[6] Zina or Zinah is an Islamic legal term referring to unlawful sexual intercourse. According to traditional jurisprudence, *zina* can include adultery (of married parties), fornication (of unmarried parties), prostitution, rape, sodomy, homosexuality, incest, and bestiality

advocate for women's rights and equality. Previously, women in Saudi Arabia needed their male guardian's permission to apply for a passport, school, jobs, travel outside of the country, and access certain medical and surgical procedures. This challenges women's rights for freedom of choice and making informed decisions about their own health and life. However, as of August 2019, Saudi Arabia's Royal Highness King Salman Bin Abdul-Aziz issued an order to all governmental agencies, that women shall not require male guardian's consent to access any governmental services.

Women at the age of 21 are allowed to apply for and renew their passports, register their marriages, register their children and divorce without a male guardian's permission (47). Saudi women are now allowed to travel outside of Saudi Arabia without male guardian's approval and are officially considered legal guardians alongside men over their children. Yet, laws in Saudi Arabia give Saudi women's children who are born to non-Saudi fathers limited rights, and those children cannot obtain a Saudi citizenship from their mothers.

In September 2017, the ban on women's driving in Saudi Arabia was lifted, and women were allowed to drive as of July 2018. Women do not need permission from a legal male guardian to get a driving license.

1.6. PUBLIC HEALTH INITIATIVES IN SAUDI ARABIA

In 2004, the premarital screening programme, also known as 'Healthy Marriage Programme', was introduced with the goal of reducing the incidence of genetic blood disorders that are prevalent in the country with contributing factors like the prevalence of consanguineous marriages (48). The screening involves screening individuals intending to get married for sickle cell anaemia, thalassemia, HIV, and Hepatitis B and C. It is mandatory for all couples planning to get married and is required to obtain a marriage certificate. Couples who are identified as carriers of a genetic blood disorder are offered a counselling session, and they have the ultimate choice of marriage regardless of their test results. However, recent available data revealed that the programme has successfully reduced high risk marriages by 60%, thereby reducing the burden of genetic blood disorders in the country (49).

Screening for STIs including HIV, Hepatitis B and C was included in 2008 to be a part of the premarital screening programme despite low prevalence in the country. Although there was no evidence on its cost-effectiveness, this is likely to reduce Saudi women's vulnerability to STIs especially since research shows that marriage is the primary risk

factor for STIs among Saudi women (50). It could also possibly reduce the burden and spread of STIs in the country since they are not routinely screened for among the public.

The Saudi national AIDS programme was founded in1994 by the MoH to raise awareness about HIV/AIDS and advocates for the rights of people living with HIV. Information on HIV prevention is also provided in the MoH website with messages that focus on promoting abstinence (51). Treatment for HIV is free for all Saudis, however, migrant workers who are found to be HIV positive are deported from the country.

Cervical cancer is the third most common cancer among Saudi women and is usually diagnosed at very advanced stages. It is not routinely screened for in Saudi Arabia, and there are no clear guidelines or public health initiatives to promote for cervical cancer screening among women (52). Only married or previously married women are offered a pap smear, and unmarried women are excluded from screening based on the assumption that they have never been sexually active (36). Vaccines to protect against the Human papilloma virus (HPV) are available in Saudi Arabia but only upon request (53). Initiatives to raise the public's awareness about the HPV vaccine, and strategies to promote cervical cancer screening are severely lacking.

1.7. AIMS AND OBJECTIVES

The overall aim of my thesis was to explore Saudi women's sexual and reproductive needs, perceptions, experiences, and practices.

The research aim was explored in three distinct studies. The first study was a systematic review on the factors influencing Muslim women's SRH **(see chapter 2)**. The second study was a qualitative exploration of **Saudi women's** SRH needs, perceptions, experiences, and practices **(see Chapter 4)**. The third study was a qualitative exploration of Saudi women's needs, experiences, and practices from **stakeholders'** perspectives **(see Chapter 5)**.

OBJECTIVES

To address the aims of my thesis, the following objectives were used:

Saudi women's study:

- Explore Saudi women's SRH knowledge and knowledge needs, and their specific sexual health issues.

- Explore Saudi women's attitudes towards available SRH services and the barriers and facilitators to seeking SRH services and advice.
- Explore Saudi women's STI knowledge, attitudes towards STIs, and the barriers and facilitators to STI testing and diagnosis.
- Understand what women consider to be appropriate SRH education (what, when and how).
- Explore women's views towards introducing SRH education as a part of premarital screening programme.

Stakeholders' study:

- Explore the specific SRH issues and needs for Saudi women from stakeholders' perspective.
- Identify the barriers and facilitators to offering SRH services and advice.
- Explore stakeholders' views towards the public's perceived barriers to STI testing and diagnosis
- Identify stakeholders' perceptions on Saudi women's contraceptive knowledge, use, and barriers to use.
- Explore stakeholders' attitudes towards providing SRH education on a national level and their opinions on the best time and place to provide SRH education, and their suggestions for the content of SRH education.
- Identify and explore areas for improvement for SRH services and counselling, and provide future recommendations.

CHAPTER TWO - SYSTEMATIC REVIEW OF THE FACTORS INFLUENCING MUSLIM WOMEN'S SEXUAL AND REPRODUCTIVE HEALTH

PUBLICATIONS FROM THIS CHAPTER

Alomair, N., Alageel, S., Davies, N., Bailey V, J. 2020. Factors influencing sexual and reproductive health of Muslim women: a systematic review. *Reproductive Health*.

Alomair, N., Alageel, S., Davies, N., Bailey V, J. 2020. Sexually transmitted infection knowledge and attitudes among Muslim women worldwide: a systematic review. *Sexual and Reproductive Health Matters*.

CHAPTER OVERVIEW

The chapter details the rationale, methods, findings, and discussion of my systematic review on factors influencing Muslim women's SRH.

2.1. INTRODUCTION

Religion and culture can play an important role in the education and lifestyle of its followers. This is clearly observed in Islamic societies where certain social behaviours are prohibited or considered to be unacceptable, such as extra-marital sexual relations. Issues related to SRH are rarely discussed in Muslim societies and are considered sensitive subjects (1, 2). Failure to provide SRH education may result in serious health threats including unwanted pregnancy, unsafe abortion, and STIs (3). Teenage pregnancies and unsafe abortions all contribute to morbidity and mortality, with girls aged 15-19 years twice as likely to die from childbirth as women in their twenties worldwide (4).

In Islamic cultures, there is a widespread assumption that single women do not need to be knowledgeable about their own SRH (1, 2, 5, 6). This assumption stems partly from the high value placed by society on women's virginity before marriage, and the belief that talking about SRH might encourage pre-marital sexual relations. Yet several reviews of sex education programmes worldwide suggest that such programmes could lead to delayed first intercourse, contraceptive use, and safer sexual practices (7, 8). Literature also suggests that in some Islamic societies, unmarried women are less likely to be referred for reproductive health services (9) and are also less likely to seek reproductive healthcare than married women (10). Lack of SRH services makes Muslim women, both

married and single, a vulnerable group unable to make or act on informed decisions about their own reproductive health.

Extra marital sexual relations are prohibited by religion in Islamic countries. It is commonly believed that those countries have the lowest rates of HIV/AIDS (11, 27). The prevalence of people living with HIV/AIDS in the Middle East and North Africa (MENA)[7] region, which is predominantly made up of Islamic countries, is much lower than the world average (54). However, it is also believed that HIV/AIDS rates are significantly under reported (55). Recent available data revealed that the number of new HIV cases have risen between 2004 and 2014 by 26%, making the MENA region one of the fastest growing HIV epidemics globally (26). While some of this rise could be attributed to enhanced testing and reporting, a significant proportion of cases are new transmissions (55), and the public are commonly unaware of the extent of risk behaviours and the measures of prevention (27).

Since sexual relations outside of marriage are forbidden in Islam, it is assumed that people are abstaining from sexual relationships until marriage. However, this is not the case, with some young Muslims engaging in extra/pre-marital sexual relations (56-58). Despite efforts by advocates calling for the need to educate young Muslims on sexual health issues, and providing services for those who need it, many countries fail to prioritise the issue (59). The reluctance is likely to be from the cultural sensitivity surrounding sexuality, and more specifically, young people's sexuality (2).

Several systematic reviews have covered many aspects of women's SRH; however, none have focused exclusively on Muslim women, and the factors affecting their SRH. Ethnic variations in SRH have been well documented in many countries and are a major public health concern (60-62). Compared to White women, women of Asian origin are less likely to attend sexual health clinics and less likely to use emergency contraception (60) and more likely to delay antenatal care (62). Ethnic differences in SRH exist even after adjusting for possible explanatory factors, such as socioeconomic status and sexual behaviour (60). However, these studies often fail to consider the wider cultural and religious determinants of SRH. It is essential to understand the factors that influence Muslim women's access and use of SRH services and education.

[7] The MENA region includes Iraq, Iran, Jordan, Lebanon, Syria, Palestine (West Bank and Gaza), Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, Yemen, Algeria, Egypt, Libya, Morocco, and Tunisia.

This systematic review aimed to identify personal, religious, cultural, or structural barriers to SRH service and education among Muslim women. In particular, the review focused on knowledge, attitudes, experiences, and healthcare-seeking behaviours for issues related to SRH.

2.2. METHODS

DESIGN

A systematic literature search for qualitative and quantitative studies was conducted following the Centre for Reviews and Dissemination (CRD) guidelines (63). In this review, I used a narrative synthesis approach with thematic analysis methods (64). The protocol for this systematic review is registered with PROSPERO (registration number: CRD42017081999)

ELIGIBILITY CRITERIA

Inclusion criteria

- Participants included Female Muslims of reproductive age (15-49). If studies included males or non-Muslims, only results relating to female Muslims were included
- All study designs
- Studies on SRH knowledge, attitudes, beliefs, experiences, and behaviours focusing on subjects related to SRH in terms of:
  - STIs
  - Contraception and family planning
  - Access to SRH services
- Arabic and English language publications[8]
- Studies published in between 2007 and 2021[9]
- Any country with a Muslim population

Exclusion criteria

- Studies were excluded if the outcomes are not reported, male and female results were not reported separately, or if results relating to Muslim participants were not reported separately.

[8] The search was limited to English and Arabic Languages as these were the two languages understood by the review team.
[9] The start date of the search was set to 2007 onwards to obtain most recent research.

- Studies conducted in a non-Muslim country or countries where less than 90% of the populations are Muslims, unless clearly stated that the study population were Muslim females.
- Studies focusing exclusively on *clinical* treatments and outcomes, the physiology /pathology of the reproductive health system, pregnancy outcomes and intervention studies.
- Studies on cancer screening behaviors i.e., Pap smear or breast self-examination Studies reporting on a specific contraception method (i.e., oral contraception pill) were excluded, as these studies were focusing on barriers relating to the method being used.
- Studies were excluded if they were in the form of editorials, book reviews, conference abstracts, resource or policy documents, letters, expert opinions, systematic reviews, narrative reviews, or reports.

SEARCH STRATEGY

Seven electronic databases were searched with a tailored search strategy for each database. These were MEDLINE (via OvidSP), EMBASE (via OvidSP), WEB OF SCIENCE, PsycINFO (via OvidSP), Maternity & infant care (via OvidSP), CINAHL (via the EBSCOHost), and POPLINE. The search strategy combined terms for sexual health OR reproductive health AND Muslim women.

Full details of the search strategy can be found in **(Appendix 1)**. Where applicable, MeSH terms were selected and exploded to identify articles where different terms were used for the same concept. Where MeSH terms were not available, free-text search terms were used.

IDENTIFYING ALL RELEVANT CITATIONS

Electronic databases were searched in January 2017 using a ‘sensitive’ search strategy to retrieve all relevant articles with the help of an expert librarian. Once the search was run for each database, the data were exported as a text file and imported into the reference management software (Endnote™ X8). The search was updated in January 2021 to include studies published after the first search was carried out in January 2017.

CITATION CLEANING AND SELECTION

After all citations were combined into one library, Endnote filters were used for initial data cleaning, to remove duplicates and studies published before 2007. A manual check was performed to remove duplicates not recognized by Endnote. A colleague with expertise in systematic reviews and public health research was the second reviewer for this systematic review (SA). SA and I independently reviewed all citations. The screening process started by title screening to exclude articles with obvious non-relevance. The reviewers categorised citations into 'Definitely YES', 'Definitely NO' or 'Possibly relevant'. After the title screening stage was complete, the two datasets produced by each reviewer were combined. The same steps were taken for abstract/ full text screening results.

A sensitive approach was taken throughout the screening process. Meaning that at any phase, if it was unclear whether a citation is eligible, it was marked for inclusion. All disagreements were resolved by consensus and disagreements were discussed to determine if the citation included the information needed. Third and fourth reviewers (supervisors JB & ND) intended to resolve any remaining disagreement. **Figure 3** displays the PRISMA diagram of the search and selection process.

SEARCH TERMS

Combinations of search terms were used for this purpose these terms will be divided into 3 categories:

Population terms

'Islam', 'Muslims', 'Arab', 'Middle East', 'north Africa', 'MENA', 'Algeria', 'Iraq', 'United Arab Emirates', 'Bahrain', 'Egypt'. 'Saudi Arabia', 'Kuwait', 'Oman', 'Syria', 'Morocco', 'Lebanon', 'Tunisia', 'Turkey', 'Iran', 'Qatar', 'Palestine', 'Jordan'.

Gender terms

'Women', 'females', 'girls', 'wives' wife', 'lady', 'ladies'.

Sexual health and reproductive health

The main terms that were used are 'sexual health', 'reproductive health', 'women's health', 'sexually transmitted diseases', 'sexually transmitted infections', 'health education', 'health promotion', 'sex education', 'sex counseling', 'family planning', 'contraception', 'contraceptive', and 'birth control'.

DATA EXTRACTION

A standardised data extraction form was developed to help in systematically identifying participant characteristics, study design, aims, data collection methods, methods of data analysis and main findings for all included studies. Separate extraction forms were developed for qualitative and quantitative studies. Excel spreadsheets were used to extract the main findings from included studies.

I extracted all data from all included full texts. The second reviewer (SA) reviewed a random selection of 50% of the extracted data and assessed the quality of (50%) of the full texts. If reviewers required more information, authors were contacted. A detailed description of the extracted data can be found in **Appendix 2.**

QUALITY ASSESSMENT

For this review, the quality of studies with qualitative design was assessed using the Critical Appraisal skills programme (CASP)(65). For appraising the quality of quantitative studies, I used the quality assessment tool developed by the Centre for Evidence Based Management (CEBM)(66). This tool is used to appraise the methodological quality of cross-sectional surveys, and address questions on the representativeness of the sample, response rate, validity of the tools used and statistical significance. Both tools have been widely used to assess the quality of qualitative and quantitative evidence.

DATA SYNTHESIS

The data in this review were synthesised using a narrative synthesis approach. Narrative synthesis refers to “an approach to the systematic review and synthesis of findings from multiple studies that relies primarily on the use of words and text to summarise and explain the findings of the synthesis” (64). It allows us to combine the results of qualitative and quantitative studies and examine relationships between them. Since both qualitative and quantitative studies were included in this review, the data needed to be translated into common categories/headings to allow for useful comparisons of the results.

Thematic analysis is one of the tools that could be used in the process of narrative synthesis and can be applied to both qualitative and quantitative data (64). The main outcome variables included in survey research (e.g., factors associated with contraceptive use) are translated into themes in the same manner as conceptual themes are extracted from qualitative studies. Thematic analysis allows for arranging and summarising the data from large and diverse bodies of research. And typically, but not always, involves an

inductive analysis process without a complete set of themes developed a priori to guide the extraction and analysis process.

According to Popay et al. (2006), there are four elements to narrative synthesis which are usually undertaken in an iterative manner. Although the first step, ***developing a theory of how the intervention works***, was not considered as it was not relevant for this review.

The *first step* in my narrative synthesis was ***developing a preliminary synthesis*** of the findings of included studies. This step involved the development of a tabular summary of the main findings to organize the extracted data and translate it through thematic analysis of primary data. All qualitative research studies were thematically analysed, and data were managed using NVivo qualitative software. Using inductive and open coding methods, the main overarching themes and subthemes across all studies were identified. All codes were checked by two reviewers (SA & JB) to ensure that codes provided a rigorous reflection of the data. Additional codes were created by a second reviewer where needed, merged into the original NVivo file after agreements on new codes were reached. Upon the completion of the thematic analysis, the themes of both qualitative and quantitative studies were merged and tabulated, and the first draft of the conceptual framework **(Figure 1)** was developed and discussed by the review team.

Discussions were made where new categories were created while others were incorporated into existing ones, producing the preliminary conceptual framework. The conceptual framework used for the review was based on a modified version of the ecological model[10] of health behaviours (67). The framework recognizes that multiple levels of factors influence health behaviours. These were divided into: **Personal domain** (knowledge, attitudes, skills), **Family and Community domain** (friends, family, social networks), **Religious and Cultural domain** (religious beliefs, and socio-cultural norms), and **Health Policy and Health Services domain** (national, state, local laws, and regulations).

The *second* step involved ***exploring relationships within and between studies***. As patterns across study results start emerging from the preliminary synthesis, rigorous examination was done to identify factors that might explain the differences in results across all included studies and allow the identification of any additional themes. It provided the opportunity for investigating and understanding how and why findings differed across and within studies and providing plausible explanations of the differences in the study

[10] Ecological models of health behaviour highlight the environmental and policy contexts of health behaviour, while integrating social and psychological influences. Ecological models lead to the explicit consideration of multiple levels of factors influencing health behaviours, thereby guiding the development of more comprehensive interventions.

findings.

The *third* and final step is ***assessing the robustness of the synthesis***. This step involved assessing the quality of primary studies, in addition to assessing the robustness of analysis through continuous discussions and revisions with the review team throughout the process of analysis and write up of results.

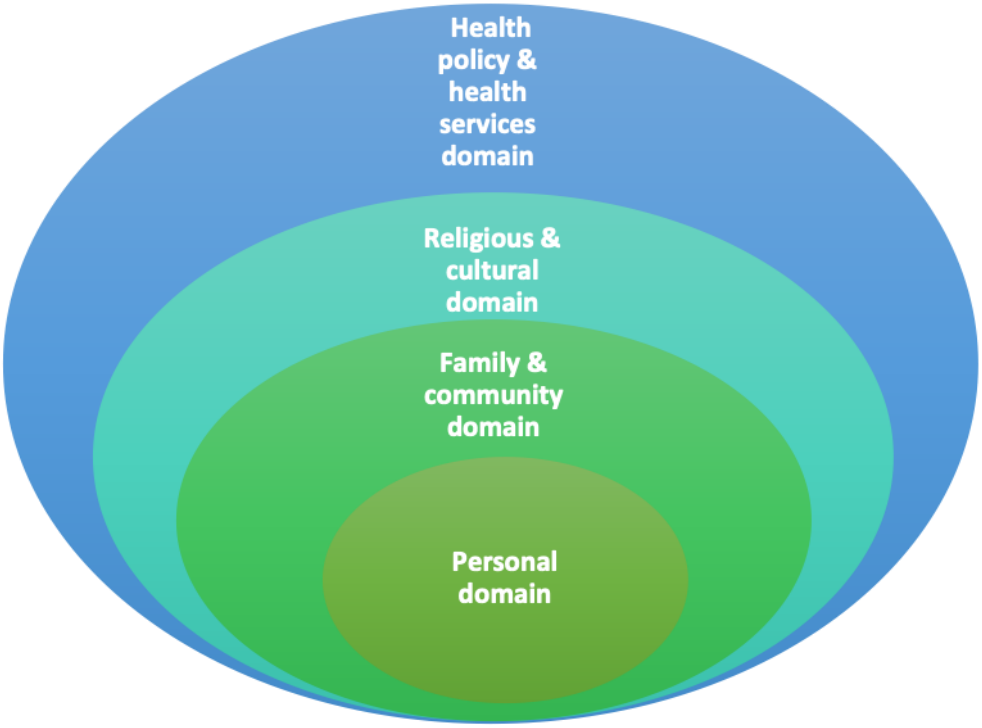

Figure 1: Conceptual framework guiding the analysis of the factors influencing Muslim women's SRH

2.3. RESULTS

Study selection

The search identified 13,554 articles, 2051 additional articles were included from the updated search, and five additional records from articles reference lists. All duplicates were removed, leaving 9,117 articles for title screening. After title screening, 2,774 abstracts were screened to identify potentially relevant studies. The search update conducted in January 2021 identified 13 additional studies that met the criteria for inclusion. A total of 86 studies were included in the review. **Figure 2** shows the PRISMA flow diagram outlining the systematic review process.

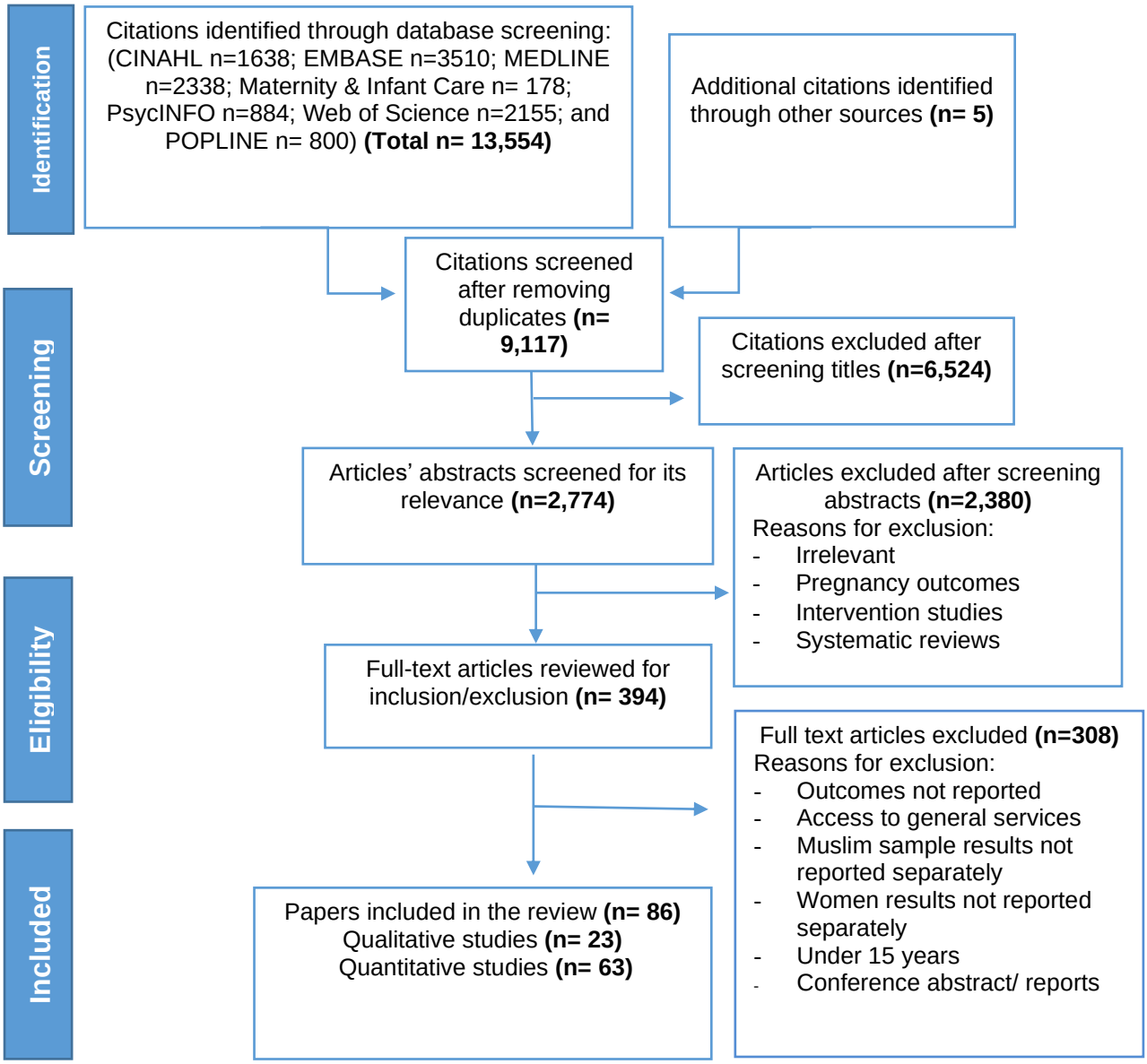

Figure 2: PRISMA flow diagram outlining the systematic review process

STUDY DESIGN AND SAMPLE CHARACTERISTICS

Sixty-three studies had a cross-sectional survey design (13, 68-129), twenty-three used qualitative/mixed method designs (130-153). Of the 58 studies focusing on contraception, almost all studies (n=53), exclusively included married women in their sample, with some specifying 'currently married' rather than 'ever married' in the eligibility criteria. Some authors have justified this with the assertion that it is socially unacceptable to question unmarried Muslim women about contraception as the general assumption is that they are not sexually active (85, 99, 101, 148).

Several studies included both men and women in their sample (13, 81, 85, 103, 104, 107, 108, 110, 113-115, 117, 133, 139, 143, 152), most of which focused on STIs and HIV/AIDS knowledge and attitudes. Only six of the studies focusing on contraception included men in their sample (81, 85, 139, 143, 149, 152). One study conducted in the UK included non-Muslims in their sample (107). However, only data relating to Muslim women were extracted from those studies.

Only twelve studies involved university students, while the majority of women in the included studies were unemployed 'housewives' (68-70, 72, 74-76, 78, 84, 86-88, 95, 96, 98-100, 129, 151). A significant proportion of women were illiterate or had education no more than secondary school education (68-70, 72-78, 83-87, 89-92, 94-96, 98, 99, 129, 151), with one study reporting illiteracy levels as high as 92% (89).

(Appendix 3) shows a list of the reviewed studies, giving details of settings, instruments, outcomes, participants, and response rates.

Seventy-one of the included studies were conducted in Muslim countries: Afghanistan (n= 5), Egypt (n= 7), Iran (n= 11), Iraq (n= 1), Jordan (n= 5), Kuwait (n= 2), Morocco (n=1), Pakistan (n= 1), Palestine (n= 4), Qatar (n= 1), Saudi Arabia (n= 13), Sudan (n= 2), Turkey (n= 13), United Arab Emirates (n= 3), Yemen (n= 1), and **one study** was conducted in three countries (Kuwait, Bahrain, and Jordan). Fifteen studies were conducted in non-Muslim countries: Australia (n= 1), Canada (n= 2), India (n= 3), Kenya (n=1) Nepal (n= 2), Nigeria (n= 1), Thailand (n= 1), United Kingdom (n= 2) and United States (n=2). However, all 86 studies focused primarily on Muslim women.

Fifty-eight studies had a primary focus on **contraception** knowledge, attitudes, sources of information, barriers and facilitators to use, and factors associated with their use (68-102, 120-123, 125-128, 138-153). Fifteen studies assessed women's **STIs and HIV/AIDS** knowledge on modes of transmission, symptoms, prevention, treatment, attitudes towards STIs and HIV, and the effect of culture and religion on their knowledge and attitudes(13, 103-115, 119). Thirteen studies examined women's **access to SRH services**, knowledge about available services, sexual health education needs, and the barriers and facilitators to accessing services and education (116-118, 124, 129-137)

Methodological quality

Quantitative studies quality appraisal

As shown in the critical appraisal table **(Appendix 4)**, nine cross-sectional studies did not address a clearly focused question (13, 69, 83, 85, 95, 104, 116, 118). The cross-sectional design was appropriate for most of the studies (n=56). While for the remaining studies, the research question would have been better addressed by a qualitative or mixed method approach (80, 81, 84, 85, 116-118). Eighteen of the included studies failed to clearly describe how participants were selected (68, 73, 77, 78, 82-84, 97, 100, 101, 105, 106, 108, 110, 118, 125, 127), and twenty-five studies used sampling strategies that had the potential to introduce selection bias (13, 68, 71, 72, 74, 78, 81, 83, 86, 88, 92, 94-97, 99-101, 104, 108, 111, 115, 119, 121, 125, 126, 151). Poor reporting made it difficult to assess the risk of selection bias in eight additional studies (70, 73, 77, 84, 105, 106, 110, 118). Only 26 studies appeared to have a sample representative of the target population (69, 75, 76, 79-83, 85, 87, 89-91, 93, 95, 98, 102, 103, 107, 109, 112-117, 151) and the sample size was based on pre-study calculation of statistical power in 19 studies (13, 69, 70, 73, 75, 79, 83, 88, 93, 99, 101, 102, 115, 117, 119, 120, 125, 127, 128). However, most remaining studies had a large number of participants and specific pre-study calculations of sample size may have been deemed unnecessary. Only 19 studies reported on response rate (13, 68, 69, 72, 75, 76, 87, 93, 98, 99, 102, 107, 111-114), and two studies had a non-satisfactory response rate of 50% and 47% (111, 121).

Qualitative studies Quality appraisal

As shown in the critical appraisal table (**Appendix 5**), most qualitative studies had a clear statement of the aims of the research, and a qualitative methodology was

found to be appropriate for all included studies. For some studies, the research aims would have been better approached using individual interviews rather than focus group discussions, especially given the sensitivity of the topics being discussed and the participants included (136, 140). Some studies lacked detail in describing their methodology, which could be due to the restrictions on word limit for papers written for publication (133, 137, 138). The lack of detail was also found in the analysis of three studies, where authors did not specify the method of analysis used (141, 142, 144). However, it was assumed from the description provided by the authors that they used thematic analysis. The result section for included studies was mostly discussed well and supported with relevant quotes. Some studies provided a combination of healthcare professionals/policymakers/ religious leaders/ husbands quotes in addition to women quotes; and in certain instances, it was difficult to distinguish the views of women from other participants in the sample.

2.4. BARRIERS AND FACILITATORS TO CONTRACEPTION UPTAKE AND USE

A. Personal domain

INSUFFICIENT SRH KNOWLEDGE

Knowledge about different contraception methods was assessed in many of the included studies (68-70, 74, 75, 77, 79, 81, 82, 84, 88, 92-94, 96-102, 116, 118, 135, 137, 138, 141, 144, 145, 147, 148). The oral contraceptive pill (OCP) was the most widely known method, followed by the intrauterine device (IUD). Different results were reported in one Nepalese study, where vasectomy and OCPs were the most widely known methods (94.5%), while only 28.7% of women knew about the IUD (127).

Spermicides and lactational amenorrhea were the least known methods across all studies (68-70, 74, 75, 77, 79, 81, 82, 84, 88, 92-94). Poor knowledge about female sterilization was consistently reported across all studies (68-70, 74, 75, 77, 79-81, 84, 88, 92-94), except one study conducted in rural Kashmir where high levels of knowledge were reported: (98%) of the sample were familiar with female sterilization (82). However, the majority of women in the sample (71.6%) had undergone female sterilization, which is likely to explain the high levels of knowledge.

Insufficient knowledge about contraception is one of the main barriers to contraception use among women (69, 75, 78, 80, 88, 90, 95, 141, 148, 151).

A Kurdish mother of four living in Turkey expressed that the only reason she did not use any form of contraception is because she did not know that there is anything that could be done to prevent pregnancy (141).

> *"When I got married, it never occurred to me how many children I give birth or whether I give birth to a child. I didn't know one can get pregnant so soon after she marries […] I didn't know after the pregnancy that one will get pregnant again if she doesn't protect or do something. I didn't know that, too. I got pregnant again after that child. It was my fault. It was because I didn't think. Only if I thought over [...] After I gave birth to the second, I was anxious that I would get pregnant again. But I didn't know what to do. Nobody told me to go to a doctor or do something like using the pill and having the coil fitted. The second son became eight months old, and then I got pregnant another. I gave birth to that one, too. My husband went to military service. I became pregnant when he returned for a holiday. Then, nurses came to see us. [...] I learned [about contraception] then."* **– Turkey** (141)

Seven studies focused exclusively on emergency contraception (EC) knowledge and use among women. Poor levels of knowledge were reported consistently across all studies (96-102), with the highest knowledge reported 24.5% (98). In all studies that reported on EC knowledge, women were defined as having knowledge about EC if they have 'ever heard' of EC rather than having accurate information about the method, mode of action and how it should be used. Reasons for non-use of EC were mainly lack of knowledge about the method (96-102).

Among women who had prior knowledge of EC, a major barrier to their use was the misconception that EC is a form of abortion (96, 98, 101). Other reported barriers included fear of side effects, infertility, and concerns that it would harm the baby if it did not work (96-102).

Sources of Information on Contraception

Main sources of information included family, neighbours, friends, media, healthcare professionals, books, and television (81, 82, 98, 120, 121, 126, 127). Qualitative evidence suggests that information on contraception was predominantly obtained from family, neighbours, and friends (138-141, 144, 147, 148)

> *"When women gather, they talk about these things [family planning] so I know about those things from neighbours and family… my sister told me about condoms and we started to buy condoms afterwards."* **– Jordan** (148)

Although women might obtain information on contraception from healthcare professionals, they usually preferred seeking information from friends and family members (138, 144). Some women expressed a lack of trust in healthcare professionals, and others explained that they do not seek their advice as they feel that they are incompetent (139, 144, 148).

> *"If we go to the doctor they will tell us that pills have side effects and encourage us for an IUD because they receive more money"* **– Afghanistan** (139)

Only in two studies conducted in Australia and the UK, women mention education in school as a source of contraceptive information. However, in the UK study, women felt that the amount of information received from schools was not sufficient (134, 145).

Fear of Side Effects and Misconceptions About Contraception

Fear of side effects is a major barrier to using modern contraception (68, 70, 73, 75, 78, 80, 82, 84, 87, 88, 90, 96, 99-101, 116, 126, 138, 139, 144, 147, 148, 150, 151). Women's concerns include weight gain, irregular bleeding, nervousness, headaches, and pain (138, 139, 141, 147, 151).

> *"I used many methods. At first, I used OCs [oral contraceptives], and these made me nervous. I started to hit my children and my weight started to increase, so I discontinued using them. Then I started to use an IUD, but it caused me bleeding. My menstrual period lasted for 20 days. Finally I*

returned to using withdrawal, periodic abstinence, and breastfeeding." **– Jordan** (144)

Misconceptions about the side-effects, modes of action, or effectiveness of different contraception methods also contributed to poor uptake and use among women. Misconceptions included fear of infections, wounds, difficulty and pain during intercourse, shortness of breath, kidney damage, cancer, sweating, early menopause, hair growth, mental health problems, weakness, weight loss, hernia, sperm reduction, doubts about methods reliability with some women believing that the risk of pregnancy is high with OCPs and others believe that IUDs can travel within the body (70, 84, 96, 97, 100, 101, 138, 139, 144, 147, 148).

"I heard that a coil was attached to the baby, it [IUD] was found somewhere on the baby. I was scared, I had an ultrasound. They said that it [my IUD] was in place. Still, I was scared, so I wanted it to be taken out." **– Turkey** (138)

Another major barrier to use was the belief held by many women that contraception could lead to infertility (75, 138, 139, 148).

"We believe that after the first child its preferable… not to have [unspecified] contraception method because we think … maybe we won't be able to have more children… some women have been sterile after they used contraception" **– Jordan** (148)

SOCIO-DEMOGRAPHIC FACTORS INFLUENCING CONTRACEPTIVE USE

Age, education, employment, socio-economic status, and number of children were all found to play a significant role in predicting contraception use among women (70, 72-76, 78, 82-87, 89-93, 120, 121, 123, 126, 128, 151). Age strongly predicts contraception use, with an increase in women's age associated with increased contraceptive use (70, 74, 76, 78, 83, 87, 89, 91, 120). Women in their late 20s and 30s were more likely to use contraception than younger age groups (15-25 years). However, in those studies, contraceptive use declined again among women aged 40 and older. Three studies showed contradicting findings, where there was an overall decline in contraceptive use with increasing age (85, 86, 90).

Parity is significantly associated with women's contraceptive use (70, 73, 82, 85, 86, 89-93, 128). Contraceptive use increased with the rising number of children, and the number of pregnancies was found to be a statistically significant predictor of the desire to conceive (73, 82, 85, 86, 89-92, 121, 123). While one study conducted in Thailand showed opposing findings, fewer numbers of children was associated with more contraceptive use. The authors concluded this was the result of women in their sample having low income and wanting to restrict the number of children in order to maintain a good quality of life (93).

The educational level of both women and their husbands significantly influence their use of contraception. Women's education is positively associated with use (70, 72, 73, 76, 78, 82, 83, 85, 86, 89-91, 121, 123, 126). A woman's educational level was also a significant predictor of having a planned pregnancy (121). Five studies examined the effect of husband's education on contraception use and showed consistent findings of positive associations (72, 73, 85, 92, 123). Ali et al. (2011) found that women whose husbands are educated (secondary level or more) are 9.5 times more likely to use contraception. Suggesting that husbands' education can be a powerful predictor of women's contraceptive use.

With regards to employment, working women showed significantly higher levels of use compared with non-working women (70, 72, 76). The evidence on the influence of income on women's contraception use was inconsistent. Five studies found that the higher the income the more the use (76, 89, 91, 120, 123). One study showed opposing findings, where lower income levels were associated with higher use of contraception (93). Possible explanations could be that the cost and availability of modern contraception varies between countries (some countries provide contraception for free), or that lower income level is associated with low educational levels which could consequently lead to poor knowledge on contraception.

ATTITUDES TOWARDS CONTRACEPTION USE

Most women had positive attitudes towards contraception for the purposes of child spacing (68, 70, 75, 77, 79, 81, 82, 85, 88, 134, 137-139, 144, 148). Several benefits of family planning were mentioned including economic benefits, better health

outcomes for the mother and child, if the births were spaced, leading to overall improvements on the quality of life (68, 139, 142, 144, 147, 148).

> *"I think it would be better if I had planned births actually, because I want to have better health for myself and to take good care of my children."* **– Jordan** (148)

Some factors were positively correlated with having favourable attitudes towards family planning such as education, knowledge about contraception, high parity, and high income (75, 77, 79).

Many women expressed negative attitudes towards contraception for the purposes of limiting the number of children (75, 81, 88, 144, 146, 147). Some women believed that it would be easier to raise and care for their children if they were closely spaced

> *"If I give more space, I face a lot of difficulties; short space is good. I can feed them in one time, they can play together, and they can go to school together. Long space creates more problems. This is my experience."* **– Afghanistan** (139)

Different interpretations of the economic impact of child spacing was found in one study (139), where women thought of having many children as an economic advantage.

> *"[Many women are] interested in a lot of children because when they grow up, they will earn money for them."* **– Afghanistan** (139)

Women in some studies had negative attitudes towards condoms, based on their perception that they are only used to protect against STIs in case of extra-marital sexual relations (138).

> *"God forbid, the men who go out [who sleep with other women] use it [condoms]. I did not hear it from the doctor; I had heard it from the television. The risk of disease decreases, that is what they had said."* **– Turkey** (138)

Negative attitudes were also affected by wider socio-cultural and religious factors, where women believed it is against their religious beliefs to decide on how many children they wish to have.

> *"God blesses the warm-hearted and fruitful woman. Why should I limit the*

number of children while I can still get pregnant?" **– Jordan** (144)

WANTING TO HAVE MORE CHILDREN

Women cited wanting more children as the reason for not using any form of contraception (68, 69, 73, 75, 80, 82, 88, 90, 93, 138, 139, 144, 146, 151, 152). For example, 22% of women in Abdel-Fattah et al. did not use contraception because they wanted more children, and another 50% did not use because they were newly married (68). Abdel-Tawab et al. reported that delaying first pregnancy was not an option for newly married women, even though they expressed the desire to delay having children (116). This may be due to the belief held by some women that contraception could lead to infertility.

> *"You can wait [to have children] one year, but not two years. If you wait two years, then you will need to see doctors and take medications to get pregnant."* **– Turkey** (138)

Some women said that their desire to have a son is the main reason they want to keep having children (139, 144, 146-148, 152).

> *"We will keep trying to have a male child regardless of the number of female children that we have got, even if our plan was to have only four children at the beginning of our marriage. That is for sure"* **– Jordan** (144)

There were context-specific reasons for wanting to have many children in countries like Afghanistan, where child mortality is high, or in countries affected by war and conflict like Syria and Palestine (139, 146, 148).

> *"For me and women in Palestine, we like to have more children because many of the kids get arrested or shot by the Israelis, so we like to have more children – we don't want to lose all of our children. But at the same time it's really hard for us because of the economic situation and poverty"* **– Palestine** (146)

B. Family and community domain

HUSBAND'S CONTROL

Husbands' refusal was reported as a significant barrier to contraceptive use, it was also observed that the husband is the key decision maker about family planning (68,

73, 75, 80, 82, 84, 87, 88, 90, 101, 116, 139, 141-149, 151, 152). Decision-making is not usually shared, and in some cases, women have no control over their own fertility. The main reason for husbands' refusal was their desire to have more children, in some cases, specifically sons (142, 144, 146, 148, 152).

> *"I have no say in the matter of how many children we have. It's my husband who decides, but after the fourth child I wanted sometime between the children. I went to the UNRWA clinic and got birth control pills. I brought them home and told my husband I wanted time. He said okay but after five months told me to stop using the birth control. It's just not up to me; it's up to my husband"* **– Palestine** (146)

Some women wanted to use modern contraception, while their husbands wanted to use traditional methods such as withdrawal or breastfeeding. Reasons often included the husband's misconceptions about modern methods' negative effects (139, 144).

> *"I may get pregnant, but I'm consoling myself. I breastfeed day and night. All people get sleep at night except me still feeding my child. I get tired, but what to do? My husband is not allowing me to use any modern method"* **– Jordan** (144)

Men are generally perceived to be indifferent or unaware of their wives' reproductive health needs; and women are traditionally expected to be shouldering contraceptive responsibility alone. Although husbands were often the primary decision makers for contraception use, they rarely wanted to share accountability for preventing pregnancies (139, 141, 144, 145, 151).

> *"When one participant handed her husband condoms saying, "I don't want to bear a child. You also don't want. Our children are still small. You do nothing. Use these at least," he said, "Are you joking with me?! You do it!"* **– Turkey** (141)

Since polygamy is permissible in Islam, some women considered having many children as key in keeping the stability of their marriage and sustaining the husband's attention and financial support (143, 146, 152). Many husbands used this rationale to pressure their wives into having more children.

> *"I know it is important to discuss how many children you want. But it won't be good for me. I would have liked to have only four children ... but then my co-*

wife already had four children and our husband who often says he likes children could also use it as an excuse to marry a third wife. So, I figured that telling him about my intention to stop at four children will only hurt me. I have seen it happen to other women..." **– Nigeria** (143)

While in some cases, it was the women who asked their husband to marry another woman in order to relieve them from the burden of having to bear another child and fulfil his desired number for children (146). For some women, husband's control over fertility went beyond psychological pressures to threats and partner abuse (141, 144, 146, 152).

"When I gave birth to my last baby, I wanted to have the ring, and he said you aren't allowed, you can't do that. Once, I didn't tell him that I was taking the birth control. I did it, I bought some birth control, and he found it, the pills, and he was going to beat me for it ... he doesn't want me to do it" **– Palestine** (146)

FAMILY AND COMMUNITY INFLUENCES

Family member's interference was also cited by women as the reason for contraceptive non-use (69, 80, 93, 116, 134, 139, 140, 146-148, 151). In addition to the husband, mothers-in-law, in some cases, had some influence on women's contraception choices. It was clear across different studies in many parts of the world that the contribution of the women to their own family planning decisions was insignificant in relation to other family members including parents, sisters, and sisters-in-law. (87, 93, 134, 140, 146-148, 151, 152).

"That was our first argument with my husband about children. He was very angry when I told him about the lawlab [IUD]. I expected my sisters-in-law to be supportive or at least understanding. I already had three children, we were all living under the same roof, it was very cramped, and we had no money. But in fact, his whole family took sides against me, and all of them said we had to have more children (...). They made it clear that if I used an IUD, I would regret it, because I might even have to leave the house and above all lose my three children" **– Palestine** (152)

Some women expressed that their mother-in-law had the same influence as their

husband, if not more, on their family planning decisions (69, 80, 139, 140, 146, 147, 149, 151).

> *"In most families, the mother-in-law and husbands [take the decision for child spacing]. They take the decision and they force on us to get pregnant or not"* **– Afghanistan** (139)

In some situations, the mother-in-law resorted to threatening the daughter-in-law that if she does not get pregnant, the husband would marry another woman.

> *"I'm telling my son to get another wife. They need more children ..."* **– Palestine** (146)

Direct comparisons with other women within the community also placed a significant pressure on women to have more children even when they have expressed no desire to have any more children (147).

C. Socio-cultural and religious domain

The influence of culture and religion on contraception use has been cited by women in many studies as the main barrier to their use (68-70, 73, 75, 78, 80, 82, 84, 88, 90, 93, 99-101, 134, 139-142, 144, 146, 147, 151, 152). Despite quantitative studies citing 'cultural reasons' as a barrier to contraception uptake and use, they rarely provided descriptions, giving participants little opportunity to provide their detailed accounts. The issue was better understood in qualitative findings, where participants' narratives were explored in more detail.

RELIGIOUS BARRIERS

For many Muslim women, the use of contraception is against their religious beliefs and considered to be the main barrier for use (68-70, 73, 75, 78, 82, 84, 88, 90, 93, 99-101, 116, 134, 140-142, 144, 146, 147, 151). For example, in Turkey, 92.5% of women think it is a sin to use emergency contraception(100). And in Egypt, only 50% of women think it is permissible in Islam to use contraception (84). These beliefs are highly influenced by religious leaders and Islamic scholars' views (140, 142, 146). Sapkota et al. (2016) interviewed female religious leaders in Nepal about the use of contraception, and they all had similar views:

> *"We can't use FP methods as we have no any right to prevent a new life from coming to the world"* **– Nepal** (151)

The general belief held by Muslims is that Islam encourages high fertility, and having many children is something that many Muslims aspire to (70, 142, 144, 146, 150, 151). Muslims depend on what is written in Quran and Sunnah for guidance on their day-to-day life. However, when it comes to family planning, there are contradictory views and interpretations of what is written (142, 149, 150).

> *"Islam is not the problem here, but the premier problem is how people understand Islam. People do not always read the Quran, the texts. There are many interpretations"* **– Morocco** (142)

Differing religious views were observed across and within studies. Muslims have different religious interpretations regarding family planning which can be categorised into two different schools of thought. One group openly accepts and promotes the use of contraception. They believe that God is gracious and desires ease for all, and that they can limit their family size to be able to live comfortably within their means (139, 142, 146, 149, 151).

> *"Our religion says that God is the one who gives us children, but on another perspective, we are not allowed to burden ourselves. To do family planning is okay, what is wrong is abortion. Its better you have a child that you can take care of"* **– Kenya** (149)

While the other group strongly oppose the use of family planning, except when used for medical reasons (134, 140, 144, 146, 147, 151). For many women, the use of family planning is believed to be permissible in Islam if it is used for child spacing and not limiting the number of children (95, 144, 146, 147, 149-151). Some even believed that limiting the number of children for reasons like mother's health, childcare, wanting a small family or economic reasons is forbidden or reprehensible in Islam (95, 149).

> *"It's permissible to take a break from having children, but one isn't allowed to say, "I will never take what God gives me and I will never want any more children*" **– Palestine** (146)

SOCIO-CULTURAL BARRIERS

The influence of culture was observed to greatly influence women's contraceptive decisions. In some instances, it affected women's ability to access and obtain contraception (134, 148, 151). The situation is even more challenging for unmarried women, as it is culturally unacceptable for them to discuss contraception, since they are believed to be sexually inactive (117, 132, 134-136). Young women have expressed that they faced negative reactions when they asked about contraception.

> *"The ad was very unclear. It said to take the pill if you want a break between children. I was curious about the ad and so I asked my aunt. She scolded me and told me it was not something I should talk about."* **– Australia** *(134)*

Both married and unmarried women face difficulties accessing family planning services because they fear judgement. In married women's case, they feared judgment because of the cultural unacceptability of family planning (131, 151). Although some women believe that Islam does not forbid the use of contraception, they expressed that they cannot openly access or admit their use because it would be culturally unacceptable.

> *"Allah (God) knows everything; nothing is hidden from him. But we cannot openly share the use of FP services as others will see it negatively"* **– Nepal** (151)

For unmarried women, they fear the consequences they would face if someone found out they are sexually active and in need of contraception (132, 134).

Many Muslims share the culture of the preference of sons over daughters. Many women keep having children until they reach the desired number of sons. It is sometimes the women's preference, which is affected by the cultural desirability for male offspring, but in some cases, it is the husband or other family members that pressure women into having more children (139, 144, 146, 147, 149, 152).

> *"The society values boys more than girls, so if you don't have a boy you keep giving birth until you are able to get [one]."* **– Kenya** (149)

D. Health policy and health services domain

LACK OF ACCESSIBILITY

Reasons cited by women as barriers to accessing contraception included lack of nearby family planning clinics or being physically unable to access clinics because of lack of transportation, needing permission from husbands or parents to go to clinics, financial cost, or lack of knowledge of available services (68, 73, 80, 82, 88, 90, 93, 96, 139-141, 145, 148, 151).

> *"She knows contraception. She doesn't know how to go anyplace. No one has to go [with her]. If she gets the pill, doesn't it finish in a month? Who buys for her? She knows [contraception]! But she can't go. Who takes her to? She can't go even to the maternity hospital."* **– Turkey** (141)

A study conducted in the UK on Pakistani Muslim women reported that most women did not go to family planning clinics because they did not know that they can make their own appointment at the clinic without being referred by their general practitioner (GP) (145).

Women expressed that existing policies in their countries are preventing them from accessing contraception (152). Some revealed that for women to get contraception, providers required evidence of husbands' approval. Some health providers explained that this was in the women's best interest, as this would protect them from divorce (116).

> *"To have the operation, I needed my husband's signed consent. But he refused point blank. We already had seven children. I didn't want any more, and I was not well. The doctor said I had to have it done because I was in danger of serious problems. It was very hard to convince my husband. He kept refusing because he wanted more children [...] He eventually agreed, but now he tells me every day that he wants twin boys and that if I can't give them to him, he will take another wife. What can I do?"* **– Palestine** (152)

HEALTHCARE PROVIDERS

Provider related factors appeared to have significantly affected women's access to family planning services (82, 134, 138, 139, 144, 145, 147, 148). Four issues have emerged influencing women's access and use of family planning: gender of the

healthcare provider, paternalism, language and communication issues, and quality of the services provided.

Many women emphasised that the gender of the practitioner played a major role in whether they would accept or access the service (130, 132, 134, 145, 148). This issue is highlighted by Islamic religious beliefs concerning modesty[11] of women's dress and interactions between men and women.

> *"I had an appointment, the nurse got the coil ready and everything ... I went in, and she said I am going to call the [male] doctor to put the coil in for you, and I said to them, no way am I going to have a [male] doctor ... I'll have 10 kids, but I will never have that from the doctor."* **– United Kingdom** (145)

Some women have missed appointments because they thought there was a possibility of being examined by a male practitioner (145, 148). And in many cases, women did not know that they can request being seen by a female healthcare provider (145).

Language barriers were cited in one study conducted in the UK. This made it difficult for some women to communicate with health providers and discuss their needs. Some women lacked the confidence to speak in English because it was not their first language. Some women relied on family members to interpret in health consultations, which contradicts with patient confidentiality, and made some women feel uncomfortable discussing private issues (145).

> *"For example, one of the participant GPs who spoke Urdu had encountered a mother-in-law describing her recently married daughter-in-law as having problems becoming pregnant. When the GP discussed the issue in private, the younger woman did not want to become pregnant yet, and asked for contraceptive advice."* **– United Kingdom** (145)

In the same study, none of the women had been offered professional interpreters. And even in the case of interpreters being available, some practitioners were worried

[11] Modesty is defined as a multidimensional construct which includes aspects of appearance, or how one dresses and looks; behaviour; beliefs; culture, or religion; and relationship or interaction with others.

that they would not convey contraceptive information properly or would modify the emphasis of information given (145).

But it extended beyond language to more widespread communication issues. In some instances, women expressed that when providers use complex language and medical terminologies, they rarely remember information given (138).

> *"They told me [about the modes of action], they showed pictures. There was a book in that clinic, and they showed pictures from that book. But now I do not remember, because it was very complicated"* **– Turkey** (138)

Quality of family planning services proved to be a major barrier for some women. Lack of trust in healthcare professionals, which in some cases was based on providers' misinformation and lack of skills, indifferent attitude and disrespectful treatment has led to ineffective family planning counselling (138, 139, 144, 145, 147, 148). Some women felt judgement and seemed to be ill-treated by their doctors because they lacked control over their own fertility (144, 145, 147). However, despite their unpleasant experiences with healthcare professionals, women were generally uncritical of providers' behaviour (145).

> *"Zaida: He first shouted at me ... you have no coil, no pills you no stop children ... they [her children] making a lot of noise, they are jumping here, there ... the doctor said ... you can't look after them two ... and how are you going to have another one now ...?*
>
> *Interviewer: Did he upset you, the doctor?*
>
> *Zaida: ... no, no, not upset ... he is very nice.' (Zaida, aged 34 years)."* **– United Kingdom** *(145)*

Many women have mentioned that the discussion of contraception was never initiated by the healthcare provider, and when they asked, they rarely got any answers from them (147, 148).

> *"If they [doctors] talk more [family planning] I would benefit from them but they don't talk, so I don't ask."* **– Jordan** (148)

2.5. BARRIERS TO ACCESSING SEXUAL AND REPRODUCTIVE HEALTH SERVICES AND EDUCATION

A. Personal domain

KNOWLEDGE, ATTITUDES, AND PERCEPTIONS

Studies that examined Muslim women's access to SRH services found that for some women, they were unaware of available services (117, 132, 133, 136, 145), poor health seeking behaviour was particularly observed among unmarried women (132, 133, 136).

> *"Giving information is more important than the services, as many do not know what services are provided in healthcare centres and whether the services can be used for singles or not. I, too, do not know where I can go. I just know that there are gynaecologists, and the health centre is only for married women."* **– Iran** (132)

Unmarried women often feared losing their virginity during medical examinations. And this prevented them from seeking SRH services when needed.

> *"Unmarried women don't refer to gynaecologists because they are afraid of losing their virginity during inspection."* **– Iran** (135)

Some women exhibited negative attitudes towards SRH education and had the misconception that they do not need to be educated about SRH matters as their religious practices provided them with enough protection against STIs (130, 133, 134).

> *"We don't go through the process of multiple partners. That is a religious distinction. So far now, grace of God. It keeps us safe from many sicknesses. The rest, Allah's wisdom is used. At least we have kept ourselves safe from sexually transmitted disease."* **– Canada** (130)

Others thought of SRH education as encouraging early sexual relations among unmarried youth (118, 134, 136). In some instances, it was thought to be against religious beliefs to teach SRH education for unmarried youth (134, 136). Yet, many

women believe it is essential to learn about SRH matters, with some emphasising the preference of being taught SRH education in a structured manner and delivered by trained professionals. It was also highlighted by many women that the content of SRH education needs to be tailored to fit Muslim women's needs (117, 131, 133, 134, 136, 137).

> *"There needs to be more support for Muslim women who are not too sure about sex and Islam. It can be hard to know exactly what is right and wrong sometimes, like where the line is. Also, I don't know too much about sexual health, so I think it would be good to learn this with other Muslim women."* **– Australia** (134)

B. Family and community domain

FAMILY CONTROL

Women expressed that they lacked information and felt there was a need for formal SRH education. However, since they were unmarried, they experienced opposition from family members when attempting to seek answers on certain sexual and reproductive matters (117, 118, 132, 134-137).

> *"I don't know anything about menstruation, how pregnancy occurs and other related issues, but I have always wanted to know more about these topics. But my family believes I don't need to know about these subjects, as I am unmarried."* **– Iran** (135)

Findings suggested that mothers' attitudes towards SRH education affected young girls' access to information and education (135-137). Many mothers wanted their daughters to learn about SRH but felt that they had inadequate information to give them, and other expressed feelings of embarrassment discussing such matters with their daughters (118, 136).

Some mothers strongly opposed their daughters being taught about SRH before marriage, and often dismissed their daughters' questions or concerns regarding SRH issues (134, 136, 137). Young girls who had the advantage of being taught sexual education in school expressed that their families might not approve of the sexual education content they received.

> *"I wouldn't tell my parents what I was taught at school. They wouldn't like it. That's why sometimes it can be hard to combine my religion and culture in Australia."* **– Australia** (134)

In many cases, unmarried women experienced reproductive health related issues and needed medical attention. However, their families seemed to dismiss their concerns or in some cases banned them from seeking healthcare services. This was mainly because they were unmarried and thus believed to not require SRH services (132, 135).

> *A 38-year-old unmarried woman stated, "I get annoyed by my delayed periods. My family tells me that, as I am not yet married, I don't need to worry or take any measures."* **– Iran** (135)

For other women, their mothers feared that they would lose their virginity during examinations, and would escort their daughters whenever they needed SRH related services to ensure they would not be examined (135).

> *"Mothers accompany their unmarried girls to the gynaecologist's office to avoid the inspection, hurting their daughter's virginity and thereby avoiding future problems."* **– Iran** (135)

C. Socio-cultural and religious domain

CULTURAL AND RELIGIOUS BARRIERS

The evidence on the influence of religion on the access to SRH education was conflicting. On the one hand some women thought that it is prohibited (117), and others had the same beliefs but still wanted to know regardless (134).

> *"Although my religion says I do not need to know about sexual health before having sex, I think it should be taught because girls are still going to do that stuff […] It could prevent a lot of mistakes from happening."* **– Australia** (134)

On the other hand, one study interviewed religious leaders and asked for their views on providing SRH education for unmarried youth. Most of them had supporting views on the importance of SRH education in Islam and considered that it was not against Islamic beliefs. They did however emphasise the importance of having education

within the boundaries of Islamic teachings and providing a culturally and religiously sensitive content (136).

> *"People who think that sex education isn't permitted in religion are completely wrong, but such knowledge should be taught in a way that informs adolescents about sexuality in a modest and moral manner."* **– Iran** (136)

Many Muslim women living in Western countries expressed that the SRH education and services available were not culturally and/or religiously appropriate, and many of the content was not reflective of their needs (130, 133, 134).

> *"Iranians have no experiences of and know little about sexuality before their marriage […] But Canadians might have [sexual] experiences from 14 or 15 years of age. So as adults, their questions are different."* **– Canada** (133)

Cultural taboos formed a major obstacle to discussions around sexual and reproductive issues, particularly with regards to unmarried women. Pre-marital sexual relations are forbidden, and discussions around them or sexuality in general are often considered taboo. Most studies revealed that cultural factors are key barriers contributing to the suppression of discussing SRH issues among Muslim women (117, 136, 137).

Unmarried women feared stigmatization or being labelled as having premarital sexual relations if seen accessing SRH services. This fear is rooted in the cultural belief that unmarried women are not sexually active, and many had the misconception that those services are associated with sexual activity (117, 131, 132, 135, 136).

> *"If one is unmarried and has a gynaecological problem, others will think that this individual has certainly had immoral sexual relations and is probably suffering from a serious disease."* **– Iran** (135)

Unmarried women also expressed that having services labelled as 'sexual' or 'reproductive' made it difficult and uncomfortable for them to access those services. Talking about SRH issues was often accompanied by feelings of great shame among single women (132, 135).

> *"I once accompanied one of my friends to a gynaecologist's office. I saw that all the other patients were married. Despite the fact that I needed to talk with the gynaecologist, it was difficult for me and I could not accept it. During the time I was there, I hoped that all the other patients knew I was simply accompanying my friend."* **– Iran** (135)

Since having services labelled as sexual or reproductive services hindered single women from using them. Unmarried women felt more comfortable using primary care centres to receive SRH services without the fear of being exposed, as those centres offer a wide range of services not limited to sexual or reproductive health (131, 132, 135, 136).

> *"Using public services is very good for singles. Singles are more comfortable in this way, I suppose, because they come to a centre where everyone goes; their frequent referral would not be noticed, and they would not be separated from the rest by using special labels."* **– Iran** (132)

D. Health policy and health services domain

LACK OF ACCESSIBILITY AND AFFORDABILITY

The economic dependency of some women on family members, either parents for unmarried women or husbands for married women, made it difficult for some to access SRH services when they lacked the finances to pay for the service (131, 132).

Physical and financial accessibility proved to be a facilitator to accessing SRH services among women. Being able to reach clinics by foot or having travel times less than 20 minutes, out of hours services or flexible hours, and low costs had positive effects on women's health-seeking behaviours (116, 129, 132).

LACK OF PRIVACY AND CONFIDENTIALITY

Lack of patient confidentiality was mentioned consistently as a barrier to accessing SRH services (116, 117, 132, 134, 136). Even though in some instances, women did not seem to always recognize the breach of patient confidentiality. They stated that the presence of a family member during consultations made it difficult for them to discuss the reason behind their visit (135, 146).

Unmarried women seemed to be concerned with healthcare providers informing family members about their visits and expressed worries regarding providers sharing information discussed during consultations. For some single women, family members always accompanied them during health visits, making it impossible for them to discuss any issues privately (132, 134-136). Furthermore, lack of privacy during consultations in some cases is the result of primary care centres failing to provide private rooms for patients (130).

A study in Egypt revealed that although patient records were stored securely in filing cabinets in the family planning clinics, several healthcare providers stated that they allowed family members to view women's health records. In addition to providers' lack of respect for confidentiality, another contributing factor is that in the Egyptian family health model, women's medical records are a part of the combined family health records and could be easily accessed by any family member (116).

HEALTHCARE PROVIDERS

For many women living in non-Muslim countries, having healthcare providers from similar cultural backgrounds was preferable, as they would be more understanding of their needs (130, 133). Women expressed that it facilitated conversations with the healthcare providers since they share the same language, and already understand their cultural and religious beliefs and how it has an impact on their healthcare decision-making. Additionally, women felt that providers from the same culture seemed to be more caring and were keen to devote more time to their patients.

> *"I heard about this doctor from Iraq […] I run to him. Although I know the English language, I feel very comfortable. They understand you. If you don't understand the English word, they can explain in Arabic. […] For female check-up, he himself told me that there is a doctor woman coming to our clinic on Saturdays […] If I go to another doctor, who doesn't understand my religion, he will feel insulted when I tell him, sorry you cannot do this for me. Because he doesn't understand your culture"* **– Canada** (130)

Yet, studies conducted in Muslim countries showed opposing views particularly for single women. They expressed that healthcare providers dealt with their concerns in an unfriendly and judgmental manner, some faced ridicule and negative attitudes from staff members and healthcare providers (130, 132, 136).

This issue was also observed in studies that examined healthcare professional's views. A midwife working in a healthcare centre stated:

> *"It has been established in our country that infections and gynaecological problems occur after marriage. That is, an unmarried woman cannot have such issues."* **– Iran** (135)

Some healthcare providers felt that it was not a part of their professional duties to help unmarried women (132, 135).

2.6. SEXUALLY TRANSMITTED INFECTIONS KNOWLEDGE, ATTITUDES, AND BELIEFS

For this section of the review, it was observed that the available literature reported no factors or results that went beyond the personal domain. Therefore, the results of this section were limited to one domain in the conceptual framework (**personal domain**).

INSUFFICIENT STI KNOWLEDGE

In all studies examining STIs knowledge (17 studies), a significant proportion of the women have never heard of HIV/AIDS and many other STIs (13, 103-115, 119, 134). Two studies conducted in Saudi Arabia reported that only about half of the participants had good knowledge about STIs (defined as having answered 60% or more of the question correctly) (106, 119). In the studies that examined both gender's knowledge about STIs, Muslim females had better knowledge about STIs compared to Muslim males, although knowledge was significantly low for both groups (107, 114, 124). One study in the UK examined knowledge of students from different religious backgrounds found that Muslim students had poorer knowledge than students from all other religions (107).The majority of women who were able to name an STIs mainly mentioned HIV/AIDS but had limited knowledge regarding the nature of the infection, modes of transmission, and prevention. Other STIs like chlamydia and human papilloma virus were less recognized (107, 108, 110, 134).

> *"I only know of HIV. I would assume it is transmitted through bodily fluids. I can't think of any others. I was never taught about them."* **– Australia** (134)

Knowledge about STIs signs and symptoms

Generally, Muslim women had poor knowledge regarding signs and symptoms of STIs, in addition to many misconceptions. Women in nine studies believed that you could identify an HIV infected individual just by looking at them (13, 103, 105, 106, 111-113, 115, 119). A study in Iran conducted on soon-to-be-married women showed that only 4.5 % knew that a person with an STI does not necessarily look ill, and 78% did not know that painful urination could be a sign of an STI. A further 51% did not know that the presence of sores in genital area is an STI symptom in both men and women. Poor knowledge of STIs was found among university students as well as women who were unemployed and illiterate (108, 113).

Knowledge about modes of transmission

Fifteen studies reported myths and misconceptions regarding modes of transmission of STIs among Muslim women (13, 103-106, 108, 109, 111, 113-115, 118, 119, 140). Women in several studies believed STIs can be transmitted from mosquito bites with proportions ranging from 58% to 18% (13, 103, 106, 111, 114, 118). Almost 20.9% of college women in the United Arab Emirates (UAE) did not know that it could be caught from having unprotected sex with an infected individual, and 70% believed that they are more likely to be infected when they are on their periods (13). Sharing toilets and swimming pools were also mentioned as possible routes of transmission (103, 106, 111, 113, 114, 118), as well as physical contact such as hand shaking or hugging (13, 103, 104, 106, 111, 114, 118).

Identifying correct modes of transmission was suboptimal as well, many women in four studies could not identify correct modes of STIs transmission. HIV transmission through breastfeeding was poorly recognized, with correct answers ranging from 70% to 18% (103-105, 112). Only 6% of young girls in one study knew that STIs can be transmitted through vaginal fluids, and 5% knew that HIV can be acquired through blood transfusion (113).

> *“HIV, well [...] it’s not exactly an STI. It’s more of a cancer, isn’t it? Also the thing called “crabs.” I learnt that from movies. I don’t know how you get it though.”* **– Australia** (134)

Only two studies reported good knowledge about modes of STIs transmission (103, 105). A study conducted with university students in three Arab countries reported that 90% of women correctly identified modes of STIs transmission, although there were also many misconceptions. For instance, over 40% of participants believed that only homosexual individuals get HIV/AIDS (105).

Knowledge about prevention and treatment

Lack of knowledge about STIs prevention was observed among Muslim women (13, 103-106, 109, 110, 112-115, 119). Nearly 93% of university students in the UAE and 77% in Afghanistan believed that vaccinations could protect against HIV/AIDS (13, 114). Women were also generally unaware of condoms for STIs prevention (103-106, 110, 112, 114, 140). For example, only 12% of female students in a study from Saudi Arabia believed that condoms can protect against STIs (110).

Only three studies reported good levels of knowledge regarding condom use with correct answers ranging from 74% to 67% (113, 115, 118).

> *"We have heard that HIV/AIDS spreads through sexual relations and by using certain measures such as contraceptives [condoms] we can protect ourselves. But there are people who are not aware of HIV/AIDS and contract the disease from sexual contacts"* **– Pakistan** (140)

Regarding treatment of HIV/AIDS, 66-43% of women in six studies believed that it is curable (13, 105, 111, 112, 114, 115). For example, a Demographic Health Survey in Palestine showed that 12.2% of women thought that HIV/AIDS can be treated by a traditional healer or folk medicine (112). Almost 20% of university students in Egypt did not know that if one person is infected, sexual partners need to be tested and treated (109).

ATTITUDES TOWARDS STIS

The results suggest that many women had negative attitudes towards STIs and HIV/AIDS, which are highly influenced by misconceptions and insufficient knowledge (13, 103, 105, 106, 111, 112, 114, 119, 130, 140).

> *"Generally, the society is of the opinion that a girl or a woman [who is HIV infected] is of a bad character, as not everybody knows about the other modes of spread of HIV/AIDS."* **– Pakistan** (140)

Negative attitudes were reported across studies from a range of different countries. For example, 32% of participants in a study from UAE said that 'I do not feel sorry for people who caught HIV/AIDS because it is their own fault', 81% believed that those who transmit the infection should be punished, and 53% thought that people with HIV/AIDS should be made to live apart from the general public (13). In Palestine, only 15% said that people with HIV/AIDS should be allowed to teach (112). One study from the southwest region of Saudi Arabia reported that 8% of young female students thought that a person with HIV should be killed or punished (119).

Women living with HIV seemed to be considered inferior and subjected to more blame and judgement compared to men, and this gender inequality was considered normal in the society (140).

> *"Our society considers those who are suffering from HIV/AIDS as having a bad personality, people will never sit, eat or have physical contact with them. The society will disgrace a woman more than a man because our culture is like that."* **– Pakistan** (140)

Negative attitudes towards HIV/AIDS, and the perceptions that only certain individuals are at risk acted as a barrier to testing and diagnosis. For example, 38% of participants in a Saudi study said that they would not want to know if they had any kind of STI (110). Although 90% believed that their partners had the right to know if they had an STI, and 55% said that they would ask for a divorce if they found out that their partner had an STI (110).

Nearly 62% of women in one Iranian study believed that education about STIs and unintended pregnancies does not lead to premarital sex (113). Women and young girls in a number of studies wanted more information about STIs symptoms, transmission, prevention, and treatment, and many wanted to learn about sexual health issues in schools (13, 113, 134).

> *“Although my religion says I do not need to know about sexual health before having sex, I think it should be taught because girls are still going to do that stuff [...] It could prevent a lot of mistakes from happening.”* **– Australia** (134)

On the other hand, some women in another qualitative study believed that there was no need for sexual education for Muslims, believing that STIs are not an issue among them, or that religious practices provided them with protection against STIs (140).

2.7. DISCUSSION

This is the first systematic review, to my knowledge, to synthesise the findings of qualitative and quantitative evidence on Muslim women’s SRH in a rigorous, systematic manner. There are multiple levels of factors that influence Muslim women’s SRH. Poor SRH knowledge and practices among Muslim women is a complex matter that is affected by personal, community, cultural, religious factors and existing policies and regulations. All these factors overlap and are affected by each other. Although this review included studies from all countries, the majority of studies in this review were conducted in the MENA region.

This review revealed that Muslim women often had little or no education and lacked awareness about family planning in general. It was also found that a significant proportion had many misconceptions. Lack of knowledge about contraception is a significant barrier to fertility regulation (94). In addition to poor knowledge, fear of side effects and misconceptions, particularly fear of infertility, limit women’s use of modern contraception. Some women associate condom use with disease and promiscuity, and this is true of women from different religious and cultural backgrounds (95-97).

Women’s education as well as husbands’ education positively correlates with contraceptive use (98, 99). Education is assumed to increase autonomy and empower women to take charge of their own fertility and provide women with the knowledge to make informed decisions and use services effectively (100). This highlights the need to educate all women about available contraceptive methods, and how to use them effectively.

Negative attitudes towards contraception influenced women's uptake and use; these attitudes are affected by wider socio-cultural and religious factors. For example, some women believe it is against their religion to decide on how many children to have. Muslims depend on what is written in the Quran and Sunnah for guidance on their day-to-day life. However, when it comes to family planning, there are contradictory views and interpretations of what is written. My review also revealed that some Muslim women accept the use of contraception. According to Stephenson & Hennink, psychosocial barriers were found to be the most important self-reported barrier to family planning. Psychosocial barriers were defined as religious interpretations and belief systems that limit women's power to make decisions regarding their own fertility (101).

Shyness and modesty are major barriers that affected Muslim women's knowledge and access to family planning and SRH services. Women expressed that they prefer discussing reproductive health matters with friends and family rather than healthcare providers, and that friends, family and the media are sources of most of their contraceptive knowledge. Women were also uncomfortable with physical examinations by physicians from the opposite gender. A preference for a physician of the same gender, particularly for gynaecological-related consultations, can be true of women from different religions (102).

The contribution of Muslim women to their own fertility choices was less significant in relation to other family members. Many married women are under a lot of pressure to stay fertile and bear children (103, 104). Several studies have shown that bearing children is considered essential to gain the approval of the husband's family, protect them from divorce, and sustain economic support (95, 103-105). Fertility decisions are mainly dominated by men and older women in the family, particularly the mother-in-law (101).

Most Muslims are known to share strong family values and patriarchal culture, which can benefit young individuals and protect their well-being (106). However, this can also be a barrier to women's access to SRH information and services. My review also revealed that unmarried Muslim women faced greater difficulties accessing SRH services compared to married women. Although both groups faced barriers accessing information and services, being unmarried by itself was a significant

barrier. The social unacceptability of pre-marital sex limits young women's SRH knowledge and access to services (95).

My review revealed poor overall STIs knowledge among Muslim women, with HIV/AIDS being the most widely recognized STI. Although this review suggested that Muslim women's STIs knowledge was higher compared to Muslim men, women's awareness of STIs was still found to be suboptimal. This issue is particularly concerning since approximately 50% of included studies in this review focused exclusively on college students. A report on STIs evidence from the MENA region confirms the results from this review. The report showed that although the majority of people in the region have heard of HIV/AIDS, they rarely know how the infection is transmitted, and have little knowledge regarding other STIs (154). Poor sexual health knowledge poses a great risk to young Muslim women who engage in premarital sexual relations, and to married women whose husbands are not monogamous or are infected before marriage. These findings strengthen existing evidence that supports the importance of sex education, particularly at school (155-157).

Previous literature suggested that better education is associated with higher levels of HIV/AIDS and STIs awareness (158). However, the result showed that poor knowledge existed among women of all educational levels. Since sexual health is not taught in any formal setting in most Islamic countries, educational level might have little impact on STIs awareness. Even among highly educated people, lack of knowledge and misconceptions still exist. For example, a study examining physicians' knowledge in Saudi Arabia reported that almost half of the sample identified casual kissing as a mode of HIV transmission (159).

Significant misinformation was also found regarding modes of transmission and prevention. Condom use was poorly recognized as a measure of HIV prevention among Muslim women. However, literature suggests that Muslims with prior knowledge of condoms expressed difficulty accessing them (160). According to a report by Abu-Raddad and colleagues, awareness of condom use in Arab and Islamic countries did not predict use, and only a 'fraction' of those who are aware of condom use as a measure of HIV prevention actually use them (55). It is likely that the majority of extra-marital sex in the region is not condom-protected (29). This is likely because premarital sexual relations are forbidden in Islam, making it difficult for

young individuals to openly access condoms without being judged or stigmatised for having premarital sex (27, 154). The issue is even more challenging for women, as they could face severe consequences for having premarital sexual relations (i.e., honour killing). Findings from another systematic review on non-Muslim youth showed that reasons for condom non-use often went beyond lack of knowledge and access barriers to social influences (161). Other reasons documented in the literature for not using condoms included partners' refusal, high condom prices, and low perceived risk of infection (29). Therefore, addressing awareness without considering social and cultural factors would only solve a part of the issue.

Social and cultural factors influence how STIs are perceived in Muslim countries, with many Muslims believing that STIs are not an issue among them (130). STIs rates are not commonly reported in some Islamic countries, which might contribute to the perception of low risk found among many Muslims. Stigma surrounding at-risk individuals, particularly men who have sex with men and extra-marital sex in general also adds to the denial of the existence of STIs and HIV/AIDS among Muslims (162). Findings from a review on South African youth suggested that low perceived risk resulted from societies' tendency to deny the presence of HIV/AIDS, specifically in societies with great stigma attached to HIV/AIDS (163). According to the Health Belief Model, low perceived vulnerability is a risk factor as it reduces the individual's motivation to take protective measures (164). Research indicates that higher perceived risk of STIs is associated with safer sexual practices (163).

Cultural and religious factors play a crucial role influencing sexual health perceptions, sexual health knowledge and needs. A number of studies on women from different religious backgrounds suggest that conservative views and social disapproval of premarital sex significantly influenced sexual health awareness and safer sex practices (157, 165, 166). Therefore, for any educational intervention to work, it should be tailored to meet the target population's specific needs. Our review showed that many women expressed a need for sexual health education. Qualitative evidence on Muslim immigrants from Canada showed that women did not oppose sex education, but felt that the sex education offered did not reflect their needs (164). Research on religious leaders' views on providing sex education showed that the majority had positive views towards providing sex education for young Muslims, with emphasis on providing a religiously sensitive content (136). Efforts should be

directed towards designing sex education programmes that are religiously appropriate and accepted in conservative Muslim societies.

STRENGTHS AND LIMITATIONS OF THE SYSTEMATIC REVIEW

Several measures have been taken to identify all relevant literature like including non-English papers, searching a broad selection of electronic databases, and screening reference lists of all included papers for additional studies. However, since I only included English and Arabic language papers, a proportion of the Muslim population might have been underrepresented. While it is best practice for data extraction and quality appraisal to be done independently by two reviewers, only 50% of included papers were independently appraised and extracted. However, there was an overall high level of agreement between reviewers.

I located studies of Muslim women from 23 countries worldwide. However, since I excluded studies that did not clearly state that the population included Muslim women, not all countries with Muslim populations are represented in this body of evidence. Most of the studies in this review were quantitative surveys, with only 23 qualitative studies. Qualitative evidence facilitates an in-depth exploration of issues and the close-ended nature of survey questions provides little opportunity for participants to give their detailed accounts (167). It was not possible to conduct a meta-analysis in this review as study outcomes were measured differently across included studies.

There were limitations to the primary studies. A number of studies in this review lacked rigour, which could be improved by careful consideration of study design, selection of participants, and reporting of findings. Furthermore, all quantitative studies in this review were of cross-sectional design and provided only simple descriptive results. However, due to the existing obstacles to conducting STIs and HIV/AIDS research in the MENA region, Haghdoost and colleagues suggest that even simple descriptive studies and convenience sampling are an essential step to improving research in the region (168).

EXISTING LITERATURE IN SAUDI ARABIA

My systematic review revealed that most existing literature in the area of SRH in Saudi Arabia is quantitative in nature. Cross-sectional studies identified from this review focused on investigating SRH knowledge, with poor overall knowledge among Saudi women and girls. No research has been done to document the impact of poor SRH knowledge on Saudi women. Furthermore, there were no published qualitative studies exploring Saudi women's SRH identified in this review. The majority of cross-sectional studies used convenient sampling with high possibility of bias. Quantitative research can be insufficient when exploring a sensitive and complex topic such as SRH. My research investigated the issue through qualitative methods to gain a deeper understanding of the matter and explore Saudi women's and stakeholders' perceptions and experiences.

CHAPTER THREE - METHODOLOGY

CHAPTER OVERVIEW

In this chapter I describe the study design applied for my qualitative research, provide a rationale for my chosen methodology, ethical considerations, a critical reflection on my positionality, and the obstacles encountered within the data collection, analysis, and writing up phases.

3.1. METHODOLOGY

I chose qualitative research as it can provide valuable and unique understandings that cannot be addressed using quantitative methods. It can provide answers on how quantitative data are created through social processes (169). Qualitative research aims to provide 'an in-depth and interpreted understanding of the social world of research participants by learning about the sense they make of their social and material circumstances, their experiences, perspectives and histories' (170). Qualitative research methods are appropriate for exploring people's attitudes and perceptions, and understanding social settings (170). Most of the research done on sexual health topics in Saudi Arabia is quantitative (171-173). This can be insufficient when exploring a sensitive and complex topic such as SRH. My research investigated the issue through qualitative methods to gain a deeper understanding of women's SRH in Saudi Arabia. The same methodology was applied for both studies. Where applicable, specific measures employed for each study are highlighted throughout.

3.1.1. STUDY DESIGN: SEMI-STRUCTURED INTERVIEWS

Semi-structured interviews are one of the qualitative methods that are widely used for exploring and investigating phenomena by allowing the participants to share their detailed accounts in their own terms (174-176). It allows for the exploration of specific socio-cultural traditions, values and beliefs (177, 178). In semi-structured interviews, the researcher develops an interview guide with open-ended questions rather than close-ended questions (170, 178). It is a commonly used method when there is little to no knowledge about a research topic (e.g., sexual health in Saudi Arabia) (179).

Through the interviewing process, and by carefully listening to participants, I aid and guide the discussion of what the participants consider relevant and significant to them. Interviews are audio-recorded and accompanied by field notes. Semi-structured interviewing is a valuable tool for SRH research as it has the potential of creating a 'normal' conversation with the participant, which could facilitate a more open discussion about private and sensitive issues (175). Therefore, to explore the views of women and stakeholders in Saudi Arabia, I chose a qualitative approach using semi-structured interviews with open-ended questions.

Given the sensitivity of the topics being discussed and the participants included, I chose one-to-one interviews over Focus group discussions (FGD) as many of the questions in the topic guide can be perceived as sensitive or private, and some people may be uncomfortable disclosing private, controversial, or opposing views in a group setting (180). I chose one-to-one interviews in order to explore the topic of Saudi women's SRH in-depth, and represent marginal opinions that may not be given in FGDs (181). The one-to- one nature of the interviews allowed me to explore the sensitive subject of SRH, giving participants the opportunity to provide their detailed accounts and allowed for the rich exploration of participants' narratives (174).

3.1.2. Rationale for choosing stakeholders

Policymakers

I chose to recruit stakeholders from a number of policy-making agencies and officials in the health sector. The reason I chose to recruit policymakers working in the field of women's health is because they have a direct or indirect influence on policy formulation or implementation in this field. Additionally, their opinions have a direct impact on many of the MoH recommendations and policies.

Healthcare providers

I recruited stakeholders working in the field of women's health including physicians, health educators, and psychologists. These stakeholders work and interact directly with women and could evaluate their healthcare needs and concerns. They can also provide insight into the specific issues Saudi women face, which can help in tailoring

a programme based on the unique needs and experiences of Saudi women. Healthcare providers deal with women from all around the country with different circumstances and demographics, which could help me capture and convey the accounts of women who might not be willing or able to participate in my study.

RELIGIOUS LEADERS

Saudi Arabia is a country ruled by Islamic '*Sharia'* law, and all legislation and policies need to be in line with Islamic rulings and teachings. The opinions and views of religious leaders are highly respected in the Saudi community, and they have a direct influence on the public's views towards any proposed programme.

3.1.3. SAMPLING AND RECRUITMENT STRATEGIES

STUDY 1 - SAUDI WOMEN

Sampling and setting

Purposive sampling was used to identify Saudi women aged 18-50, aiming to interview participants from different age groups, marital status, educational level, and employment. This heterogeneous sample allowed for the capturing of a wide variety of views and experiences. The recruitment process was done by me, it took place in a public hospital, King Fahad Medical City (KFMC), in Riyadh, (the capital city of Saudi Arabia) between January and June 2019. This hospital is one of the major public hospitals in Riyadh that provides primary, secondary, and tertiary healthcare services to the public free of charge.

I approached potential participants in the waiting areas of the hospital's outpatients' clinics and invited to take part in the study. I am fortunate to have a good relationship with a number of clinicians and clinic staff working in the hospital, and they were able to provide support with the recruitment process, by asking patients in their clinics if they were interested to participate in the study, explaining the research aims and handing out information sheets. Initially, I was worried that the nature of the topic explored would discourage women from participating and was prepared for a very challenging and lengthy recruitment process. However, contrary to what I anticipated, many women approached expressed interest in the subject and were keen to participate in my research. I handed a written information sheet to

participants who expressed interest in the research and their questions about the research were discussed and answered prior to the interview. I continued to recruit potential participants until there were no further emerging themes and it was decided that thematic saturation was reached (181). All interviews were conducted face-to-face in KFMC outpatient clinics. Clinics were the most appropriate setting to interview women as I had a private room in the clinics to conduct my interviews. Additionally, women were already present in the clinics for other appointments and were able to participate after their appointments. After explaining the research and handing out the information sheet, I asked potential participants to meet me in the private room provided by the clinic after their appointments. Only one woman who was approached and agreed to participate did not show up for her interview. However, she apologised and explained that she could not participate due to issues with transportation and time restrictions.

STUDY 2 – STAKEHOLDERS

Sampling and setting

Purposive sampling was used to identify stakeholders working in different areas in the field of women's health. I chose stakeholders based on their professional involvement in activities related to women's health, health education, SRH, and religious studies. A stakeholder is defined as an individual or group with a substantive interest in an issue, including those with some role in a policy making/changing positions (182). Selecting stakeholders to participate in this project was based on their professional relationship to the field of women's health.

The diversity in the stakeholder sample allowed me to capture a breadth of expertise for different perspectives on Saudi women's SRH. Fourteen stakeholder interviews were face-to-face, and two of the religious scholars' interviews were conducted via telephone, due to difficulties meeting face-to-face.

I recruited healthcare professionals including health educators, obstetrician/gynaecologists, and psychologists. From the healthcare professionals, five were physicians including obstetrician/gynaecologists (OBGYN) and/or urogynecologists, one was a psychologist and two were health educators. Being a faculty member at a well-known institution such as King Saud University (KSU) has

helped tremendously in increasing stakeholders' interest in participation, and their trust in me as a researcher.

I recruited stakeholders from policy-making agencies and officials in the health sector by directly contacting them via telephone or through email invitations.

I recruited religious leaders/scholars who are highly respected and influential in the community from different educational institutions. I gained the details of contacts with religious leaders/scholars through educational institutions' websites where they teach Islamic studies to recruit religious academics. I approached over 160 religious scholar via email, ten responded to the email invitation, and only three agreed to participate.

3.1.4. TOPIC GUIDE

Topic guides for the interviews were drawn from the systematic review of the literature I conducted on Muslim women's SRH **(Chapter 2)**. The interview guide was informed by the conceptual framework used in my systematic review **(See Chapter 2)**. Questions/topics included women's perceptions of the term SRH, sources of SRH information, perceived barriers and facilitators to knowledge acquisition, the influence of lack of SRH knowledge on their mental and physical wellbeing, the influence of lack of knowledge on certain SRH experiences (i.e., menarche, first sexual intercourse), SRH information needs and experiences with any form of SRH education, and their views towards introducing SRH education in the country. A full copy of the topic guide can be found in **Appendix 6**.

Separate topic guides for each stakeholder group were developed based on their professional roles **(Appendix 7)**. For healthcare providers, the topic guide explored their views on Saudi women's sexual and reproductive healthcare and information needs, SRH issues Saudi women face, barriers and facilitators to SRH discussions, information and advice, women's knowledge of contraception methods and their role in facilitating usage, and women STIs knowledge. It also included questions on communicating STI diagnosis with their patients, views on providing SRH education programmes and who's responsible to educate the community on SRH topics.

For policymakers, the topic guide explored participants views on Saudi women's SRH in general, current and future programmes and policies to address SRH in

Saudi Arabia, perceived barriers and facilitators to community's engagement in these programmes, current family planning programmes, rules and regulations regarding family planning, contraception knowledge and use, the availability of different contraceptive methods, current STIs knowledge, ways of prevention, and organizations responsible to educate the community on SRH topics.

For religious scholars/leaders I explored their views on women SRH in Saudi in general, religious views on contraception use and family planning, perceptions on commonality, causes and prevention of STIs in the country, religious views on providing SRH education.

The topic guides were discussed and edited by myself and my supervisors. I carefully worded questions to be non-leading and non-judgmental. The guide was then piloted with a few participants (work colleagues) and questions were rearranged and rephrased based on their comments. The piloted interviews were not included in the analysis as the purpose was to improve the topic guide.

3.1.5. DATA COLLECTION

Participants were given the choice of either face-to-face interviews at the venue of their choice or via telephone. A demographic questionnaire was handed to each participant for descriptive data at the start of each interview **(Appendix 8)**. The demographic questionnaire included questions on age, education level, employment status, parity, and marital status. For stakeholders, the questions included job description, expertise, and their affiliated institutions. Before the start of each interview, I informed participants that I will be taking notes throughout the interview to further aid the analysis.

All women's interviews were conducted face-to-face, in a private room in the hospital and written consent was obtained before the start of each interview **(Appendix 9)**. Fourteen stakeholder interviews were conducted face-to-face and took place at the participants' place of work, one interview was in a café, and two were conducted via telephone. All interviews were conducted in Arabic except two stakeholder interviews were conducted in English as per participants' request.

Consent forms and information sheets were provided in both Arabic and English and verbally explained to participants. For telephone interviews, consent forms and information sheets were sent and signed electronically via email before the start of the interview. In addition to written consent, verbal consent was recorded at the start of each interview. With participants' permission, interviews were audio recorded.

Discussions ranged between 30 to 60 minutes. I continuously took notes of participants' body language, tone of voice, incidents that happened before, during or after the interviews. I also took notes of my feelings and the surrounding circumstances during the recruitment and interviewing process to guide the analysis, write up, and presentation of my findings **(See reflexivity and positionality).**

3.1.6. DATA MANAGEMENT

In accordance with the Data Protection Act (2018), audio files of recorded interviews were saved on a password encrypted file in a password protected computer that can only be accessed by me. Interviews were anonymised and given unique identification codes. For the women's sample **(Study 1)**, I made a chart of participants' identification codes, age, marital status, education, employment, and number of children. For stakeholders **(Study 2)**, I made a chart of participants' identification codes, education, and job title. Participants' names and their affiliated organization were removed from all transcripts and participants were only identified by their code number at the beginning of each of their answers. Both files were saved on a password protected computer and only I had access to it. The signed consent forms were stored in a locked filing cabinet that only I have access to, electronic consents are stored in a password protected computer.

3.1.7. DATA TRANSCRIPTION

Transcription is a written representation of audible or visual data, and it is the first step in analysing qualitative data. It is a process that involves close observation of the data through careful and repeated listening (183). Due to the high number of interviews conducted (n=44), it was time consuming for me to transcribe the interviews myself. My funding allowed me to hire a transcriber with whom arrangements were made to protect confidentiality. Files were encrypted and

password protected and were only shared by me and the transcriber. All shared files were deleted upon completion of the transcription process.

Transcription was done verbatim by a professional transcriber. Some interviews were conducted in English (n=2), as per participants' request. After receiving all the transcripts, I checked each transcript one by one against the original recording, which required close reading and listening of the audio-recording, through which many mistakes were discovered and corrected. While revising the transcripts, I added notes about changes in participants tone of voice or emotions to aid the analysis process. For example, how participants lowered their voice when discussing uncomfortable or controversial views or when participants seemed uncomfortable when talking about certain topics. After all the editing was done, I was confident with the accuracy of all transcripts against the original recording and proceeded to the next step. The repetitive replaying of the audio-recordings allowed me to familiarise myself with the data, to the point where I could recall and identify interviews by their code number. This helped immensely with checking and rechecking of the data as I was familiar with all interviews and could go back to any specific detail fairly easily.

3.1.8. DATA TRANSLATION

Collecting data in another language from which the findings are presented requires an extensive translation work, yet, extremely common in social research. The translation process in itself can be an analytically productive process and a critical challenge that is both time and effort consuming (184, 185). It can also pose some issues relating to the credibility of the data and findings. In order to minimise translation errors and improve the quality of the translated data, it is generally acknowledged that translation must be done by someone who is proficient with both languages and share similar cultural backgrounds with the participants (186-188). Originally, I intended to translate all interviews using a professional translator. A hired translator attempted to translate a couple of transcripts. However, after reviewing his work, I decided to keep the transcripts in their original language as cultural nuances and expressions were lost in translation, which I considered important for the analysis, and subsequent interpretation. To ensure the credibility and authenticity of the data, I decided to do translation myself and translated all relevant quotes. I attempted to translate as many quotes as possible, much more

than what I intended to use, in addition to translating a number of interviews (n=8), to allow my non-Arabic speaking supervisors to be exposed to as much of the data as possible. Two interviews were conducted in English, but even then, some Arabic anecdotes and phrases were used.

3.1.9. DATA ANALYSIS

Having a very rich dataset, I decided to use thematic analysis, as it is not 'wedded' to any pre-existing theoretical framework and could be used within many different theoretical frameworks (189). Thematic analysis is the most common form of analysis in health research. It is useful for exploratory research where little is known about the research topic. Through its theoretical freedom, thematic analysis offers a flexible and useful approach that has the potential to provide 'a rich and detailed, yet complex account of data'. Therefore, I felt that it would allow me to explore the data in great detail with room for complexity and richness (189).

The audio-recorded interviews were transcribed verbatim. Having co-investigators from different disciplines and cultural backgrounds provided varied perspectives and ensured that one viewpoint did not dominate (190). Although I initially planned on using Nvivo, a qualitative data analysis computer software package, which I had received training on and used for my narrative synthesis. Unfortunately, it could only be used for left to right written languages which meant that it was incompatible for Arabic language use. After some research, I chose to use ATLAS.ti software which allows for right to left data handling and thus compatible with the Arabic language.

I revisited audio recordings before coding interviews to take notes on participants' tone of voice and verbal cues to be added to the notes I already took during interviews on participants' body language and interview contexts. Data familiarisation was conducted in parallel to the data collection process by listening to audio-recordings and reading transcripts. I read each transcript carefully, writing down initial impressions and possible themes. Audio recordings were played throughout the coding and analysis stage to ensure that spoken words were reflected in the written transcript, and to help guide the analysis process.

An inductive approach was applied, where themes and codes were not pre-selected in a deductive way; rather, were generated from the data using coding and

refinement of themes. I coded each transcript, line-by-line, generating a set of codes based on close reading of the transcripts. A random sample of interviews (n=6) were coded by another member of the research team (SA). Codes from each transcript were revised, line-by-line, then compared, discussed, and amendments were made, where appropriate, until full agreement was reached. Categories were derived from grouping codes together to produce an analytical framework and the preliminary themes were produced. All codes and categories were in English, and I translated all relevant quotes to facilitate the analysis process. All members of the research team checked all codes and contributed to categorisations and groupings of codes. The analytical framework was refined in an iterative way during the analysis via discussions with co-investigators experienced in qualitative research. In the final stage, I checked the integrity of the themes in relation to the extracted codes, as well as to the data set as a whole. During the interpretation and write up phase, I made a separate file for codes, groups and categories which was shared and discussed with co-investigators. From those files, we were able to choose and agree on the main themes used in our results. I met regularly with my supervisors to ensure agreement about the themes. Finally, recordings and transcripts were revisited at every stage of analysis and write up of results.

The qualitative findings were mapped using the conceptual framework from my systematic review **(See Chapter 2)**, and an additional domain (institutional domain) was added for a comprehensive exploration of this findings. The conceptual framework and included personal factors, family and community factors, socio-cultural, religious, institutional factors, in addition to health policy and health services.

3.1.10. Ethical Considerations

In social research, confidentiality is a fundamental requirement for ethical practice. Therefore, I made sure that the confidentiality and anonymity of the participants' identities and accounts were protected throughout all stages (181). During the interview process, I showed respect for the participants' privacy, anonymity, and comfort. When possible, I allowed the participants to choose the setting for their interviews, in order to make them more comfortable and give them a sense of empowerment.

To facilitate discussions about the topic, confidentiality between participants and me was explained and maintained throughout the process of data collection. The legal limits of confidentiality were also explained at the start of the interview; to ensure that participants understood that in exceptional circumstances, relating to the safety of the participant or others, confidentiality will be broken. However, there were no instances where I felt that the safety of the participants or others was compromised.

During interviews, I made it clear to all participants that they do not have to disclose any sensitive or upsetting matters; and kept checking if they were happy to proceed throughout the interview reminding them that they can pause or stop at any time. Recordings were also turned off upon participants' request, and any information disclosed during the interviews that the participants later mentioned that they did not intend to disclose were discarded from the data. This only happened twice throughout the interviewing process.

Some questions in the topic guides relate to sexual health, which can be considered a sensitive subject to some participants. Participants were not asked directly about sexual practices, sexual orientation, or personal views on sexuality, although some participants felt comfortable sharing personal stories and reflected on their own sexual views and experiences. I was conscious not to probe too much about sexual views and experiences as it was not the aim of my study and could also be perceived as exploiting participants' trust in me.

Research around religion and SRH is considered a sensitive topic particularly in Islamic cultures, which could make some participants feel uncomfortable or to construct answers in accordance with religious norms. I am Saudi, and share the same culture and religious background as the participants, and feel that it improved the quality of the interview through shared language and cultural references (180). Being Saudi also allowed me to be culturally sensitive and aware of which phrases are considered acceptable to use, and which ones I should avoid **(See Reflexivity and positionality)**.

Special care was taken in phrasing the questions and the use of terminology, particularly when discussing sexual topics. Participants included both married and unmarried women, and in our culture, it is considered unacceptable to assume that unmarried women are using or have used contraception, as this could be construed

as accusing participants of having premarital sex, which can have severe repercussions for unmarried women. As a result, questions relating to contraception were phrased differently based on marital status to avoid offending participants. For example, in one interview, the participant mistakenly wrote down her marital status as 'married', and when I asked her if she ever used contraception, she was taken aback, and I felt that she was offended by my question. Understandably, she answered defensively saying *'I'm not married and never was! How can I use contraception??'* I felt embarrassed and worried that I offended her, I immediately apologised and told her that I did not assume that she was married, it was based on what she wrote in her demographic questionnaire. She laughed and apologised for the confusion. Thankfully, that incident did not seem to impact the rest of the interview, instead it helped establish a good rapport with this participant.

Two interviews were conducted via telephone, one with a female stakeholder who was not able to meet face to face due to her busy work schedule, and another with a male religious scholar who was uncomfortable meeting with me. He explained that since I am a young female researcher, the only way he could talk to me was through the phone, most likely because of worries about *Khalwa*[12] خلوه which many Muslims believe is forbidden in Islam.

The topic guide included questions on awareness on different SRH topics. Some participants seemed critical of their own lack of knowledge and others were embarrassed. Participants used phrases like '*I don't know if what I am about to tell you is true or false'* or *'I'm sure I'm wrong'* and *'I'm sure I failed to mention something'.* However, I kept reassuring and reminding them that the purpose of this interview was not testing knowledge. I also assured them that they will not be judged for expressing personal views or experiences. I remained neutral toward participants' responses and avoided showing any judgement or emotional reactions towards participants' experiences or potentially controversial views. Some participants attempted to ask for validation or asking directly if their answers were correct. I consistently tried to remain neutral and refrained from expressing my personal views.

[12] In Islam, khalwa (literal translation is solitude) is private meetings and physical touch between men and women who are not married, nor close relatives (such as father or siblings) are prohibited.

However, there were instances where I felt the need to nod in agreement in order to encourage the participants to carry on.

Ethical approval from UCL ethics committee was obtained on 15/03/2017, Reference no. 10157/001. Ethical approval from the hosting hospital (King Fahad Medical City) in Riyadh was obtained on 30/01/2019, Reference no. FWA00018774.

3.2. REFLEXIVITY AND POSITIONALITY

Reflexivity involves a “self-critical sympathetic introspection and the self-conscious analytical scrutiny of the self as a researcher” (191). Being conscious of one’s positionality within the research process has been highlighted as an integral part of social research (170, 192). I attempted to be reflexive throughout all stages of my studies, being aware of my impact on the research process from the inception of this thesis.

I am aware that my interests and beliefs have influenced the research topic and chosen methodology. I have been consciously reflecting on how my assumptions about the topic had an influence on recruitment, rapport with participants, data collection, data analysis, write up and discussion of findings.

I am a young, educated, married Muslim woman born and brought up in Saudi Arabia. I am fortunate to be raised in a family that has always encouraged me to pursue my academic and professional career and was given freedom in many aspects of my life. My parents also raised me to be open and understanding to different cultures and civilisations. I understand that many Saudi women are not as privileged as me, having full control of my life choices. My privilege has led me to think of women and young girls who are less fortunate, and in many situations unable to take decisions directly affecting their own lives, which influenced my chosen topic and methodology.

Ever since my early college days, I had a passion for public health. It made me understand that health is not merely the absence of disease, rather, it encompasses a set of interrelated factors that includes physical, social, cultural, environmental, economic, and political wellbeing. My experience working in health education and promotion also helped me realise how disadvantaged women and young girls can be, and how their medical issues are often affected by a complex set of issues that

are not directly related to their health. I realised that women do not only lack health information, but they also lack a safe space to share their medical concerns, more specifically sexual and reproductive concerns. In my days working in patient education, I have encountered some female patients coming with parents or spouses, and they rarely had a chance to utter a word or even have a private moment with the healthcare provider. And sadly, for some, their medical choices were also not their own. This prompted me to take actions to advocate for their needs and rights by providing evidence-based women' health research in Saudi Arabia.

Being a 'cultural insider' as young Muslim woman with first-hand experience of SRH services in Saudi Arabia made me develop an interest in women's health. I wanted to understand their specific needs and experiences in order to provide recommendations for SRH education and services, with the aim of improving Saudi women's SRH experiences and overall wellbeing.

Studying my masters in the UK allowed me to be exposed to a different health system and become familiar with the sexual healthcare services provided for women in the UK. My Master of Public Health also provided me with exposure to different cultures and experiences, which made me realise the significant impact of social, culture and religious beliefs on health. It also helped me gain knowledge and understanding of different health systems and health policies around the world, which led me to look more critically at how women's health is approached and practiced in Saudi Arabia.

In recent years, there has been a considerable amount of interest both in the media and elsewhere, about the place of women in Islam. Much of this interest has been depicting Islam as constrained, intolerant, and backwards particularly regarding Muslim women. As a Muslim woman, and a researcher, focusing primarily on Muslim women in my thesis, I aim to provide an impartial view about the status of women in Islam by discussing the different interpretations made by religious scholars of Quran and Sunnah and share the critical views of women on their own perceptions of the status of women in Islam and within the Saudi society.

My interest in the area of women's SRH was met with enthusiasm by family, friends and colleagues. However, there were some instances where I was warned by

colleagues about using the term ‘sexual’ in my thesis due to the cultural sensitivity around sexual health topics. Thinking back, I now realise that their opinions have impacted how I presented my research topic to others, particularly to people in a position where they can have a direct impact on my funding, data collection and recruitment. For example, for the first year of my PhD, I would omit the term sexual from any official letter to my funders and affiliated organization. I later realised that my concern was unwarranted, and I was affected by people’s opinions. In reality, my funders and my affiliated institution had no issues with my research topic, and instead, I was met with eagerness and understanding.

The fact that I am a teaching staff member in one of the most prestigious universities in Saudi Arabia greatly facilitated the data collection process. My role as a Saudi academic provided me with legitimacy and helped me gain participants' trust. I was mindful that the way I introduced myself to participants could influence what they told me, and how comfortable they are discussing private and sensitive matters. I always introduced myself as a faculty member at KSU and a PhD student. I felt that it is important to mention my position at KSU as me studying abroad might give the impression of someone who is too liberal, and possibly judgemental of their conservative views. Although I made sure participants were fully aware that I am planning to publish and present the findings in international conferences. The fact that I am Saudi, and a part of a well-known and trusted institution gave me credibility and might have facilitated in gaining participant’s trust as I was perceived as an insider rather than an outsider.

I was also aware that some participants, particularly policymakers, may be wary of my agenda, especially since I was studying in the UK and my research is related to such a taboo topic. This might make participants more aware of ‘who I am reporting back to’, which could make them fear of being misrepresented, especially when sharing controversial cultural/social/religious beliefs. It might not be easy for religious scholars and policymakers (from governmental institutions) to discuss these topics with someone studying abroad, as they would view me as an outsider.

Although many policymakers were comfortable critically discussing SRH issues, policies and available services in Saudi, some were very reserved and careful in expressing their views. Policymakers from certain institutions made sure they were

representing their institution's views rather than their own. Many were referring to the work of their institution as flawless and in no need of any reform. Participants were also conscious of this presentation, as one participant mentioned after the interview that it is only normal to defend your work and take your institution's side. She also asked me to stop recruiting from this institution as I will most probably be exposed to similar views as her own and I would be wasting my time. When I tried to recruit junior staff working from the same institution, they mentioned they were worried about their employer's approval to join the study, although they were guaranteed confidentiality, they still refused to participate.

My previous experience working in hospitals helped me understand the setting and be familiar with the hospital's systems and processes. It also provided me with the connections and contacts that would facilitate the recruitment and data collection process. My connections also helped prepare for obstacles and plan how to deal with them. Before I started with the data collection, I contacted a colleague working in the hospital's women's health clinic. Her support and enthusiasm about the project greatly facilitated the recruitment process. She introduced me to the clinic's staff and provided me with access to a private room in the clinic to conduct my interviews. She introduced the research to women in her clinic and asked them if they were interested to participate. Having her introduce the research facilitated participation because women knew her and trusted she would not introduce them to something that was inappropriate or irrelevant to them. She also advised me on the best times and days to come to the clinic, where the chances of finding participants were better. Yet, there were days that I would spend hours waiting for potential participants but there were barely any patients coming to the clinic, and there were days where I had no interviews at all. However, those days of long waiting times helped me reflect on the data collection process, reflect on the way I conducted interviews I have done so far, and reassess the way I approached and interviewed participants. I did not realise how much this colleague facilitated the recruitment process until she went on her annual leave, and even though I had many other connections, I struggled to recruit participants in her absence.

One of the challenges I faced not being affiliated with the hospital, was having no control of when the private room to conduct the interview became available. Although I usually had a private room in the women's health clinic, on busy days,

doctors would sometimes come to the room and ask to use it for the extra patients they had, which meant I had no place to conduct the interviews. Although this never happened during an interview, it caused a disruption in the recruitment process as I stopped looking for participants when I had no room to conduct my interviews.

Many women showed interest in participating in the study but indicated that they did not have time to be interviewed after their consultation, mainly because their husbands were waiting for them outside, and they were their means of transportation. This also meant that many women had already had a long day of appointments, and some had travelled long hours to come to this hospital, yet many of them were still keen to participate in the study. Some women were accompanied by their husbands during their appointments. Although they were not present in the interview room, the fact that they were waiting outside made me mindful not to take too much of their time and I may have rushed through some parts of the interview.

The presence of the husband also affected women's choice to participate in the research. For example, one woman agreed to participate, after asking her to sign the consent form, she asked me to wait so she could ask her husband's permission to sign. She came back and told me that he refused and did not want her to participate, because they did not want to sign anything. Conducting research, particularly qualitative research, is not common in Saudi Arabia. This makes people wary and confused about why I needed their signature, as consent forms are usually needed for invasive medical procedures. So, some might have been afraid that I am taking their signature for something other than what I have disclosed to them.

I was very conscious of how I physically appeared to participants. Although I don't cover my face or my hair, which can give a certain impression about me. I always made sure that I appeared modest, by wearing a conservative outfit *'Abaya'* (always black, no colours), I wore no makeup, and covered my hair. I was very aware that the way I look could highly influence participants' opinions of me, and for some, my looks could even offend them, influencing their choice to participate in the study. This was especially true for religious scholars. Preparing for an interview with a religious scholar, I was especially conscious of the way I looked in front of him, I even considered covering my face for the interview (religious covering). We have a history in this country where religious scholars feel like they have the duty to comment on

the way women dress and vocally advise and condemn anything they perceive as non-religious. After much thought, I decided to go with what I normally dress like. When we met, he actually positively commented on my non-coloured *'black Abaya'* and the way I cover my head and how I had minimal makeup on '*unlike women nowadays'*. This also made me feel uncomfortable as I felt I was being assessed on the way I looked, and I did not acknowledge or reply to his comments. Unfortunately, this is a perfect example of how the way I look during interviews had a huge impact on how the interview went, and how comfortable the participants were talking to me.

As a 'cultural insider' from the same background as many of the women in my study, during the interviews, I found it challenging at times to find the balance between being neutral and having a more personal conversation. Being neutral with some participants made the interviews feel like an interrogation, where I felt it was essential to have a conversation-like interviewing style so that the participants become at ease with the discussion. This could be due to SRH topics being very personal and sensitive topics. Also, qualitative interviews are not commonly conducted in Saudi, and the concept of recorded interviews is still new as well. I anticipated that women would refuse to have the interview audio recorded as previous researchers have indicated that they had participants refuse to be recorded. Luckily, I did not encounter a participant refusing to be audio-recorded. However, some would ask the purpose of the recording, who would listen to it, and whether the recordings of their actual voices would become public. Once I explained that the purpose of the recording is so that the interviews could be transcribed verbatim, and no one other than the people immediately involved in the research would listen to it, they had no issue with being audio-recorded. There were instances where I did notice that women were very aware that they were being recorded, some would lower their voice when saying controversial views particularly when talking about men, expressing their frustration about the traditional gender roles in our culture.

As the interviews were conducted in the hospitals, some women feared the consequences of expressing their views about the services provided, and their opinions on their healthcare providers. This is a public hospital where healthcare is provided for free, and women feared they would suffer consequences for expressing any negative opinions towards the service or the service provider. One woman

asked me to guarantee her that she would not be penalized for criticising physicians and their consultation skills.

Marital status influenced the way I interviewed and asked questions. In interviews with divorced women, I was very careful not to ask too many questions about their experience as a married woman fearing I would offend them or bring back unwelcome memories from their past. There were some instances where I felt that some questions triggered negative emotions. One participant expressed a lot of regret and sadness about her experience that was affected by her lack of SRH knowledge. I was careful not to probe her any further as I did not want to trigger any negative emotions or make her regret participating in the study. At the end of the interview, she expressed that she was happy that she had the chance to share her experience and possibly help prevent this from happening to other women in the future.

With single women, I needed to be careful with phrasing certain questions, as not to imply that they are having sexual relations, which are extremely unacceptable and could have serious repercussions for women. Unlike men, the potential consequences of having extra-marital sexual relations are severe for Arab, Muslim women (i.e., honour killing). Single women's responses to questions about contraception were often very brief, usually trying to give the impression that these topics are not relevant to them. I sometimes felt that it was a conscious effort on their part to convey naivety and disinterest in these subjects. During recruitment, many single women kept indicating that they were single, wanting to make sure that they were even eligible for the study. This was due to the general perception in our culture that SRH is only relevant to married women. I noticed that I had to probe unmarried women a lot more in order to start a discussion and have a better understanding of their views and perceptions.

Married women seemed very comfortable and at ease when discussing their sexual health, sexual needs, and experiences. Even though I never directly asked them about their sexual views or experiences, information was often shared in response to general questions. I never felt that they were uncomfortable sharing their views on contraception or their reproductive choices. I never felt my questions to married women regarding family planning were intrusive, which made me feel at ease asking

them about it. The fact that I am a married young woman could have facilitated the conversation through shared experiences, and I felt that married women participants related to me more. However, when it came to questions about STIs, for some women, I sensed that they felt uneasy and bothered talking about STIs and their views. They sometimes spoke about their own marriage imagining how it would feel to them if an STI came from their spouse, which could explain their discomfort. Their unease discussing STIs were apparent in some interviews that it has impacted the way I discussed these topics, fearing that I would cause worry, concern, or even offend them in any way. In these interviews, I noticed myself not asking too many questions, or probing too much, because I did not want the participants to feel uncomfortable.

All women found it difficult to use sexual terminology, regardless of marital status or how comfortable they were discussing sexual health topics. Women usually used hints or used expressions of the Arabic language to describe sexual terms. For example, instead of saying the Arabic word for sexual intercourse, women said *'the thing'* or *'marital relations'* or 'the relationship between husband and wife'. And instead of saying the Arabic word for female and male reproductive organs, they would say *'his and her organs'*. I must admit, I do relate with women's difficulty vocally expressing sexual terms as I am, as with all the women in the sample, raised in a culture where it is regarded as immodest, improper, and even offensive to speak freely about these topics. There is a stigma and shame associated with anything related to sex and sexuality, which includes the mere use of the terms. I found this to be true for stakeholders as well, even physicians, whose sexual health is part of their professional duties. During interviews, stakeholders were very careful to replace the word 'sexual relations' with the word 'marital relations' when discussing sexual intercourse. When talking about extra-marital relations, they almost always used the terms 'forbidden' or 'illegal' relations in reference to extra-marital sex.

Recruitment of stakeholders was not as easy and smooth as recruiting women participants. Given that I had to interview different stakeholder groups, with different job descriptions, it took a lot of time and required the assistance of some of my connections to gain access to certain institutions and contacts. I was also more conscious of stakeholders' busy schedules and heavy workload. This might have affected the way I interviewed them, and some discussion might have been rushed.

For example, I once interviewed a physician who just came out of surgery, she was still dressed in scrubs and looked exhausted. I told her I had no problem rescheduling the interview, but she insisted that she was happy to proceed. The fact that she looked exhausted, placing her head in her hands a lot, rubbing her temples, caused me to rush the interview. I experienced this again in an interview with a consultant during her clinic hours. Although she did not have any patients booked, the interview was continuously interrupted by the clinic's staff either to ask her opinion on something or ask her to sign some papers. She then asked me to give an estimate of how much time I needed to finish the interview. This has caused me to rush through the rest of the interview (especially that we were already 25 minutes into the interview), and I tried to focus on the most important questions. I noticed that the timing of the interviews has had an impact on both the interviewee and me. Having an interview early in the morning (7 am), before clinics started meant that clinicians were relaxed and not in a rush to finish the interview, which made us take our time. I found those interviews the easiest to conduct, and those interviews took the longest, averaging on an hour. When I tried to recruit some of the nursing staff, the head of the nursing department in the hospital thought that a 30 mins recorded interview is very difficult considering nurses' busy schedules and asked me not to recruit any nurses. I tried however to invite some nurses to participate but none of them agreed.

Stakeholders' clinical experience was reflected in their views and experiences. Many policymakers were either still practising clinical work or previously worked as a clinician. Their clinical experience had an apparent influence on their views and experiences. Therefore, I found many policymakers alternated between their clinician and policymaker roles. Some healthcare providers who are not directly working in SRH (e.g., health educators and psychologists) usually reflected on their own experiences and provided their personal views and experiences rather than giving their professional opinions. Therefore, in some interviews, the discussion shifted from a stakeholder perspective to participants' reflecting on their own experiences as women, mirroring the findings from the women's sample.

Speaking the same language and knowing my way around the system, also made me an 'insider' to some extent and facilitated my data collection. It also meant sometimes participants expressed their opinions in terms that indicated their

awareness that we shared the same culture by saying phrases like '*you know what I'm talking about'* or *'you understand'*. However, this also meant that sometimes I had to probe more to give more understanding and clarify the meanings behind the *'you know what'*.

My positionality could have added some limitations to the research. As a woman, I felt more comfortable and at ease when interviewing women participants. I felt that we established a stronger rapport, and they were also more comfortable sharing personal views compared to male participants. I noticed that when interviewing male participants, I had a more serious tone and stern facial expression. Although most interviews with male participants were easy, comfortable, and engaging, I was reminded of my position as a woman in certain situations. For example, in an interview with a male policymaker, the interviewee avoided making eye contact, and kept looking at the wall specifically when discussing sexual health related topics. Reminders of my social position were most apparent with male religious scholars. One male religious leader agreed to participate via telephone interview but asked that the interview be conducted through his wife *'and I prefer the interview to be conducted through my wife'*. Given the difficulty recruiting religious leaders, I agreed. However, at the time of the interview, he decided to speak to me himself, and his wife was not present during the interview.

I anticipated that male religious scholars would be extremely reserved and unapproachable, much to my surprise, they were very comfortable, perhaps even too comfortable at times. In one instance, a male religious scholar used hand gestures to explain erectile dysfunction, and then apologised if that made me uncomfortable and asked for the permission to proceed, as he was just telling stories about Prophet Muhammad and his time. I told him that it is okay as long as it is relevant for this study and helpful in terms of understanding how religious practices in relation to sexual health were formed. Additionally, the religious scholars that I have interviewed are academics, and are often teaching and interacting with female students as a part of their job. For me personally, I found discussing sexual matters with male religious scholars more difficult than discussing these topics with male policy makers/healthcare providers. This might be due to my ability to discuss SRH topics in a scientific way and my ease of using many sexual terms in English rather than Arabic. I was conscious of appearing or sounding uncomfortable when

discussing these topics fearing that it would discourage the conversation, yet I did not want to look too comfortable with the conversation that they might find offensive.

I am fully aware that my gender influenced my interpretation of the results. I truly believe that being a woman and sharing similar culture and experiences as women in the sample (i.e., being a cultural insider), gave me insight and perspective. It also forced me to look deeper into the meanings behind what was said, and what was never told. I am aware of the fact that a male researcher, or any other researchers for that matter, might have interpreted some of the findings differently or possibly overlooked something that I found very deep and meaningful, and vice versa. I was aware that my position as a woman might have made me take the role of the advocate, and maybe sometimes look too deep or over analyse some of the data. It also made me look more critically at the stakeholders' views and I struggled not to be emotional about certain findings. For example, when physicians hid the cause of STIs from women, not telling them that it could possibly be from their spouse. Nevertheless, I understood that physicians face many challenges, and could be harmed by sharing possible routes of transmission. Being conscious of my emotions towards stakeholders' views, although it made me more critical, it also helped me remain neutral. I tried as much as I could to lessen the impact of my personal views on the findings and looked more critically at my interpretations by sharing the participants' stories and quotes, while protecting their confidentiality and anonymity, with others in the field, and with women, asking them what they took or understood from the data. This was my attempt to maximise validity, ensuring that my personal views did not cloud my judgement or affect how I approached, analysed and presented the findings.

Finally, I am fully aware that having a comprehensive awareness of my positionality and biases in any research process is impossible. However, I attempted to be reflexive throughout this project, providing examples of how my emotions, dispositions, and personality positioned me within this research. I also constantly reflected on how my personal views and experiences may have impacted how I recruited participants, conducted interviews, asked questions, analysed the data, and presented my findings.

CHAPTER FOUR - SAUDI WOMEN'S SEXUAL AND REPRODUCTIVE HEALTH NEEDS, PERCEPTIONS, EXPERIENCES AND PRACTICES

PUBLICATIONS FROM THIS CHAPTER:

Alomair, N., Alageel, S., Davies, N. and Bailey, J.V., 2021. Sexual and reproductive health knowledge, perceptions and experiences of women in Saudi Arabia: a qualitative study. *Ethnicity & Health*, pp.1-19.

Alomair, N., Alageel, S., Davies, N. and Bailey, J.V., 2021. Barriers to Sexual and Reproductive Wellbeing Among Saudi Women: a Qualitative Study. *Sexuality Research and Social Policy*, pp.1-10.

CHAPTER OVERVIEW

This chapter presents the findings from the qualitative exploration of Saudi women's SRH views, perceptions, and experiences.

4.1. FINDINGS

Twenty-eight women, aged between 20 to 50 years, participated in the study. Sixteen were married and twelve were unmarried, the majority of women (n=18) were college educated and employed, with five unemployed, and five college students. **Table 1** provides an overview of women's characteristics.

The findings were organized into the following sections: SRH knowledge, sources of information, sexual and reproductive experiences, perceptions of SRH, barriers to SRH information and healthcare services, STIs attitudes, beliefs and perceptions, barriers to STIs testing and diagnosis, contraception and family planning attitudes, practices, barriers to use, and women's attitudes towards SRH education. The findings were mapped using the conceptual framework. The framework and included personal factors, family and community factors, socio-cultural, religious, institutional factors, and health policy and health services**.** A table summarising main themes according to conceptual framework domains can be found in **(Appendix 10)**

Table 1: Key characteristics of study participants

Marital status	**N**
Married	16
Single	9
Divorced	3
Age	**N**
20 – 25	7
26 – 30	3
31 – 35	8
36 – 40	7
41 – 50	3
Number of children	**N**
0	14
1 – 2	2
3 – 5	12
+6	1
Education	**N**
College education	26
Diploma	2
Employment	**N**
Employed	18
Unemployed	5
Student	5

4.1.1. SEXUAL AND REPRODUCTIVE HEALTH KNOWLEDGE AND INFORMATION SOURCES

KNOWLEDGE OF SEX AND REPRODUCTION

Women lacked SRH knowledge to varying degrees, particularly regarding puberty, menstruation, sexual intercourse, STIs, pregnancy and childbirth. Lack of knowledge about SRH had a negative impact on women's mental and emotional wellbeing. For example, many women described having negative experiences and unpleasant memories of their first menstrual cycle, first sexual intercourse, and other SRH

related issues. Misconceptions about pregnancy and childbirth were particularly evident before marriage.

Some women said that they did not know that men produce semen which could lead to pregnancy. Some had misconceptions about the mechanisms of childbirth, while others did not know that pregnant women can have sexual intercourse.

> *"I remember when I was 12 years old, we were so naive, we didn't know. Back when Mexican television series were popular, I remember my aunt telling us: 'I know how she got pregnant.' The actress was pregnant, so we know she had a boyfriend, but how? How did she get pregnant? She told us in secret, we were almost in secondary school, she told us that he kissed her and that's how she got pregnant. So, we were terrified, we were scared of kissing our dad; we didn't want to kiss our brothers. She told us we shouldn't even kiss each other so as not to get pregnant. And by kissing, I mean a peck on the cheek."* **(P18, Married, 36 years old)**

When one participant was asked when she learned about sexual relations and pregnancy, she said:

> *"I am going to tell you something, but don't laugh at me. When did I know? I mean when did I have an idea about how a woman gives birth and from where the baby comes out, I had inaccurate information before then, I found out in high school [17-years-old] and was truly shocked. I thought the baby came from somewhere else. And my sister thought the baby came out of the belly button. We were really ignorant. Imagine being in high school and not knowing those things. It was a shock at the same time."* **(P16, Single, 36 years old)**

The general avoidance of SRH discussions in the Saudi culture, combined with the lack of SRH education, was associated with limited knowledge of women's own bodies. Some women lacked knowledge about basic (male and female) human anatomy, which led to serious emotional and physical problems.

> "*One time, and I will never forget this, our married friend told us some shockingly wrong information about female reproductive organs. It was*

completely inaccurate, but we believed her. Because we didn't know any better." **(P10, Married, 35 years old)**

Another participant who got married young said, with sadness and regret, after trying for several years to get pregnant, she did not realize that her husband did not have testes, and so could not produce sperm.

"There is basic and essential information that we don't know. To the extent that I was married, and the problem was visible to the naked eye, I mean you could look at it and know that there is a problem. But I was a child, I don't know. But I didn't know that there should be something there [testes]. After a while, I started realizing that something is not right. But who do I ask and what do I say? Even him. I couldn't talk to him about it. I wasted many years of my life, no I don't want to say wasted, I mean I'm content with God's destiny. But I lived four years of my life with this person, and I didn't know what the problem was, was it me? Should I ask? I tried so many times to get pregnant and it didn't work. I took injections and pills until the doctor said: 'your husband has to come here. We tried everything with you, there is nothing wrong with you.' I used to get sick a lot because of the medication I was using [...] I told the doctor he said there is nothing wrong with him. And she said: 'there is no such thing as he said, he needs to come' And after insisting and fighting he agreed to go, and we discovered he had zero sperm. And sadly, he said that he got checked before and he knew. He took advantage of my childlike innocence." **(P11, Divorced, 30 years old)**

Many women did not know what sexual intercourse was at the time they got married. Women who talked about their lack of knowledge about sex before marriage were often married at a young age. This lack of knowledge was linked with feeling confused about what is supposed to happen during sexual intercourse and what is expected in a sexual relationship.

"When I got married, I was 21, so I was supposed to already know what marriage [sex] is. I didn't know if this was [sex] normal or not, was the duration normal, everything with us [Saudi women] is by surprise. Everything is a surprise. You are like 'Oh, is that how it happens? Is this duration normal? Is this complete sexual intercourse? Am I supposed to feel something?' We

don't even know what it's supposed to feel like. What is the feeling?" **(P11, Divorced, 30 years old)**

KNOWLEDGE ABOUT CONTRACEPTION

Women's knowledge about contraceptive methods was mostly limited to oral contraceptives and IUDs. Only a minority of women mentioned patches, injectable contraceptives, and the birth control implant. Only one woman mentioned emergency contraception. Misconceptions regarding modern contraceptives were evident among women. Some women believed that hormonal contraceptives could lead to infertility and others thought that IUDs are a permanent contraceptive method.

"I was against the idea of having children right away. But I heard that hormonal contraceptives are dangerous. I heard that especially if a woman never had any kids and used hormonal contraceptives that it would cause infertility and other issues." **(P12, Married, 25 years old)**

When discussing contraception, women expressed openness and ease of discussion among other women, unlike other SRH topics.

"It's a normal discussion. As a woman you encounter other females in your circle whether it was your mother, grandmother, sister, aunt, cousin, friends. They will discuss these things [contraception]. It won't be hidden, and they won't be secretive about it. It would be openly discussed, at least among women." **(P21, Married, 25 years old)**

STIS KNOWLEDGE

Most women lacked knowledge of STIs, mainly mentioning AIDS when they were asked about STIs they had heard of. All women did not generally distinguish between HIV and AIDS. Women with a college education in medical sciences mentioned syphilis and less commonly mentioned gonorrhoea and herpes. These four STIs were the only ones mentioned by the entire sample.

When one participant was asked about what STIs she had heard of, she said:

“The only one I know is AIDS, maybe UTIs. But they told me this is not an STI. Even if it’s a bladder infection, or something like that, I heard it’s not transmissible. It's not related to sexual intercourse. So I only know of AIDS.” **(P11, Divorced, 30 years old)**

Women also had misconceptions about the mode of transmission of STIs and possible treatments. Almost all women thought that HIV is transmitted by sharing personal items, like clothing and using the same utensils.

"If I'm not mistaken syphilis is through sex but AIDS no, it can be transmitted through using personal items like the spoon of an infected individuals meaning through saliva, or sneezing. I don't know if my fear [of people living with HIV] is irrational, I am not educated enough on how to protect myself from such diseases, so I don't want to deal with them [people living with HIV]." **(P19, Married, 38 years old)**

"It's not necessarily from sexual intercourse, maybe you used something... For example, from toilets, it's not your fault. Using toilets that aren't sanitary or cleaned properly or maybe you used things that don't belong to you." **(P16, Single, 36 years old)**

Women were very aware of their lack of knowledge when it comes to STIs. This was evident in women’s answers, with some making jokes about their obliviousness, while others were critical about their lack of knowledge

When a woman was asked about common STIs, she said:

“AIDS, herpes and syphilis, but how did I hear about it? That’s the question. Not any reliable source. I mean if it wasn’t for personal efforts and research I wouldn’t know, as far as formal education goes, nothing credible. Even in university it wasn’t fully covered.” **(P8, Single, 28 years old)**

SOURCES OF SRH INFORMATION

Women were asked about their sources of SRH information, particularly relating to marital relationship and sexual health. Most women's responses were *‘because I read’*, *‘from the internet’, ‘life taught me’* or *‘from my own experience’,* Women said they were comfortable accessing information through the internet, and favoured

reading information over discussions. Some preferred reading evidence-based information overhearing it from someone.

> *"When you have a smartphone, you have access to a sea of information. You can browse and have access to a limitless amount of information."* **(P2, Married, 38 years old)**

> *I usually use trusted websites, like WHO, as a source of information. But people, I don't feel like I can take information from people. I prefer reading evidence-based information. Even if I hear something from someone, I don't depend on what they've said, I usually go and read after.* **(P27, Single, 22 years old)**

Some women mentioned learning about sex from friends or peers. Family, more specifically mothers, and teachers at schools did not play a significant role in sexual health education.

> ***"NA:** Where did you learn about SRH topics?*
> ***P3:** From the internet.*
> ***NA:** Not schools?*
> ***P3:** In schools they gave us a brief summary about personal hygiene during periods.*
> ***NA:** Did your mom talk to you before marriage?*
> ***P3:** I mean she gave me a brief. Just a brief, not real talk, just brief. And I had to do the rest through the internet." (***P3, Married, 33 years old)**

Women obtained information on contraception mainly from friends and family members, specifically mothers, sisters, and cousins. They explained that they trust them as a source of information more than healthcare providers, as they would be speaking from personal experience. Only a few women preferred going to a physician for contraceptive advice.

> *"**P19:** I would usually ask my friends, and the internet as a second option.*
> ***NA:** What about talking to a doctor?*
> ***P19:** Umm I don't know. I feel like I trust people around me with personal experience with contraception. I feel like I trust and value their opinion more than doctors."* **(P19, Married, 38 years old)**

INTERNET AS SOURCE OF SRH INFORMATION

The internet was usually the preferred source for SRH information. The ease of access and anonymous nature makes women more comfortable accessing information online. Women explained that due to the sensitivity surrounding SRH topics, they preferred reading information privately rather than discussing their issues out loud.

> *"If a woman has a problem, specifically about women's reproductive health, we usually go to Google and YouTube for information. Read about symptoms and possible solutions. Because this area is very sensitive, it's not easy at all for a woman to go straight to the doctor to get checked. She will try every possible solution before seeking help from a doctor. Because as a conservative society, we don't usually like to shed light or talk about these issues. It's sensitive to our culture."* **(P21, Single, 34 years old)**

Some women were concerned about the consequences of accessing inaccurate information for people who cannot assess information quality and reliability. Women also discussed the quality of information available in Arabic websites and highlighted the lack of trusted Arabic health information online.

> *"I don't feel Arabic websites are very reliable. You mostly see information on blogs, and you really don't know where they got this information from. But websites in the English language are usually known and trusted. It is usually based on scientific research, so you can find reliable sources of information."* **(P25, Divorced, 32 years old)**

In general, girls in Saudi have limited access to SRH information. As a result, women expressed a feeling of relief about the availability of the internet as a source of SRH information for the new generation, particularly for young women.

> *I think having access to the internet makes young girls exposed to things they usually won't know about. You know, her mother won't teach her about these things, her older sister didn't talk to her, they believe it is immodest to discuss this. So, she can turn to a third party for information. She could be aware; she could understand everything.* **(P1, Married, 34 years old)**

GENERATIONAL GAP

Women reflected on their SRH knowledge when they were younger, comparing it with today's youth. It was generally suggested that youth are more knowledgeable about sexual and reproductive matters. The availability of the internet and technology, and the use of social media was often cited as the main reason for these differences in knowledge across generations. Women referred to the ease of accessing information today as a facilitator to acquiring SRH knowledge.

> *"**P20:** Trust me, the new generation knows everything. Unlike us, we were wronged and what we endured as children was unjust. This new generation already knows everything.*
> ***NA:** How do they know everything?*
> ***P20:** From the internet. Everything all of it they already know. They probably know things you don't even know."* **(P20, Divorced, 40 years old)**

Generational differences were also observed in relation to school education. It was believed that teachers nowadays are more comfortable discussing SRH related topics in schools. This change was believed to be the result of the recent societal changes towards a more tolerant and open-minded society.

> *"**P1:** I did not have any idea what menstruation is. That's why I think education is needed. I think it is essential especially to girls whose parents did not teach them anything. But nowadays there is some openness with discussing these topics. I remember my cousin told me that her teacher explained some things related to SRH.*
> ***NA:** They explain these topics at schools?*
> ***P1:** Nowadays yes, before they did not teach us anything. They would skip the whole chapter. But nowadays thank God it's much better."* **(P1, Married, 34 years old)**

Some participants seemed to view this extra knowledge in a negative light. Concerns over losing sense of modesty and chastity Muslim women are proud to have were shared by some women.

"When I got married, my mom had already passed away, and you know how things were before, people were shy, and they felt uncomfortable talking about these topics even between sisters. Unlike nowadays there's too much openness, excessive boldness, and electronic devices, I mean a 15-year-old girl today knows everything [...] I swear this new generation knows everything. Like I haven't met any young girl that was ignorant or didn't know everything." **(P2, Married, 37 years old)**

THE ROLE OF MOTHERS

Almost all women in the sample said that their mothers did not teach them about puberty and menstruation unless they asked, which rarely happened. Young girls felt that they could not ask their family about anything SRH related, and said that when they tried, they were often shut down, and told that it is *'immodest'* or *'shameful'* to discuss such matters.

*"**NA:** What would your parents say if you asked them how women give birth?*
***P15:** I think they will say that's Ayb*[13]*.*
***NA:** Really?*
***P15:** Yeah, I don't think they would tell me anything."* **(P15, Single, 27 years old)**

Women at a young age sometimes felt unsafe and were fearful of negative reactions from their parents if they asked or talked about SRH. They voiced their desire of having a safe space to express concerns and discuss any questions they had without being told off or accused of lacking modesty.

"I want kids nowadays to feel safe talking about SRH. They should have a safe space and feel that it's okay to ask someone. Because, you know, young people here are often too scared of their parents, you can't talk to them. It's scary, isn't it?" **(P20, Divorced, 40 years old)**

Some women attributed their mother's avoidance of the topic to feelings of shyness and shame regarding anything SRH related, especially in the older generation. Many

[13] Literal translation is vice or shame. It used to refer to something that is considered culturally unconventional, inappropriate, shameful, or simply impolite.

women expressed feelings of sadness about their lack of sexual and reproductive knowledge in childhood, particularly regarding puberty.

> *No, I mean no, my mother didn't… she never said anything, I don't know if it's shyness, you know, older generation women, they feel shy. They don't tell you what you should do when you get your period... They don't raise you to be prepared, that once you get your period you know what to do.* **(P1, Married, 34 years old)**

Others, however, expressed feelings of resentment towards their mother due to lack of open discussion about puberty and sex before marriage. One participant was asked if her mother ever talked to her before marriage, she said:

> *I got married and my mother did not say a word to me, not a single word. I hope God forgives her...I had some knowledge but not enough, I waited for my mom to tell me something... I swear not a single word.* **(P7, Married, 44 years old)**

As a result of negative experiences women had from their lack of SRH knowledge, most women expressed a strong desire for their daughters to be educated in order to have a better experience. They emphasised that they want them to learn so they *'do not go through what they went through'.* However, they were mostly shy and uncomfortable talking about these topics. While some were not confident with the amount of information they have, they expressed that education is best to come from a trained professional.

> *They don't mentally prepare you for what is going to happen to your body. I mean when I got my period, I did not know what it was. I mean zero knowledge. And that's why I feel obligated to teach any young girl what to do, what to expect. When I notice some changes in her body, I will open the conversation with her because I don't want her to go through what I went through.* **(P1, Married, 34 years old)**

4.1.2. SEXUAL AND REPRODUCTIVE VIEWS AND EXPERIENCES

EXPERIENCE WITH MENARCHE

Many women interviewed had a negative experience with their first menstrual cycle. For example, some did not know what menstruation was, which caused emotional

distress when bleeding occurred. Women voiced feelings of shame, fear and uncertainty attached with menarche. They said that they did not know who to ask regarding the changes happening in their bodies, and often felt frightened and confused. Some women hid the fact that they had their period from their family, thinking that they did something wrong and were scared that they would be punished for it.

> *"When I was in fourth grade, I read a very scary book. That book was so scary, it's funny now... I got my period when I was in fourth grade. And this book was about STIs, and I read that one of the signs of STIs is vaginal bleeding. And I was so frightened, I thought I had an STI. I hid this from my family for a while, until they discovered it and they told me that you are grown now, and you have become a woman, and I started crying, I was so scared, I thought I had an STI."* **(P16, Single, 36 years old)**

> *"Before puberty, I wish someone talked to me about what was going to happen to my body, if your period comes what you should do, and that it's all normal. I truly felt lost."* **(P1, Married, 34 years old)**

DEEP-ROOTED NEGATIVE VIEWS TOWARDS SEX

Saudi women are raised in a culture where physical proximity to men is a sin and brought up to believe a man that is not related by blood, or your husband should not touch you. Sex is commonly viewed as negative and impure. It is also believed that virginity is sacred, and you should protect your virginity at all costs. This makes it difficult for some women to accept the idea of sex even within marriage, which often led to married women feeling unprepared for their first sexual experience, and this could lead to emotional distress and long-term psychological problems.

> *"When I was 11 years old, I was staying over at my aunt's house, and I saw a situation between her and her husband. Until I was almost 16 years old, I felt disgusted and revolted by them. It was to the extent that if I went to their home, I wouldn't eat any of the food if she prepared it. I felt nauseated every time I saw her. And it wasn't even that big of a situation [not sex]. But it was so much bigger in my head, and I didn't understand what they were doing. These things could really affect you. Maybe if I had an idea [of what sex is], I wouldn't be so*

repulsed by them. But I had no idea, I felt they were doing something wrong and forbidden. I had a very weird reaction, to the point that it emotionally scarred me. And my mother always told me if you see anything wrong come and tell me, and the first time I saw my mother after this incident, I started hysterically crying and told her everything." **(P14, Married, 38 years old)**

Parents' relationships played a significant role in women's views about sex, marital relationship and interactions between husband and wife. Social norms dictate that couples should keep their relationship and expressions of love private. Therefore, their children grow up not knowing what a relationship between a husband and wife looks like. This discretion has led to children linking intimacy with immoral and wrong behaviour, and something that you should be ashamed of. When one participant was asked why she had such negative views towards sex she said:

"I think it's our society, the relationship between the mother and father in front of their kids. We don't even know if the father loves the mother, we only see distance between them, cold treatment, and strict interactions. And of course, we don't know how things [sex] happen, we don't know how we came into this world. We were never curious; this [sex] is considered wrong bad behaviour." **(P11, Divorced, 30 years old).**

4.1.3. BARRIERS TO ACCESSING SEXUAL AND REPRODUCTIVE HEALTH INFORMATION AND SERVICES

Barriers fell under several domains from the conceptual framework including personal factors, where women controlled their own access to SRH knowledge and information, family, and community factors, with access to sexual and reproductive information and healthcare services being restricted by their family and their teachers which are all influenced by socio-cultural, religious, and institutional factors.

PERCEPTIONS OF SRH

There was a general sense of uncertainty among women speaking about their perceptions of SRH, many particularly using phrases like *'I don't know if what I am about to tell you is true or false'* or *'I'm sure I'm wrong'* and *'I'm sure I failed to mention something'.* The meaning of SRH had many different interpretations among

women in the sample. For most, the term exclusively pertained to pregnancy and delivery, while others mentioned puberty and menstruation.

> *"Pregnancy, health of the unborn baby, and women's health during pregnancy... This is what comes to mind"* **(P10, Married, 35 years old)**

Most participants felt that they should not be concerned with SRH and felt that it was irrelevant to them unless they were married. Participants who were unmarried seemed to be less likely to speak confidently and freely about the subject.

> *"Mainly related to marriage for me, I don't think anyone would care about these things [SRH] if they are not married. So it's related to marital relations, pregnancy, delivery and reproductive diseases."* **(P11, Divorced, 30 years old)**

Marital status affected women's perceptions of their information needs and influenced their desire to learn and acquire SRH information. Unmarried women said that they do not want nor need to learn about SRH whilst single. Instead, they wanted to wait until engagement or marriage to learn about SRH topics. Societal expectation of unmarried women's ignorance also acted as a barrier to women's SRH knowledge, even when personally, women did not view SRH knowledge negatively.

> *"**P13:** I am sure there are plenty of things I don't know about yet, but my knowledge isn't bad.*
> ***NA:** Would you want to learn more?*
> ***P13:** About this subject [sexual health]? Maybe when I'm getting married, I might want to learn, but not now."* **(P13, Single, 23 years old)**

When speaking about their perceptions of SRH, women rarely referred to both sexual health and reproductive health. The majority focusing on reproductive health and rarely mentioning sexual health. It was often a conscious avoidance of the term and its meanings. Instead of using terms for sexual intercourse, female and male genitalia, women usually use words like *'you know'* or *'these things'* in reference to these terms. The negative connotations of sex and sexuality were mainly because they are regarded as indecent and immodest topics. The terms are not normally

heard or uttered openly in any formal or informal setting. It is worth mentioning that women had no problem discussing their SRH, it was merely the use of the terms that were avoided.

> *"**P21:** I think the title itself [sexual health] is sensitive in our culture. It's not acceptable for you to talk about publicly. We have reservations. Even though it's purely medical, just like any other organ in the body. I think it's difficult to talk about it freely. I think because it's the female area, there is shyness and modesty. Society is sensitive when it comes to this area."* **(P21, Single, 34 years old)**

IGNORANCE SIGNIFYING MODESTY AND PURITY

Some women were proud of the fact that they maintained their naivety and '*purity*' before marriage. Women also reported engaging in self-regulating behaviour, where they controlled their own access to sexual and reproductive information. For example, this participant aged 30 years old explained that she tried to preserve her purity by controlling her intake of sexual health information:

> *"When I was in college, we had a course on medical terminology, but I was extremely uncomfortable and shy from anything related to these topics. To that extent that I skipped the whole chapter, I did not attend all the lectures. Even when I was studying for the exam, I did not read this chapter, I didn't want to know anything…. When we were at a young age, we were extremely shy and reserved."* **(P11, Divorced, 30 years old)**

Ignorance in all matters sexual in nature is viewed as normative and expected. Some women even said it is better not knowing what sex is before marriage because *'people will scare you'.* Women linked ignorance in this area to modesty and purity, hoping for positive sexual and reproductive experiences unaffected by potential external negative views or experiences. For example, when this participant, who did not know anything about sexual intercourse before marriage, was asked if she wanted to know more about it prior to getting married she explained:

*"**P2:** No, it's better this way. You maintain your purity and genuine feminine self; you have shyness and modesty. Better than how girls are nowadays. Immodest and indecent and already know everything.*
***NA:** Was it scary not knowing anything about sex before marriage?*
***P2:** No, I wasn't scared because as I told you I had no knowledge about anything [sex] ... You can't be afraid of what you don't know... And like that when you enter marriage with no scary stories or previous knowledge, it's something vague to you... And that's how I feel about certain things in life... ignorance is bliss..."* **(P2, Married, 37 years old)**

FAMILY CONTROL OVER UNMARRIED WOMEN

Some women said that their mothers did not want them to learn SRH topics from external sources and were upset when they were exposed to information at school. Parents controlled the amount of SRH information their daughters consumed and tended to shut down questions or concerns girls had regarding their own SRH using terms like *'shameful'* and *'immodest'* when this subject was brought up.

"I once had an incident. When I was in secondary school, there was an awareness campaign about puberty and menstruation. They gave us sanitary pads, and my mom saw it in my bag, and she shouted at me: 'What is this! Why do you have this!!' I told her it's from school. She said: 'Don't lie to me, why would they give it to you?' I told her: 'I swear to God, they gave it to me.' And she got really upset that the school did that ..." **(P17, Single, 27 years old)**

Discussions about sexuality were viewed as taboo and are socially unacceptable. Parents controlled young women's SRH knowledge with sexual information withheld until marriage. However, women regretted lacking awareness before their wedding night and wished they had learned more before getting married.

"When I got married, my mom had passed away. But even if she was alive, I doubt she would have said anything... Mothers don't usually discuss such things. But even if we saw something on TV, a scene [intimate scene], they [parents] would make you feel like you did something wrong because you are not supposed to see this, sometimes you could be beaten up for this [caught watching an intimate scene], even if you weren't really watching and you just

happen to be in the room while it was on TV. This parental control existed 100%. You could be beaten up for this, even though you didn't choose the channel, you are not the one doing this [intimate scene], it's out of your control. There was this extreme intimidation, these topics were taboo and not even up for discussion." **(P19, Married, 38 years old)**

UNMARRIED WOMEN'S ACCESS TO HEALTHCARE SERVICES

Many women called for a change in society's views that SRH services are only for married women. Since most unmarried women's access to SRH services is controlled by their parents, women called for educating the community, particularly parents, to facilitate unmarried women's access to SRH services.

"Before I got married, if I told my mom I booked an appointment with an OBGYN she would freak out and say why?? What's wrong with you?? But now that I am married it's fine, but before marriage, yeah they get scared and freak out." **(P26, Married, 22 years old)**

Unmarried women faced difficulties seeking care for any reproductive health related issues such as urinary tract infections (UTI) and issues with menstrual cycle. For example, a common perception in the community is that unmarried women cannot have any reproductive health issues, and that UTIs are linked to sexual activity.

"When I experience any symptoms [of a UTI] or something like that, they [her family] will be like 'how did you get this?' They need to encourage young girls to seek treatment, because naturally you would be hesitant to seek help, they should change society's views to encourage unmarried girls to seek help. It should be normal, if you believe that this is normal and it is your right to get checked, you will go with confidence and won't be afraid." **(P16, Single, 36 years old)**

Mothers' education and attitudes seemed to play a major role on whether unmarried women sought help when needed.

"Some mothers are still not very educated and have some negative views. If her unmarried daughter had an infection [UTI], she would be angry. She wouldn't accept that her daughter has infections. Mothers think that infections

are associated with either being married or having sexual relations. That's how they think. They would think she's doing something wrong." **(P3, Married, 33 years old)**

EXPERIENCES OF SRH EDUCATION AT SCHOOL

According to research participants, schools acted as a barrier to SRH knowledge. Women mentioned teachers avoiding answering SRH questions and telling them to ask their mothers for answers. Women also recalled their teachers seeming uncomfortable when they asked them about SRH, and oftentimes shutting down any discussions related to that area. Some teachers omitted SRH related subjects, referring to these topics as socially unacceptable.

*"In college, we wanted to conduct research about these topics [*SRH*], we wanted to be brave and daring, they told us: 'No. Society won't accept it. Don't come near these topics. You will open up a can of worms. This subject is taboo.'…. We wanted to be daring, but we had no support".* **(P8, Single, 22 years old)**

One participant was asked if she learned about SRH in schools, she explained:

*"**P25:** No, not in school. They actually used to skip these topics in schools. Even in the biology and anatomy course this wasn't taught. Whether it was the female or male anatomy, they used to skip it.*
***NA:** Do you know why?*
***P25:** Because we are in Saudi [laugh]. I don't know if it was the teacher herself who decided to skip it, or it came from someone above and told them not to discuss this, I honestly don't know".* **(P25, Divorced, 32 years old)**

EXPERIENCES WITH HEALTHCARE PROVIDERS

Healthcare providers sometimes proved to be a barrier to women's SRH knowledge, access and use of services. Women expressed that they could sense physicians feeling uncomfortable with sexual health discussions, which prevented them from seeking medical help or advice.

> *“I am personally comfortable with asking questions, but I feel like physicians are not comfortable discussing these topics. I wouldn’t mind asking questions, especially if I am alone. Even if my husband was with me and I was not comfortable during the consultation, I could ask him to leave the room. But I feel like male physicians are not comfortable, thinking I am a woman he can’t talk to me about these things. Even if I went to a female physician, she wouldn’t discuss it scientifically. She will mainly be reassuring rather than educating and explaining the issue. I would rather she would be honest and tell me if I did something wrong and I need to be careful. It would be useful if I was educated rather than just reassured.”* **(P23, Married, 29 years old)**

Physicians rarely provided advice on sexual and reproductive issues; they would mainly prescribe treatment without explaining the illness, its causes, treatment, or prevention. Women felt that healthcare providers did not give them the time or opportunity to address their issues or concerns. Due to the huge demand on governmental hospitals, they often have long waiting times, and women could wait months for a simple appointment. Women mentioned that physicians are always in a rush to finish consultations because of the high number of patients waiting to be seen. For women who are able to afford private healthcare, it was the easier, more accessible solution. However, women raised the issue of not trusting the advice of some healthcare providers, especially in private hospitals, and often spoke negatively about their experience with private hospitals.

> *“I feel like most doctors in private clinics don’t know what they are talking about. I really don’t want to underestimate their competence, but he would be a general doctor, and he gives the woman advice on a topic outside his area of expertise, and the woman would take his words as facts because she doesn’t know any better.”* **(P14, Married, 38 years old)**

Women spoke specifically about their experience with seeking contraceptive advice from healthcare providers. Doctors rarely offered women detailed advice regarding contraception (e.g., explaining to women how to use certain contraceptives, their side effects, what to do if the pill was missed). Women often referred to written instructions to get their information after the doctor's consultation.

*"**P1** She [the physician] prescribed me contraceptives.*
***NA:** Did she explain to you how to use it?*
***P1:** Nothing. She told me to take one pill a day, and that's it… She did not explain to me what this pill does to my body. What happens if I miss a pill? Nothing. I read the Arabic instructions inside the pills packet. But she didn't tell me anything. She just prescribed it. Didn't educate me."* **(P1, Married, 34 years old)**

4.2.4. SEXUALLY TRANSMITTED INFECTIONS

STIs ARE "NOT OUR PROBLEM"

Women tended to use phrases like *'God forbid'* and *'God forgive us'* before mentioning STIs. When asked if they think that STIs are common in Saudi, the majority of women in the sample believed STIs are non-existent in our country.

***"NA:** Do you think STIs are common here in Saudi?*
***P7:** No thank God, we don't have it here in Saudi because extramarital relations are forbidden, and we have our religious beliefs to protect us."* **(P7, Married, 44 years old)**

Religion is viewed as the most dominant influence on women's views towards extramarital relations, and therefore the existence of STIs in the country. However, one participant shed light on the significance of socio-cultural norms and their influence on the matter. She explained that even when people are not *'religious'* and are *'open-minded'*, they will not practice extramarital sex because it is frowned upon in our society. Socio-cultural factors seemed to be a significant barrier, if not more, than religious views. When this participant was asked why she thinks STIs are not common in Saudi, she said:

"Maybe because religion prevents forbidden relations, which are the cause of these things [STIs]. But, other than religion, some people could be open-minded, and they don't care if it's forbidden, but because of our traditions and the fact that it is socially unacceptable to have extramarital relations people won't do it. And that might be the reason why STIs are not common here." **(P27, Single, 22 years old)**

Some women however acknowledged that extramarital relations happen and believed that STIs exist. However, they said that they cannot speak on the magnitude of the problem with certainty due to lack of publicly available data. They also raised the issue of transparency and openness in discussion relating to STIs in the country.

> *"It's not that prevalent, but we have it. Facts are hidden. There is no transparency. Data is not publicly available, and we know we can't talk about it."* **(P8, Single, 22 years old)**

Linking lack of religious morals with having an STI led women to believe that these diseases could be an issue in the future due to recent societal openness. In recent years, with technological advances and the birth of social media, the Saudi society has been exposed to different cultures, where gaining access to information has become much easier. Some women viewed this as a negative change influencing young people's minds and *'opening their eyes'.* Discussions and interactions between genders became easier and more acceptable in the Saudi culture, which led some women to conclude that this was one of the reasons why STIs are becoming more common in recent years.

> *"Society is more open now; a lot of things became acceptable. Not everyone used to be able to travel before, now everyone travels. I am talking about when I was young. Now, it is different. The majority are travelling and exposed to different cultures."* **(P20, Divorced, 40 years old)**

Women often used the term *'travelling'* as a code referring to extramarital sex and *'forbidden relations'*. This also stems from the belief that extramarital sex and STIs do not exist here in a Muslim country, instead it is an outside problem that *'foreigners'* or men bring back home from other countries.

> *"No thank God, these diseases are not seen in my social circle and environment. I hear foreigners who come here to work bring such diseases. But in my social circle, thank God it does not exist."* **(P3, Married, 33 years old)**

> *"What I usually hear is that the man did something forbidden, he travels to a bad country and gets an STI and gives it to his wife. Women, honestly, never*

heard of. I feel it is mostly men, given that men are drawn to these things [sex] more. But infected females are unheard of." **(P9, Single, 22 years old)**

MEN AS THE SOURCE OF INFECTION

It was apparent from the interviews that women place the blame on men for women getting an STI. Women with an STI are usually seen as the victims of the husband's infidelity and unfaithfulness, rarely being mentioned as having an STI from any source other than her spouse. Either he had an STI before getting married or being unfaithful during their marriage. There was a sense of acceptance over men being the source of infection and women are told to *'just be careful'* when their husbands travel abroad, as travelling is also seen as a gateway to having extramarital sex.

"Any woman has to be careful and take precautions when her husband comes home from travelling. Even if he was a Shaikh [Religious leader], she should avoid him for a while, she has to protect herself." **(P7, Married, 44 years old)**

All women mentioned lack of religious morals and having no fear of God as one of the causes of STIs, which is a quality woman often associated with men. Women explained why men are more susceptible to STIs by giving reasons like men do not have to fear the consequences as women and have the freedom to travel and go out freely without needing permission from a guardian or a parent. These beliefs are generally deep rooted in the culture to the extent of acceptance.

"Because we live in a male dominant society. Because men have no culturally set boundaries like women do. There is also the fact that males are not like females. Females have virginity, so it shows. Whereas the male has no prohibitions. No one can know. So, it is easier if you try it [sex] before [marriage]." **(P8, Single, 28 years old)**

PROTECTION AGAINST STIS

Prevention of STIs was believed to be achieved through strengthening religious beliefs and having a solid moral compass. Only one woman mentioned condoms as a method of protection against STIs. Many women emphasised the importance of raising awareness about STIs specifically in the context of educating women so that they know what symptoms to look out for if their husbands are being unfaithful or

were infected before marriage. Reconfirming the narrative of men being the source of infection.

> *"The disaster is that most men have premarital sex, and then the poor woman is the victim when she gets married, because she is confident in herself and that she would never get involved in premarital sexual relations. But then discovers that he is, he has been playing around and he infects her, but what's even sadder is that she doesn't know what kind of infections she could get, how it is transmitted and what symptoms to look out for."* **(P8, Single, 28 years old)**

Few participants mentioned using fear appeal[14] and exaggerating the consequences of having extramarital sex as a way of preventing STIs.

> *"We have to raise awareness but emphasise that education should use fear appeal and exaggerate this thing's [STI] complications. Yes, yes using fear. For example, they could make a short film and show how a person's life became hell after [having sex]. This would make a stronger impact. Of course, this comes after urging people to stay in the path of God and doing it the Halal way through marriage."* **(P3, Married, 33 years old)**

ATTITUDES TOWARDS PEOPLE WITH STIS - STIS AS "A PUNISHMENT FROM GOD"

Negative attitudes towards individuals with an STI were observed among most women. Some women were very outspoken about their views towards people with an STI, using phrases like *'he caused this to himself'*, and *'it's a punishment from God'*. It is worth noting that they often used gender-specific pronouns when speaking about infected individuals. In other instances, it was clear in some women's initial responses that they were conscious about seeming judgmental and tried to convey more tolerant views towards infected individuals. However, the more they talked, the clearer it became that they shared these negative views.

[14] Fear appeal is a persuasive message that is designed to alter attitudes by producing fear to motivate behaviour change. It is a commonly used marketing method to change health behaviour e.g., anti-smoking public health campaigns.

"Do I judge the person? No, because for some people it is out of their hands. It is true that they've got it. And I am not condoning Haram [forbidden] relationships but sometimes she is married but she got it from her partner. So no, no I don't judge like that. I am only judging health-wise." **(P8, Single, 28 years old)**

"It's fine, but I will try not to use anything that belongs to them. For example, I wouldn't use the same bathroom they use. I mean it is going to be impossible for me to use any of their personal items. I will keep my distance, but I won't show it to them. I am not that mean. I mean he got what he deserved […] I don't think it is their fault, because God already punished them. I will try to distance myself, and an antiseptic will always be with me. So that indirectly, not being obvious about it, I would sanitize my hand after touching anything they touch, but in a non-obvious way. Because after all they are only human. I don't want to hurt their feelings." **(P3, Married, 33 years old)**

People with an STI are often viewed as bad people who committed *'immoral'*, *'illegal'*, and *'forbidden'* actions. It was also observed that most women had extremely negative views towards people living with HIV/AIDS in particular. This could be attributed to the way AIDS is viewed by society and how it is depicted in the media, specifically in movies and TV shows. This has also contributed greatly to the misconceptions about the disease, its causes, symptoms, and modes of transmission. One of the reasons women gave for their fear and extreme negative views towards people with HIV compared to other STIs, was the fact that HIV/AIDS has no cure and is often viewed as a terminal illness.

"Sadly, I am one of those people who would be scared of people with AIDS... I can't explain my reasons, and I don't have valid reasons for that matter. But we grew up being taught that AIDS is a scary disease that could spread through the air. I know that there should be sexual contact, but we were fed from a very young age, not only from society or family, but also from the media. AIDS means that this person should be isolated from the public. People shouldn't be in contact with them, people are scared of them. And that a person with AIDS is a bad bad bad bad bad person. You shouldn't even know someone with AIDS. Even though some people get it by accident, it

doesn't have to be through sexual contact. But I cannot be associated with someone who has AIDS. I could know someone who has syphilis or gonorrhoea, but not AIDS. Because society did not stigmatise it, made it a huge issue and planted fear of it like AIDS, AIDS is something else..." **(P23, Married, 29 years old)**

ATTITUDES TOWARDS PEOPLE WITH AN STI - "DEPENDS ON HOW THEY GET IT"

The first response many of the women gave when they were asked about their views towards people with an STI, was *'it depends on how they got it'*. For example, if it was from extramarital sex, they won't be as tolerant and accepting of them. Whereas if it was from something that is *'not their fault'* giving examples of blood transfusion or anything that is not a result of extramarital relations, they might be more tolerant towards that person.

"It depends. If he caught it through blood transfusion, and it has nothing to do with travelling abroad, he's not playing around. For example, like the kids in Jazan, from where they got it from? Is it blood transfusion? They are innocent kids, they know nothing. So It depends on the case… It depends on the mode of transmission. If he's someone who plays around, then honestly no, I wouldn't accept living with him." **(P5, Married, 43 years old)**

Reasons behind fear of people living with HIV are at times linked to lack of knowledge and misconceptions about modes of transmission. One woman explained that she had to interact with a person with HIV at work, which made her extremely uncomfortable. She attributed this unease to lack of knowledge about the disease.

"I mean it's a bit scary [HIV/AIDS]. And when I didn't know, back then I used to think it could be transmitted even by shaking hands. It used to really scare me. But now that I have an idea … Once we had a patient and his mother had AIDS and I was confused about how they would let her in a clinic like our clinic. And then, I did my research, and I found out that it cannot be transmitted by hand shaking. And I felt at ease. I was like ok I'm going to be ok." **(P27, Single, 22 years old)**

Some women showed accepting and non-judgemental views towards individuals with an STI. This was clearly observed among women who had higher levels of awareness about STIs, more specifically modes of transmission.

> *"Yeah, that's fine. Because I know how AIDS is transmitted. So, I don't have a problem. As long as I know that I am going to be okay, that's fine. That I won't get it. I wouldn't have a problem with them at all."* **(P28, Married, 49 years old)**

VIEWS TOWARDS A SPOUSE WITH AN STI

Women's views towards having a spouse with an STI were conflicting. When discussing a hypothetical scenario for unmarried women, they were extremely against living with an infected spouse and expressed that they will never accept his infidelity. Some married women explained that they will not forgive their husbands for being unfaithful and contracting an STI but said they will stay in the marriage for the sake of their children. Stigma surrounding divorce and how divorced women are perceived in society could be another factor that would force women to stay in the marriage.

> *"It depends on the kind of husband he is. I've never been through this, and God forbid I wouldn't, if it was just one time, I might look the other way. But I would isolate myself from him completely, I will just live for my kids, so that they would grow up with a mother and a father in the same household."* **(P14, Married, 38 years old)**

> *"What I am sure of is that I would never start a relationship with someone who has an STI. But if it was someone else like at work, it might be okay. But to be honest with you I would still be careful with them."* **(P13, Single, 23 years old)**

When women were asked about a husband's views towards having a wife with an STI, they explained that it would be impossible for any man to accept living with a woman who has an STI. There was an overall acceptance among women regarding this gender inequality, linking it with religion and how God made males and females to be different. Indicating that it would be going against *'our values'* as Muslims and

God's creation of each gender. It was noticed that this belief makes women feel guilty for not accepting *'men's nature'*.

A woman was asked if a man could live with a woman who has an STI, she said:

> *"**P14:** Impossible, I swear it would be impossible.*
> ***NA:** why?*
> ***P14:** That's how they are. God made them this way. We can't change how they think, or how their brains work. Even if you tried, it wouldn't work. It's not like women, women are givers by their nature. But men, that's how they are, they just take. God made us this way; we can't say anything about it."* **(P14, Married, 38 years old)**

BARRIERS TO STIS TESTING AND DIAGNOSIS

Barriers to STI testing and diagnosis existed on several levels of the conceptual framework **(Chapter 2)**, including personal, socio-cultural, religious, institutional, healthcare providers and policy level barriers.

PERSONAL BARRIERS TO STIS TESTING AND DIAGNOSIS

Lack of knowledge on where to go to get tested was not expressed by any of the women in the sample. Lack of knowledge about STIs, denial, underestimating the infection and the symptoms were believed to be among the many barriers to STIs testing and diagnosis. Women discussed fear of getting tested as a barrier to STIs diagnosed, consistently using men as their example.

> *"Maybe it's fear, fear of reality. Fear of facing the fact that I have this. Or maybe he is underestimating the illness. Thinking that it is something simple or thinking that no there is nothing wrong with me. It will go away on its own. I feel mainly not wanting to face reality."* **(P12, Married, 25 years old)**

> *"I think he [the husband] would be scared, scared that someone would talk about him, so I think this would scare them and prevent them from seeking help from the start. There's also denial, even with minor issues, there's always denial and that stops people from seeking treatment. So, imagine if it's something as big as this. People will certainly be afraid of knowing. Yesterday I was in the waiting area in the OBGYN clinic, and a nurse called a woman by*

her name, and she started shouting at the nurse for saying her name out loud and told her you should use my number and not my name. So, if you see people having this reaction for something simple like pregnancy imagine how people would react to something more serious." **(P26, Married, 22 years old)**

The misconception that STIs are caused by lack of personal hygiene made it difficult for some women to get help as they were concerned with being perceived as unclean. STIs were also linked with extramarital relations, which also added to the taboos and sensitivities around testing and diagnosis.

"It's a sensitive subject. As I told you, maybe because the idea that STIs are associated with either lack of hygiene or extramarital relations. So it's a taboo because it's linked to these two reasons." **(P23, Married, 28 years old)**

When discussing the possibility of women getting tested, shyness and modesty were among the main barriers to seeking medical help regarding anything sexual in nature. Women are not comfortable with physical and gynaecological examinations, sometimes accepting to endure extreme physical pain rather than seeking medical care.

"My mother, to this day, is still shy, she has seven kids but is still shy. She would rather suffer. She could have a simple problem, and I keep telling her to go see a doctor. And she refuses. She keeps giving excuses and then says: 'Just leave me alone, it's bad enough I endured being exposed during childbirth just because I had to.' We keep trying to convince her, but she won't do it." **(P17, Single, 27 years old)**

SOCIO-CULTURAL AND RELIGIOUS BARRIERS TO STIS TESTING AND DIAGNOSIS

Social unacceptability of extramarital sex, and the extreme negative views towards people with STIs have acted as a significant barrier towards STIs testing and diagnosis. Some women indicated that social influences play a more significant role to STIs testing compared to any other factor. Fear of being exposed was seen as worse than having the disease itself and suffering the consequences. Not fearing societal judgement, and therefore making it easier for people to seek help is believed to be an impossible task, as '*we live in an extremely connected society*'. Living

independently of other people and being unconcerned with other people's opinions is not normal and not usually seen in the community.

> *"I think it would be difficult to get help. It would be very difficult for him. Because he is scared of society. Because society has no mercy. Society will not be kind to him. So, he might secretly get checked, if, and only if, he could guarantee confidentiality. He then might get checked. But it would have to be permanently removed from his medical records."* **(P14, Married, 38 years old)**

> *"I don't think it would be easy to get checked. Because we have other problems. We are not like people from Western countries. Where everyone lives on his own, in his own home… We live a very social life. I'm with people from the moment I wake up to the moment I sleep. The only time I am on my own is when I am sleeping. So, we don't have someone that is anti-social. It is not an option. You have to have social interaction every moment of your day."* **(P11, Divorced, 33 years old)**

SERVICE-LEVEL BARRIERS: LACK OF PATIENT CONFIDENTIALITY

Women believed that it is preferable to go to a non-Saudi doctor to protect the patient's privacy, explaining that it would be less likely for a non-Saudi doctor to recognize the family name, and therefore risk being exposed. Some women even suggested that people should seek treatment outside the country to avoid societal judgment and risk exposure.

> *"They need to know that it is not okay to share patients' information. We live in an interrelated community. People know each other. So, I feel to avoid being exposed, people will seek non-Saudi doctors. Saudi doctors would know your family name, he might know someone that knows someone, he could talk. You can't even go in public without seeing someone you know. So, they could share the information without intentionally meaning to share it. So, in this area, he could seek help from a doctor of a different nationality in order to eliminate the risk of knowing someone he knows. Because these issues in particular are very sensitive."* **(P19, Married, 38 years old)**

A crucial barrier to STIs testing is lack of patients' confidentiality. Healthcare providers' judgement and mistreatment were also cited as a barrier to getting medical help. The issue of compromised confidentiality was often because of healthcare providers discussing their work life in social settings, not respecting their patient's privacy. Many participants suggested ways of improving STIs testing by using codes instead of people's names and IDs when seeking help. They also suggested that test results should be removed from their medical records, as it is possible for anyone working in the institution to access patient's medical records.

> *"We need confidentiality. We need healthcare providers not looking at patients with contempt and disdain or judging them to be a bad person. We need to have a safe space for patients. We also need to educate them about confidentiality."* **(P19, Married, 38 years old)**

> *"Some people don't respect what you call confidentiality. Even in healthcare, I always hear for example, a doctor said: 'Oh, I saw this patient [her name] today.' I mean a patient you know; I've heard many stories. One of my friends, she was following up with a doctor, something not related to sexual health. And she knows the doctor's daughter. So, the doctor told his daughter: 'Your friend came to me today, and she has this and this and that.' And I mean he is a doctor. He should take confidentiality more seriously. And it wasn't something sexual, it wasn't something Ayb, but still, he shouldn't share."* **(P25, Divorced, 32 years old)**

Although lack of confidentiality was seen as a negative thing, it was believed to be acceptable to undermine patient confidentiality if the woman is wanting to know, particularly in the case of engagement or marriage.

> *"Sadly, we have this issue with having an extremely social life. Everyone knows everyone. So, for example, my friend would come and tell me that I saw this person, getting treatment or tested for something. And I personally believe if that person is marrying a person that I know, I will let her know, because it is her right to know."* **(P11, Divorced, 33 years old)**

Concerns over doctors sharing diagnosis with spouses was raised by some women. Men would rather keep having sex with their wives and transmit the infection to them than telling them that they might have an STI.

> *"Because he is scared. He is scared he might be positive. And this is a scandal by itself. It's a scandal regardless of how serious the illness is. Anything related to this area would be considered Ayb and a disgrace. Nobody is supposed to know about these things. Some people even keep this from their wives to the extent that they might even keep having sex and infect her rather than tell her that he has been diagnosed with something. He feels this is a huge thing. He will not consider it normal. It's only a disease that, with time, will find a cure. But no, he will think this will compromise his manhood. He'll think it is a scandal and no one should know about it."* **(P23, Married, 23 years old)**

4.1.5. CONTRACEPTION AND FAMILY PLANNING ATTITUDES, PRACTICES, AND EXPERIENCES

ATTITUDES TOWARDS CONTRACEPTION

Positive attitudes towards contraception were expressed among all women in the sample. Women used statements like *'I strongly agree with the use of contraception',* and *'it was the greatest invention of mankind'* when they were asked about their views towards contraception. Benefits of contraception and family planning included physical and emotional benefits for women, financial benefits, and benefits for the children.

> *"Of course, I am 100% with contraceptive use. I mean there should be control over fertility. Regardless of the method ... Regardless of how you prevent pregnancy, I am with contraceptive use."* **(P19, Married, 38 years old)**

Many women mentioned how multiple pregnancies and births can have a negative impact on their health. They were grateful that they have the option of birth control in order to have a healthier body and mind.

“Pregnancy takes a toll on your body. Everything is different now. Raising kids nowadays is more challenging. You have to live for yourself and enjoy your life and your body.” **(P14, Married, 38 years old)**

Women highlighted the importance of using contraception to take better care of themselves financially and academically, by providing them with the opportunity to focus on their education and career.

“I didn’t want to get pregnant immediately after marriage. Because I was still in college, and I wanted to focus on my studies.” **(P18, Married, 36 years old)**

Limiting the number of children was linked with greater opportunities to provide a better quality of life for them. Having fewer children was associated with having the financial means to pay for their education, giving them a proper home and good living conditions, in addition to other life necessities. Women also mentioned that fewer children means that they have more time to give to each child, and the energy to take care of them and raise them properly.

“Why would I burden myself, I already have three children, and that is a blessing from God. I can raise them well and give them my all. I mean this is my opinion, but the fewer children you have, the more you can provide for your kids, and give them a better life” **(P14, Married, 38 years old)**

Some women were sceptical about modern contraceptive methods, believing that they could fail and lead to pregnancy. Failed contraception was experienced by some women which caused them distress and to lose faith in those methods.

“I had an IUD, and my doctor assured me that I won't get pregnant. A month later it turned out that I was pregnant. I almost fainted. I wanted to die. I was jumping off the table trying to miscarry.” **(P18, Married, 36 years old)**

Some women mentioned the importance of using contraception in the first year of marriage to protect themselves and any future children in case of divorce. They discussed the difficulties of having children of divorce. Some women believed that having children might force them to stay in an unhappy marriage or endure an abusive relationship.

> *"I am neither with nor against contraception use. But maybe when it comes to the situation [for women] here in Saudi, maybe I am with the use of contraception after marriage, at least for the first 6 or 7 months. Until they get to know each other more. Because if a woman has a baby in the first year of marriage and isn't happy, this will cause her to endure things she wouldn't otherwise endure if she didn't have a baby with that person."* **(P11, Divorced, 30 years old)**

While contraception use was generally viewed positively by all women in the sample, one participant was judgemental towards women who delay pregnancy early in the marriage, with the perception that the purpose of marriage is procreation.

> *"I honestly don't understand why they would use contraception, why did you get married to begin with? …. I know that there is this idea that you should wait a year before getting pregnant. Honestly it is a strange idea, I don't understand it."* **(P27, Single, 22 years old)**

BARRIERS TO CONTRACEPTION USE

Several barriers to contraception use were mentioned by women. Lack of knowledge about contraception, misconceptions, fear of side effects, and socio-cultural norms were among the most significant barriers. Some women, specifically women who got married at a young age, said that they did not use contraception before their first pregnancy because they did not know that there are ways to prevent pregnancies.

> *"When I got married, I didn't know that contraception existed. I didn't know about contraception until after I gave birth to my first son. My doctors told me about it, otherwise I wouldn't have known that you can prevent pregnancy."* **(P1, Married, 34 years old)**

Women from an older generation, in some instances still in their thirties but perceive themselves to be older generation, viewed having children immediately after marriage as customary and expected.

> *"In the past, I mean for our generation, we used to get married at a young age. I got married when I was only 20 years old. So, we did not have this idea that you should live your life and then maybe think about having kids. So, for*

our generation, it was, get married, and immediately have kids. That was the norm." **(P28, Married, 49 years old)**

Some women did not want to use contraception before first pregnancy, fearing infertility. While some women did not believe that contraception causes infertility, they wanted to confirm their ability to bear children before using any contraception.

*"**P22:** I didn't use contraception before my first child.*
***NA:** Why?*
***P22:** Because we have this culture that if you use contraception in early marriage, it might cause her harm, and prevent her from getting pregnant. It could also delay pregnancy longer than she expected. So once I had my first baby, I started using contraception."* **(P22, Married, 38 years old)**

The reason behind some women's non-use was due to the negative side effects they experienced when using modern contraception. Side effects included excessive bleeding, blood clotting, mood changes, weight gain, depression, headache, and changes in menstrual cycle.

"I considered IUD but then got scared because I heard it caused excessive bleeding." **(P3, Married, 33 years old)**

RELIGIOUS VIEWS ABOUT CONTRACEPTION

Religion did not seem to play any role in women's contraceptive use or non-use, despite religious views forbidding its use. All women in the sample believed that family planning is not against Islamic beliefs. Many women had never heard of the fact that family planning is forbidden in Islam.

"I have never ever heard any religious advisory opinion forbidding contraceptive use" **(P21, Single, 34 years old)**

Many women believed that common sense and the overall benefit to humans is consistent with Islamic views. For this reason, many women did not seem to accept or comply with the forbiddance of family planning.

"There are many things that are beneficial, but people will say it is Haram [forbidden]. It is also Haram that you bring kids into this world and not take

care of them, or don't have the means to raise them properly. The situation is different now, you can barely have one or two children. So honestly, I don't know. I don't feel that it is Haram, but I honestly don't know. Life is changing and so are those views." **(P20, Divorced, 40 years old)**

Women highlighted that there is no explicit text in Quran or Sunnah that prohibited the use of family planning. When it comes to contraception, religious views are based on the jurisprudence of religious scholars and their interpretations of what is written in Quran and Sunnah.

"There is no explicit text showing the prohibition of contraception. The prophet Muhammad (PBUH) only encouraged marrying and having children …. I mean our religious reference is the Quran and Sunnah. Religious scholar's interpretations are personal efforts. This is clearly evident now on how scholars used to prohibit many things that are now accepted. So we need to use our common sense here." **(P19, Married, 38 years old)**

CONTROL OVER CONTRACEPTIVE DECISIONS

The majority of women said that they have control over their fertility choices. When they were asked who the primary decision maker for contraception use is, they mostly said that they have full control over their fertility choices.

"I feel most of the time it's my decision not his. He is like if you want to get pregnant it's ok if you don't want to, it's ok too. You want to tie your tubes, it's also fine if you want to prevent pregnancy however way you want it's your choice. He is a person who gives me complete freedom and there are no joint decisions." **(P2, Married, 37 years old)**

Some women said the decision to use contraception should be a shared decision between the husband and wife. But if the husband disagrees with her choice to use contraception, it is ultimately the wife who should decide. It was suggested that having an education gave women the courage to make informed decisions and take charge of their own fertility.

***"NA:** Who do you think should decide?*

P6: *Me, because he doesn't experience pregnancy and birth. He doesn't know what I go through. I look back at my mother and her mother, they didn't have the knowledge, and because of that they did not have the courage to take the decision to stop or say I am done having children. But nowadays, we are all college educated and have the courage to stand up for ourselves and take the decision [to use contraception] even if we had to use it in secret.*
NA: *Was your husband okay with using contraception?*
P6: *At first, I did not tell him I was using [contraception]. He had no idea. Because he would definitely stop me from using them. It's my body and I have the freedom to choose what I will do with it. I told him a few months later, he was completely against it and was asking me to stop but I kept using it anyway."* **(P6, Married, 34 years old)**

A Husband's disapproval did not seem to play a significant role or prevent women from using contraception. Women whose husbands did not want them to use contraception tried negotiating until agreement was reached. Many women revealed that they are hiding their contraceptive use from their disapproving husbands.

"It is both me and my husband's decision. But honestly, I feel like it's more my decision. Because I will get pregnant, it will affect my body. I will be the one taking care of the kids, it's going to be mostly my responsibility. Especially for me. I had a very tough pregnancy. So for me personally, if I don't want to do something, I will never do it. If I don't want to get pregnant, I will not get pregnant. We might have a discussion about it but eventually I'll do what I want to do." **(P18, Married, 36 years old)**

"At first he used to pressure me and tried to convince me to have a fourth child. But I convinced him. I was like thank God we have two girls and a boy; is there a third kind we don't have? Is there something else that would make you want another baby? What are we looking for exactly? At first, he was upset with me, and now he just laughs about it. He is now convinced that I am right." **(P14, Married, 38 years old)**

Family members including mothers, sisters, mothers-in-law, and sisters-in-law sometimes influenced women's contraceptive choices especially for young women early in the marriage.

"I only discussed contraception with my older sister. When my mom told her no don't use contraception she got scared and listened to her. She was studying abroad and had a baby. She immediately regretted her decision. So she told me you should use birth control. She didn't want me to go through what she went through. So she was very supportive and kept telling me please be careful, use birth control until you finish your education… Of course, my mother was completely against me using contraception. Because she was saying, and you know this is something in our culture, you might not ever get pregnant if you use them. So I took her with me to my consultation so that the doctor could convince her that I will be fine." **(P26, Married, 22 years old)**

Societal factors pressured women to get pregnant even when they were not ready. For example, family members or people in women's social circles warned them about contraception and delaying pregnancy. Mainly because they know someone with fertility issues who had used contraception in the past and could not get pregnant attributing infertility to contraceptive use.

*"**P26:** My husband and his entire family were against me using birth control. I told him my mother had similar views, he said your mother is right. So I told him that that's none of your business [laugh]. He eventually came to terms with my decision.*
***NA:** And why is his family against it?*
***P26:** His sister couldn't have babies, she had to go through IVF. So they are afraid that this might happen to me. My mom used to say if you use it while you are young and never had babies, you might not be able to in the future. So he was scared because of his family, but now he is convinced."* **(P26, Married, 22 years old).**

Women who mentioned that the decision of contraception should be a shared one were mostly unmarried. Married women who said that the couple should decide, also mentioned that they would use birth control regardless of their husband's opinion if they needed to. They justified that the physical impact bearing gives them the right to be the primary decision maker over their own fertility.

"It should be a shared decision because couples are partners in life. The wife shouldn't use any contraceptives without her husband's knowledge, especially if he wants to have children. There should be an open discussion regarding these decisions. The couple are sharing a life, they should be sharing all decisions." **(P21, Single, 34 years old)**

Overall, married women showed control over fertility decisions. Being armed with knowledge seemed to play a key role in empowering women to take charge of their fertility choices. Even when external barriers including husbands, family, and social pressures were present.

RESPONSIBILITY FOR PREVENTING PREGNANCY

The burden of preventing pregnancy seemed to fall solely on women. There was a general acceptance of the fact that women are completely responsible for birth control. Some women even said that they did not know that birth control can be used by men.

"I didn't know that men can do something to prevent pregnancy until a couple of years ago, it's not well-known, maybe married people talk about it in my absence." **(P2, Single, 22 years old)**

A significant part of women having to shoulder the sole responsibility of family planning is the perception that men do not take their desire to control fertility seriously. Many mentioned that men do not care if contraception fails, and in some instances, it was believed to be the husband's intention. The only way a man would be willing to share the responsibility of family planning was if he had a strong desire to stop having children. If finances were not an issue, men are usually less inclined to limit the number of children or encourage the use of contraception.

"I think the wife is more committed [to preventing pregnancy]. Men would be okay if their wives keep getting pregnant… The wife will be more responsible … She's the one facing the burden of giving birth and raising children. On the other hand, men are okay with having more kids, if his wife had a baby every year, he would be okay with that. The wife is more committed to family planning as she's one responsible for raising children. Men are not faced with

any consequences, if the husband is financially able, he would be okay with having many children. I don't know any couple where the husband is responsible for family planning." **(P1, Married, 34 years old)**

The side effects of some hormonal contraceptives seemed to cause issues and were bothersome for some women. Although it was perceived to be easier for men to use contraception (i.e., condoms, withdrawal), it was believed to be uncommon in their culture for men to share responsibility for preventing pregnancy. It is both expected and accepted for women to be responsible for family planning.

NA: *Was your husband accepting the use of male contraceptive methods? Or you didn't discuss it with him?*
P19: *No, I didn't discuss it with him, I don't think he will be open to it. I feel like he wouldn't even accept or comprehend the idea. It's a bit foreign to him. Even if he tried, let's say there's a pill he can take, he wouldn't be as committed. He wouldn't accept it, even for something like condoms for example, they feel that it challenges their masculinity. Because it's called birth control, the name makes them feel like it's a woman's job, because it prevents pregnancy and women get pregnant therefore, they should be responsible for it."* **(P19, Married, 38 years old)**

Condom use as a birth control method was not identified by many women, and it was perceived to be *'insulting men's masculinity'*. It was also generally accepted for men to refuse condom use as it is *'his right'* to refuse condoms as a birth control option.

"Some methods, for example condoms, challenge a man's masculinity. Many men don't prefer using condoms, and that's their personal right." **(P8, Single, 22 years old)**

Only one woman mentioned her husband offering to use withdrawal or condoms when she had negative side effects from hormonal contraceptives. Even then, the woman refused her husband having responsibility for family planning.

"The side effects [of the pill] were really bothering me. I was very anxious, it started to affect my mental health. I really did not want to get pregnant. He told me that we could use natural methods [withdrawal] or condoms. We can

arrange something, but I could not trust it. I was scared. There was a discussion because of the side effects I was experiencing but I completely shut down his offer." **(P23, Married, 29 years old)**

4.1.6. Sexual and Reproductive Health education in Saudi Arabia

Attitudes towards SRH education

All women in the sample had positive and encouraging views towards introducing SRH education. Women emphasised the need to provide education for everyone, highlighting that educational level does not mean that people are educated in sexual health topics. Suggestions on what education should focus on were given by all women in the sample. Women's opinions on when to provide education were divided into two different groups. The first group preferred education to be with premarital screening **(chapter 1)**, as it is most needed at that time in a woman's life. The second group wanted education to be at an earlier stage in life, preferably in schools.

*"**NA:** Do you think SRH education is positive or negative?*
***P18:** Extremely positive. It does not have any negative elements to it. Sadly, I've seen a large segment of our society with higher education and even doctors, but when it comes to this area, they are very ignorant."* **(P18, Married, 36 years old)**

*"**P13:** There should be education in place with premarital screening. It should've been done already.*
***NA:** Would you be interested in such a program?*
***P13:** Yes of course. Before I get married, I will make sure I know everything there is to know about marriage."* **(P13, Single, 23 years old)**

The differences in couples' expectations of a sexual and marital relationship between new and old generations stresses the importance of SRH education in all aspects.

"In older generations, there was an imbalance in everything in the marital relationships. Now, when you get married, you are expecting to have a more balanced relationship between you and your husband in terms of marital life,

and sexual life. There should be balance… so this awareness should start from high school and college. They could start offering sex education and involve psychology in it as well. I don't know, but I think sex education would be nice in high school." **(P28, Married, 49 years old)**

PERCEPTIONS ON THE COMMUNITY'S OPENNESS TO SRH EDUCATION

Women felt that there is a need and eagerness among society in Saudi to learn SRH related topics. There was the general perception that sex education would be accepted and well-received by society. This acceptance was believed to be caused by the recent changes in the country towards a more moderate and reform-minded society. These changes are believed to abolish barriers brought by the *Ayb* culture and extreme conservative views.

*"**P18:** In the past, we would say people are shy, or no we are a Muslim country we don't have these things [extramarital sex] but now it's different. We are in what you call 2030 vision. We should be advanced and open as a country.*
***NA:** What changed between now and then?*
***P18:** Before everything was unacceptable and people were close-minded. We used to believe no one does this [extramarital sex]. We are a Muslim country, and this doesn't exist here so why do we need to educate them? We are Muslims, we don't have to worry about this. I don't know but maybe that's why before they would say there's no need for education because we are Muslims, and we don't need to open people's eyes. But now, we know people are doing it [extramarital sex] and the numbers are getting higher. This is a fact, and it does exist, so we need to educate the public."* **(P18, Married, 36 years old)**

A need for gradual implementation of sex education was expressed by participants to gain society's approval. A few women anticipated some resistance from people who are more conservative in the community. Many women suggested that it would be more acceptable if the programme initially started with education for couples getting married. They highlighted that education for the younger generation is extremely important but would face greater resistance from people in the community. Since knowledge needs are linked with marital status, it would be easier to gain

societal approval and support if they were to start with education for couples about to get married.

> *"They [the community] might resist in the beginning, but it's so important. People will eventually understand that this is essential, and that we need it."* **(P16, Single, 36 years old)**

As societal resistance to any change is expected, many women advocated making premarital education mandatory. The justification for mandating premarital counselling was because people will reject it without knowing what it entails. Once people understand what the programme is, they will accept it. The gradual implementation along with mandating it was believed to improve uptake and acceptability.

> ***"NA:*** Do you think the community would be accepting of education with pre-marital screening?
> ***P16:*** *In the beginning, no.*
> ***NA:*** *Why?*
> ***P16:*** *I'll tell you why. Although you know what? I think we have evolved. We have become more accepting of new things. But I think maybe it should be introduced to the community gradually, so it doesn't come as a shock. And it has to be mandatory."* **(P16, Single, 36 years old)**

IMPORTANCE OF RAISING YOUTH AWARENESS

The majority of women proposed introducing a programme at an earlier age (e.g., in schools). These views were often voiced by mothers wanting their children to be knowledgeable and aware of SRH topics. Many women stressed the importance of providing youth with scientific reliable information.

> *"I have a daughter; she is still very young. But I am worried about her. I will try to teach her, to educate her, to explain to her specific things and their meanings, so she won't receive wrong information in the future. Because she will be exposed to information either way, I would prefer if she took her knowledge from me rather than from wrong sources."* **(P18, Married, 36 years old)**

Many mothers in the sample preferred that their children are provided with a well-developed educational programme delivered by experts. This preference was mainly due to their concerns of their ability to educate their children and lack of confidence in the amount of SRH knowledge they have. Some also mentioned feeling uncomfortable and shy talking with their children about SRH topics.

> *"I want my daughter to learn from a professional, someone who specializes in these [SRH] topics. I'm thinking of enrolling her in a course so she can get the necessary information. I don't want her to end up like me, walking blindly through life"* **(P14, Married, 38 years old)**

Women used society's recent openness as a motive to provide education at a younger age. Society's move towards opening to different cultures led to the belief that youth are now exposed to different sources of information. Although this change was usually expressed in a positive way, some conveyed concerns related to censoring and being culturally sensitive.

> *"For sure everything has positives and negatives. But there should be more openness because we can't be behind everywhere else in the world; we need to advance with the rest of the world. So, I am with providing education and being more open, but it has to be under parents' supervision, parents need to be involved"* **(P19, Married, 38 years old)**

A mother with three children said:

> *"They [young people] know about everything before you even talk to them about it. They know it. They would give you everything from A to Z. She could be exposed to more information than you. But is it accurate information? That's the real issue. You could correct her information if you have the right knowledge, but what if you don't have it? Then what?"* **(P6, Married, 34 years old)**

Parents' involvement and control over young girls' access to information and services makes it a priority for them to be educated. Improving parents' awareness is essential to facilitate implementation and better its chances of being accepted and utilised.

“It is important to start education for girls in schools. But I'm afraid if the girl is educated and the mother isn’t, she might go to her mother and tell her I have a UTI the mother wouldn’t allow her to seek help, so I feel it is more important to improve mothers’ awareness first.” **(P4, Married, 33 years old)**

Sex education for the youth was not viewed as encouraging extramarital sexual activities. Instead, women advocated for educating youth specifically in schools, perceiving education as a positive tool steering youth away from misjudgement and wrongdoing. Women mentioned that young people are already exposed to sex and sexuality related information. However, concerns over the accuracy of information the youth are accessing was consistently mentioned by women in the sample. There was a sense of urgency over youth accessing the wrong sources of information and the necessity of having a trusted source for SRH education.

“I don’t believe it would encourage sexual relations because as I told you if it was delivered in a scientific way. I’ll give you an example, menstrual periods. We used to get our information from other girls. Don’t you think it would have been better if I got this information from my teacher?” **(P10, Married, 35 years old)**

Changing the deep-rooted negative views towards sex was advocated by some women. They emphasised the importance of teaching youth that sex is not something to be ashamed of, and not to associate it with impurity and immorality.

"We need to be careful how to teach our children about sex. We need to deliver it in a way so that they know it is not something they should be ashamed of like how we were brought up. Like my personal experience. It is something you should hide and should be ashamed of. I don’t think that was good for us. The way it was discussed and how we were brought up to think. Education should pay attention to that.” **(P27, Single, 22 years old)**

THE IMPORTANCE OF EDUCATING MEN

Men in Saudi Arabia, to a certain extent, have great power and control over women’s SRH decisions. All women emphasised the importance of including men in the proposed premarital education programme. They indicated that men’s ignorance

about women's health in general, pregnancy, delivery, and contraception in particular, acted as a barrier to women's overall wellbeing.

> *"Look, in our society, men get involved in almost everything. He would prevent her from taking something, or doing something, sometimes to her own detriment. And in most cases, it's because he doesn't really understand, he is just ignorant."* **(P5, Married, 43 years old)**

Women mentioned that their husbands' lack of knowledge and misconceptions regarding side effects of certain contraceptive methods prevented them from using those methods. Men's ignorance about the serious influence of hormonal contraceptives on some women might be one of the reasons why they are less inclined to share contraceptive responsibility.

> *"It's because they aren't aware. For example, a man who doesn't want his wife to stop hormonal contraceptives when she's been taking it for years. Do you [the man] even know the negative impact long term use of hormonal contraceptives could have on your wife's body??"* **(P9, Single, 22 years old)**

Men are seen as oblivious to the emotional and physical impact pregnancy and birth have on women. This explains why they would be a little less enthused to prevent pregnancies and unlikely show compassion and consideration to what their wives are going through during pregnancy and childbirth. Women want men to be educated in order to be more involved and provide them with emotional support and understanding.

> *"We need to educate men about pregnancy, breastfeeding. He needs to know how hormones affect women during pregnancy, she will get tired, she will be more vulnerable and emotional, he has to be considerate to these things and not think she's just being spoiled. If you give them the proper information, he will appreciate her more and understand what she goes through, he will help her more. On the other hand, if he is isolated and doesn't understand anything, he won't get what she's going through, he has little awareness about what women go through especially when it comes to pregnancy and giving birth. She needs to be more supported emotionally more than any other kind of support. He has to be aware and understand what women go through.*

So yes, I am with men being involved in this area." **(P21, Single, 34 years old)**

One woman who went through early menopause wished her husband was more aware of the effect menopause has on women's bodies, to provide her with support and understanding.

"I know they are just unaware of what is going on in your system. He doesn't understand why I get hot flashes; he starts laughing at me and making fun of me... So they are just lacking information. They don't really get what we go through. They really need to be educated and learn about these things. My husband used to live in the United States and is highly educated but is still ignorant when it comes to women's health." **(P28, Married, 49 years old)**

According to women, men are more likely to engage in extramarital relations and have unprotected sex, possibly leading to unwanted pregnancies. Since men are viewed to be the source of infection for STIs, and women are often infected from their spouse. Women indicated that it is of utmost importance that men are educated about STIs, modes of transmission, pregnancy prevention, and most importantly, ways of protection.

"It's important for both genders to be educated but I feel it is more important for men. They are more likely to have unprotected sex with women they don't know or prostitutes for example more than Saudi women. I feel like Saudi women don't do such things." **(P25, Divorced, 32 years old)**

Women acknowledged that although a significant proportion of men might have had premarital sex, many men have never experienced sex before marraige. So, they said without being explicit, that men should be educated about sex, proper sexual intercourse and how to please their wives sexually.

"Also, men need to be educated. Even though most men are experts [laugh]. But no, there are still men who are naive. They don't know what's right and what's wrong and what is the proper way [for sex]. I mean this is serious, you are about to embark into a new chapter of your life. So there are men who are experts and know exactly what they're doing, but there are men who have never even seen a woman before." (P19, Married, 38 years old)

MODE OF DELIVERY OF THE PREMARITAL EDUCATION

Women provided suggestions on how premarital counselling should be delivered, including mode of delivery, setting, topics to be covered, who is the best, and most qualified person to deliver education. Some women were concerned about the details of implementation including the availability of time, money, and other resources, and provided suggestions on how to overcome any expected challenges.

> *"I feel it makes more sense for it to be a lecture. So that we can achieve it in the real world. One to one session is time and money consuming. It would be difficult to do it. Especially if it was governmentally funded, or depends on volunteer workers, so it would be achievable if it was a group lecture. And it has to be mandatory with premarital screening. It would be easier and affordable to do it this way."* **(P12, Married, 25 years old)**

There was variation in women's preferences on the way the premarital counselling delivery. For many women, the concern over privacy meant they were more comfortable with one-to-one education. It was also believed that people would be less enthusiastic to attend lectures, and less likely to pay attention to what is being said. While others believed a lecture would facilitate open discussions, encourage people to share their questions or concerns, and everyone would benefit from each other's questions.

> *"I would prefer if the programme had both lectures and one to one session. Some people love sharing their thoughts and ideas. They would learn from listening to others' questions. But there are people who will be embarrassed to discuss it in front of people. They wouldn't want people to even know that they are engaged and getting married. So they would prefer one to one. The programme could also be online. So it could be provided through a variety of channels."* **(P22, Married, 38 years old)**

Some suggested providing written information (booklet, brochures) or using social media outlets (Twitter, Instagram, YouTube etc..) for efficient implementation of the programme for both parties, the recipient and provider. Providing an online and open

channel of communication was also suggested as a way of providing continuous education after marriage where issues and concerns could arise.

> *"Not everyone has access. I mean many women get married and never leave the house. And doesn't even know how to search the internet. So if there's information in Arabic online, it's mostly inaccurate so at least they could have hotlines they can call and ask."* **(P25, Divorced, 32 years old)**

> *"I think it is a good idea. Having a booklet explaining all the diseases for people who do not have the time. A booklet to give couples before they receive the premarital screening test results. That would be a good idea."* **(P3, Married, 33 years old)**

There was a consensus that premarital counselling for couples should be provided separately. Women felt that they would be too shy to ask questions in front of their spouse. They wanted to have an individualised session or lectures for women and men separately so they could have an opportunity to discuss any concerns or issues freely and openly.

> *"**P1:** To start with, it should be her and the educator alone.*
> ***NA:** You don't think the husband should be there?*
> ***P1:** No. Especially if I want education pre marriage, it's very difficult to have a spouse there. She would be too shy. She wouldn't be comfortable and won't ask the educator what she really needs to know. I honestly think it's best to be separate."* **(P1, Married, 34 years old)**

Women discussed the importance of having an experienced professional to deliver the premarital counselling. Doctors and health educators were believed to be the most suitable people to provide it. Women justified their preference for doctors by saying that they have the most knowledge and expertise in the areas providing trust-worthy information, and health educators are trained in delivering health information in an understandable and relatable manner.

> "*I would prefer doctors, because they have the knowledge and the degree to assure us that the information, they are giving us is accurate. The information would be coming from a trusted source, someone with experience. If the*

information was coming from a fresh graduate or a trainee no one will accept it, everyone wants experienced professionals to trust them and trust their opinion." **(P21, Single, 34 years old)**

The gender of the person delivering education was a significant determinant to women's uptake of the premarital counselling. They expressed feeling of shyness and said they would be uncomfortable talking with a person from the opposite sex. It was also mentioned that men are more judgemental, dismissive, less likely to pay attention to details and more likely to rush through the session. Whereas women are more willing to listen, are more accepting, and easier to talk to.

"Men are always judgmental. They are not comfortable with women asking them questions. They are also very fast and don't pay attention to the details. The way they talk to you as well. They are a lot more judgemental about it. I've noticed that about male doctors. They make you close off and do not want to talk anymore. Of course, not all of them but most females are more accepting, she listens more, she would make you open up and talk even if you didn't want to". **(P26, Married, 22 years old).**

Some indicated that the name of the programme is an important factor in its acceptance. The term '*sexual'* would be an issue and likely to deter people from participating. It was suggested that the name of the programme should be sensitive to the culture as to not be explicit and contain the word *'sexual'*.

*"**NA:** How would you expect your family's reaction to the proposed program? Would they be supportive?*
***P22:** Yes of course! They wouldn't mind at all. But the name should be anything but sexual. For example, you could call it premarital women's education. Not necessarily the word sexual and sexual organs. We need to be careful with names. It shouldn't be suggestive. So that conservative families would be accepting of it."* **(P22, Married, 38 years old)**

CONTENT OF SRH EDUCATION

The content of education was discussed in two different stages in life. The first was discussed at an earlier stage for young girls, and the second was in the context of

premarital counselling and what it should entail. Women proposed that the programme for young girls should focus on changes during adolescent years, and it should be offered in schools. Topics include menstruation, bodily changes and how to deal with these changes. Women highlighted the importance of helping adolescents feel normal.

> *"It depends on what stage of life she's in. For example, for teenage girls you should focus on specific topics like puberty, periods, what are periods, why it happens, and personal hygiene. And then, when she's in her twenties at the marriage stage, we can start educating her about marriage, pregnancy, the changes that happen during pregnancy, how to protect herself and the baby during pregnancy. Then move to menopause and prepare her for the changes that will happen to her body. So the content should be tailored and provided to each target group based on their age and the stage they are in in their life, it shouldn't be given just arbitrarily you know."* **(P21, Single, 34 years old)**

> *"They need to talk about puberty before it happens, and when changes are going to start in her body... She needs to know what will happen and they need to reassure her that it's normal every girl goes through this and it's going to be okay.*" **(P14, Married, 38 years old)**

Mothers in the sample talked about the importance of teaching young people about SRH for sexual abuse prevention among children. They explained that it is important for children to learn what sex is, so that they can have an open discussion with them. Teaching them what to do if they suspect that someone is sexually abusing them and recognize the difference between appropriate and inappropriate behaviour towards them was deemed necessary by all mothers.

> *"**P20:** They need to teach kids everything. Everything.*
> ***NA:** Can you be more specific?*
> ***P20:** For example, sexual abuse. To not allow anyone to do it to them. One time, my niece told me that the driver kissed my son, they showed me how he kissed him. I was very upset, and I was really careful not to leave him with anyone. My mom was like 'relax he has daughters'. I said then he should go kiss his daughters not my son!! I regret not doing anything now. But now I try to open this discussion with my kids every chance I get. I tell them what is*

acceptable and what is not, and if someone tries something with you, you need to come and tell me. They need to know how to act if someone tries to do something inappropriate to them." **(P20, Divorced, 40 years old)**

Women suggested advanced and comprehensive SRH education content for the premarital counselling program. While some women emphasised that it should not go too *'deep'* into sexual health topics, others explained the importance of educating couples about sex, including sexual pleasure to have a healthy and happy marriage. Other topics included educating couples about ways of preventing pregnancy, STIs and the importance of regular health check-ups.

"Educate them on how infections are transmitted, how pregnancy happens, and what... what a healthy sexual life looks like... But honestly I am against talking about the deep stuff...these things as I told you should be learned through self-education from the internet or somewhere else." **(P11, Divorced, 30 years old)**

Many highlighted the importance of raising awareness on personal hygiene as a way of preventing infections. Ways of dealing with and preventing infections (e.g., UTIs, yeast infections) was an important topic to many women.

*"**NA:** What are topics you think the programme should focus on?*
***P1:** They need to focus on the woman herself ... Women related problems, sexually transmitted infections, taking care of her personal hygiene and infections. There are a lot of people who are susceptible to infections, and they don't know. They don't have anyone to educate them."* **(P1, Married, 34 years old)**

*"**NA:** What were the topics that you wished you learned about before?*
***P6:** In relation to what to do after a sexual intercourse, and what is the reason behind recurring infections. I used to have infections and I didn't know anything about it."* **(P6, Married, 34 years old)**

Some women emphasised the importance of teaching sex and sexuality related topics within the context of marriage, so not to encourage extramarital relationships.

Some women emphasised framing education from a religious perspective, focusing on abstinence rather than harm reduction.

> *"**P9:** I don't think the programme will encourage extramarital relations if it was provided in the right manner.*
> ***NA:** What do you mean by the right manner?*
> ***P9:** I mean it should be discussed in relation to marriage. They shouldn't discuss it in relation to extramarital relations. They need to cover it the right way, in a social and religious context and so on. I know in western countries they would discuss it openly and generally; we can't do the same here. The programme should be well developed. How can we open this discussion for youth? It [sex] has its harms and it shouldn't be done until after marriage. As I said, it should be covered gradually… At the beginning it should cover the basics only, like menstruation and personal hygiene, what is right and what is wrong. They shouldn't go deep to sexual relations because they are still young."* **(P9, Single, 22 years old)**

> *"**P6:** I think the most important thing for me is enforcing strong religious morals. If we feared God, we wouldn't need anything else … Of course, educating people that it [extramarital sex] would harm you [give you an STI], do you want to live or not? Do you want to be isolated from people [if you had an STI]? If people didn't care about religious beliefs, there are other ways. We should educate them about its [sex] harms, its consequences.*
> ***NA:** So we should educate them about its harm, not how to prevent STIs?*
> ***P6:** For sure, we should warn them from doing it […] With the lack of religious morals, we then need to enhance education even more. So that people will understand the severity of their actions."* **(P6, Married, 34 years old)**

Some women suggested including marriage counselling to protect marriages and prevent divorce. It was discussed in the context of teaching young women to be more patient with their husbands, and not end the marriage over *'silly reasons'*. These views provide an overview on women's position in society and how they are raised to believe that men and women are not equal. Women are always expected to make sacrifices and obey their spouses. But recent societal changes resulted in

women having standards on how they should be treated and what they want in a marriage, which some women still view as a negative change.

> *“I wish they include teaching women how to be more patient. Young women nowadays have no patience and would end their marriage over silly reasons. They need to learn that not everything in marital life will go your way, you will be shocked by many things. You can’t be happy all the time, there will be heartache. She needs to learn how to be patient and accept his reactions. Some men are like that, it's in their nature to be highly-strung and temperamental. Just because he raises his voice at you doesn’t mean you have to talk back or shout at him in the moment. For example, if he screamed at you in front of his sister you don’t have to respond to him at the moment and embarrass him in front of his sister. Sometimes it’s just silly reasons and when you go back to the root of the problem it's nothing. I read that in Jeddah 156 divorce cases happen daily. It's a very big number and not acceptable.”*
> **(P14, Married, 38 years old)**

CHAPTER FIVE - STAKEHOLDERS PERSPECTIVES ON SAUDI WOMEN'S SEXUAL AND REPRODUCTIVE HEALTH NEEDS, EXPERIENCES AND PRACTICES

CHAPTER OVERVIEW

This chapter presents the findings from the qualitative study on stakeholders' views on Saudi women's SRH and factors influencing Saudi women's sexual and reproductive wellbeing.

5.1. FINDINGS

The stakeholder sample consisted of 16 participants. I interviewed seven healthcare providers; five are obstetrician/gynaecologists (OBGYN) or Urogynecologists of both genders, and two female health educators. Six policymakers in a number of different health organizations of both genders, in addition to two male and one female religious scholars were interviewed. **Table 2** providers an overview of stakeholders' characteristics

This chapter presents the findings from the qualitative exploration of Saudi women's SRH views, perceptions, and experiences. The findings were organized into the following sections: SRH knowledge and information sources, a glimpse into the roots of Saudi women's sexual and reproductive issues and experiences, barriers and facilitators to sexual and reproductive information and healthcare services, barriers to contraception use, STIs attitudes, beliefs and perceptions, barriers to STIs testing and diagnosis, contraception and family planning attitudes and practices, and attitudes towards SRH education. The findings were mapped using the conceptual framework in my systematic review **(See Chapter 2).** A table summarising main themes according to conceptual framework domains can be found in **(Appendix 11)**

5.1.1. SEXUAL AND REPRODUCTIVE HEALTH KNOWLEDGE AND INFORMATION SOURCES

WOMEN'S SEXUAL AND REPRODUCTIVE KNOWLEDGE

Stakeholders felt that Saudi women lack SRH knowledge in many different areas including puberty, menstruation, basic human anatomy, reproduction, contraception, pregnancy, delivery, and STIs.

> *"They don't know their cycle, what's going on with their body, what's the processes and stages from puberty to menstruation to reproduction. These topics are like a grey area or no no area."* **(S12, Female, Policymaker)**

Table 2: Stakeholders detailed sample characteristics

Professional role	Gender	Interview type	Speciality/field
		Policymakers	
Programme director	Female	Face-to-face	General practitioner
Programme director	Female	Face-to-face	Family medicine consultant
Head of governmental hospital	Male	Face-to-face	OBGYN consultant
Head of health education department	Female	Face-to-face	Medical sciences – Health education
Head of clinical education unit	Female	Face-to-face	Medical sciences – Health education
Healthcare General Directorate	Female	Face-to-face	Medical sciences – Health education
		Healthcare providers	
OBGYN consultant	Female	Face-to-face	Specialises in infertility
OBGYN consultant	Female	Face-to-face	Specialises in infertility
OBGYN consultant	Female	Face-to-face	Specialises in high-risk pregnancies
OBGYN consultant	Male	Face-to-face	Specialises Urogynaecology
Psychologist	Female	Face-to-face	Relationship and marriage counsellor
Health educator	Female	Face-to-face	Specialises in women's health
Health educator	Female	Face-to-face	Specialises in antenatal care
		Religious scholars	
Academic scholar – Islamic studies	Male	Telephone	Teaching and researching religious views on family planning and contraception
Academic scholar –	Male	Face-to-face	Teaching and researching "Jurisprudence of Family"

Islamic studies			
Academic scholar – Islamic studies	Female	Telephone	Teaching and researching marriage from a religious perspective

Women's lack of SRH knowledge meant that they did not know what sexual intercourse is or lacked knowledge about basic female and male anatomy. Issues like lack of understanding of sexual intercourse, unawareness about the organs responsible for producing sperm, or the belief that men cannot be sterile were believed to be common among Saudi women.

> "*The other issue is their lack of knowledge on how to perform sexual intercourse ... from men's side, there's difficulty having erections, difficulty producing sperm or having zero sperms, premature ejaculation during intercourse or having repeated infections or women, maybe they are having really bad infections, intercourse becomes difficult and painful. Patients with endometriosis sometimes have pain during sexual intercourse, basically these are the issues.*" **(S4, Female, OBGYN)**

Due to the high value placed on women's virginity, the presence of blood after first sexual intercourse was considered a proof of virginity. Misconceptions about what is expected from women after first sexual experience, i.e., spotting, puts women at risk of severe consequences including physical and emotional harm.

> *"We need to educate people about the first night [first sexual intercourse]. For example, I once saw a friend who was newly married. He called me, he was very distraught and told me that the first time, he didn't see any spotting or blood. So, he immediately thought that it was something really serious [his wife is not a virgin]. So, I told him I need to see you, I need to talk to you face to face. This is very serious. He said he read this information on a blog, that if your wife doesn't have any spot of blood, it means she is not a virgin. And he was a very educated man..."* **(S8, Female, OBGYN)**

SAUDI WOMEN'S STIS KNOWLEDGE

According to stakeholders, STIs knowledge among women is severely lacking. Lack of knowledge was expressed in the different STIs, modes of transmission, signs and symptoms, and measures of prevention. Physicians revealed that some women did not know that infections could be transmitted through sexual intercourse until after they were diagnosed with an STI.

> *"**NA:** In your opinion, is Saudi women's STIs knowledge good?*
> ***S11:** It's very low, very low. Not at all high, it's very low.*
> ***NA:** What do you think they are missing?*
> ***S11:** they usually don't know what STIs are until they come to the clinic with an STI. And when you tell them, it's like a disaster and a big shock as if they never heard of it before. So, I would say the majority don't even know it [STIs] exists.* **(S11, Male, Urogynecologist)**

Policymakers, particularly those who do not usually deal with patients, had different views regarding Saudi women's STIs knowledge. Although they did not have data to support it, they believed that women did have sufficient STIs knowledge. A policymaker explained people's awareness of STIs stems from fear of getting the infections. Fear is perceived to encourage people to learn more about the disease and how it is transmitted.

> *"I think people who are aware of STIs are scared. I mean they are aware of STIs because they are afraid of them. But still lack knowledge on ways of protection. They know about the infection and how it is transmitted… I think their knowledge is motivated by fear rather than being open-minded about learning [SRH topics]."* **(S1, Female, Policymaker)**

Policymakers emphasised the importance of educating people about how STIs are transmitted, specifically that it is not necessarily transmitted through sexual intercourse. The motive behind raising awareness is to change society's views towards people with an STI and reduce stigma associated with STIs.

> *"They need more awareness about modes of transmission more than the disease itself. To show more understanding and compassion towards infected individuals. The disease could be transmitted by mistake, could be a medical*

error not necessarily because of wrong actions. But sadly, we only know it is sexually transmitted." **(S9, Female, Policymaker)**

SOURCES OF SRH INFORMATION

Stakeholders said that women relied on their mothers, sisters, neighbours, friends, the internet, and social media for most of their SRH information. Concern over women's sources of information was expressed by all participants in the sample. Healthcare providers said that women rarely come to them for SRH advice, and that social networks and the internet were their preferred source of information.

"Most women seek information through the internet or by asking their friends or mothers if the mother is willing to talk, especially women about to get married and a lot of inaccurate information or advice is given. Because not everything is going to be suitable for every woman, for example a specific drug or went through a specific experience, not everyone is the same and not everyone is going to have the same experience. Therefore, we have this really serious issue with lack of reliable information." **(S12, Female, Policymaker)**

Misconceptions and inaccurate information from family and social networks, especially regarding contraception, were believed to be an issue among Saudi women. Information from personal experiences were trusted and accepted as facts by many women more than any other source.

"*So she takes it [OCP] and then she comes to us [physicians] and says it didn't work for me, after she had complications or an unplanned pregnancy she goes and gets advice and says I used this method and it didn't work for me and I got pregnant in it. And that's probably because she didn't use it correctly or it's not for you but because she did not have the proper medical advice before taking it, so they only go seek doctors' advice after they have a problem. Because they think it's just a way to prevent pregnancy, it worked for my mother for my sister and friends, so she's supposed to be the same, so they use the same.*" **(S12, Female, Policymaker)**

5.1.2. A GLIMPSE INTO THE ROOTS OF SAUDI WOMEN'S SEXUAL AND REPRODUCTIVE ISSUES AND EXPERIENCES

DEEP-ROOTED NEGATIVE VIEWS TOWARDS SEX AND SEXUALITY

Women in Saudi Arabia are traditionally raised in a culture where sex and sexuality are viewed as shameful, immoral, and is even illegal outside the context of marriage. Some women face great difficulties changing their belief system towards sex after marriage. Some women are unable to accept the idea of sex even within marriage, leading to serious physical and psychological issues for them.

> *"This topic [sex] for young girls even in their own home is a no no. It's a no no area. You shouldn't talk about it or discuss it with anyone until she is married, at this time her mother might or might not talk to her about this topic just for her sake because she is getting married... but when you grow up with this being no no and Eib [shameful] and Haram [forbidden], how can you expect her at 25 years old for example to suddenly change her entire belief system and accept the idea of having sex with her husband. How can this suddenly be okay when I grew up with it being wrong and forbidden and taboo? Things cannot change overnight."* **(S12, Female, Policymaker)**

A physician explained that many sexual health issues women are experiencing and seeking help for are directly affected by their negative views towards sex. Issues including vaginismus are thought to be a major sexual health problem for women in Saudi. Women are believed to be living in pain and guilt for years without seeking help, and many are unaware of their health condition and whether it is treatable.

> "*I can give you many examples of cases I deal with in my clinic ... Many women are expected to accept having sex in the first night of marriage, even if she didn't know her husband well. Sadly, women are usually very shy, and some will require psychological help to overcome difficulties in having sexual intercourse. You need to work with her… because vaginismus does not require surgical intervention. It's all about helping women accept their sexual needs and be comfortable with their husbands, because there is something deep rooted in her that makes having sex unacceptable.*" **(S8, Female, OBGYN)**

Healthcare providers mentioned that many women lack sexual pleasure and fulfilment in their marital relationship. For many, it is not a priority in the marriage, as the purpose of sex is procreation. Sex beyond procreation is usually for the fulfilment of the husband's sexual needs. Many women also lack knowledge of their own bodies and are unaware that sex can be pleasurable for them. Lack of sexual fulfilment in the marriage could lead to feelings of resentment towards the husband, depression and feeling unhappy in the marriage.

> *"I have seen many patients come to me after 10 or 20 years of marriage. And sex is a source of stress and fear for them. She never enjoys sex, and she isn't even aware that sex can be pleasurable. Sexual relationship is just for the husband, or for having children or for what is expected from her by society. She never enjoys the sexual relationship with her husband, she is miserable, and this has a huge impact on her mental health. Our society places no significance on sexual pleasure for women, it is not a priority in our society.*" **(S13, Female, Psychologist)**

COMMUNICATION BETWEEN PARTNERS

Societal expectations of modesty and ignorance in all matters sexual in nature means that women are unable to express sexual desires with their husbands or communicate sexual issues openly and freely. Women feared being judged by their husbands as impure and having previous sexual experiences if they showed any level of awareness or having any sexual expectations. Shyness, and inability to communicate sexual needs with the spouse, also acts as a significant barrier to sexual fulfilment and pleasure for women.

> *"Women would be afraid that men would think that she is not raised properly and loose if she talked about her sexual knowledge! She's afraid that her husband is going to ask her how do you know these things? How did you learn? The man expects her to be shy and unaware I don't know that's just how we [society] are".* **(S13, Female, Psychologist)**

Lack of communication between partners could have a very significant impact on women's SRH. For example, a patient who was going through chemotherapy

endured a lot of pain and faced serious health consequences because she could not tell her husband that she was unable to have sexual intercourse.

> *"I had a patient who had cancer and was on chemotherapy, the chemotherapy was affecting her body and her health and made her very ill. It affected sexual intercourse between her and her husband. Her husband was not understanding of her situation, he wants his needs, he must get them. And this was damaging her health physically. But when did she decide to talk? When she got so ill that she had to be hospitalised."* ***(S5, Female, Health educator)***

Many participants expressed frustration over the socially constructed taboos around SRH topics particularly when it came to communication between partners. Experts in the field of psychology and women's health indicated that a lot of the cases they deal with, could be solved with open communication between partners. Stakeholders discussed the importance of tackling taboos surrounding sexual and reproductive topics, to facilitate open communication among women.

> *"It is important for women to realise that it is ok for them to express their desires and needs just like with everything in life. It is not shameful nor forbidden to talk about your needs with your husband! It is not shameful!"* **(S13, Female, Psychologist)**

SOCIETAL EXPECTATIONS OF WOMEN'S SRH KNOWLEDGE: MODEST WOMEN ARE SHY AND UNINFORMED

Religion, traditional gender roles, and the social expectation of women's shyness and modesty, dictate that women should be unaware and uninterested in their own sexual health. This expected ignorance in all matters sexual and reproductive was specific to women. Women's knowledge about sexual health and sexuality was viewed as wrong and improper, and awareness was linked with promiscuity. In some instances, women were believed to fake ignorance in order to adhere to the social expectation of chastity and modesty.

> "***NA:*** *Do you think these issues are openly discussed?*
> ***S2:*** *No*
> ***NA:*** *Why?*

S2: *I don't know. Mostly because it is Eib for a woman to ask about these things. A lot of people believe it is Eib to even discuss this in front of women, even if she was an adult over 18 years of age. Commonly they won't talk to her about it, they won't teach her about these topics until she is married with kids. After that, they would discuss things with her openly, but before that it is considered Eib and not up for discussion.*

NA: *Considered Eib by whom?*

S2: *It's the society's views, not a religious one. It is associated with society; religion actually accepts discussing these topics.*" **(S2, Female, Health educator)**

A physician who specializes in infertility and IVF treatments saw a female patient who had been struggling with fertility issues for many years and had been seen by several doctors throughout the years. After many consultations, it was discovered that she and her husband have never had a complete sexual intercourse. The physician revealed that this issue is very common, and she frequently encountered patients with similar problems.

"I once had a patient not too long ago; she had been married for 5 years. And came to us as an infertility case and we asked her about her sexual life, and she said everything is good there are no problems there. And then we discovered they have never had sex in the 5 years of their marriage. And she went through many fertility doctors until she came to us.". **(S3, Female, OBGYN)**

A policymaker mentioned an educational programme established to raise sexual health awareness among youth in schools. This programme was offered to male students only, when asked for the reason behind excluding females from this programme, she explained that it is easier and more acceptable for males to have sex education.

*"**NA:** Why did you choose to target boys not girls?*

S9: *To be honest the choice wasn't made by me, when I attended the meeting and [colleague name] said that we would start with boys' schools then we might consider it for the girls' schools.*

NA: *Was there any rationale to this choice?*
S9: *No, I don't know to be honest, maybe because it is easier to offer the programme to boys."* **(S9, Female, Policymaker)**

GENDER INEQUALITY AND TRADITIONAL GENDER ROLES

There were conflicting opinions and views on how women should act both before and within marriage, and what is expected of them in a marital relationship. Some participants showed judgment towards women who are shy and have trouble accepting the idea of sex within marriage. These judgmental views were voiced by female stakeholders, while male stakeholders showed more understanding views towards this issue. It was also observed that men are viewed as victims in the marriage, and women are expected to please their husbands no matter what personal issues they are having.

> *"Most of the time, the husband is waiting for the wife to initiate, it is because the man is too polite and out of respect to his wife, he waits for the wife to show interest and show him that she wants him. And this puts him in a very uncomfortable situation and makes him feel rejected and unwanted. Why would you [the woman] make him feel this way?!"* **(S13, Female, Psychologist)**

In recent years, a shift in the traditional gender roles is occurring in Saudi society, where women are becoming more independent and empowered. Women were traditionally expected to shoulder the sole responsibility of preserving the marriage and protecting it from divorce. Some stakeholders explained that one of the reasons that divorce rates are higher now is because women have become impatient and unwilling to compromise.

> *"We need to educate women how to build a home for their family, what are the wife's responsibilities. Sadly, in our mothers and grandmothers' generations, this came natural to them; they didn't need anyone to teach them how to become responsible. They [new generation women] are failing to understand life's priorities and responsibilities. And that's why divorce rates are high now. Nowadays they would sacrifice their marriage so easily and end their marriage over something so silly… she [women] needs someone to*

educate her on what is expected from her in her home, with her husband, how to maintain the stability of their life and the importance of marriage." **(S3, Female, OBGYN)**

Religious scholars also mentioned the recent rise in divorce rates, and believed that lack of communication between partners, excessive openness and having work colleagues of the opposite gender were contributing factors. Women being unreasonably discontented in the marriage, and younger generation women developing strong and stubborn personalities were said by religious leaders to be among the main reasons for the rise in divorce rates.

"Sadly. Now with the recent openness what happened is strong personalities developed in both genders and this affects relationships between them. They [women] become stubborn and do not compromise… Also, with social media like snapchat which I think is the number one cause of divorce, girls tend to compare their relationships with what they see on social media and make them have unrealistic expectations which can ruin marriages." **(Religious scholar 2, Male)**

The consequences of extramarital sex can be serious and severe for women. Participants said that women might be at risk of physical harm or even death. When extramarital relations among men were discussed, no consequences other than STIs were mentioned.

"If a girl [unmarried] gets pregnant, she will be labelled as bad for the rest of her life, and it is a very depressing situation. […] if illegal pregnancy happens, the outcome for women is very severe … They might commit suicide, or they might run from the house if the family knows, they might kill her, they might lock her up in the house, they might kick her out, physically harm her you know... because of the conservative background of the society." **(S7, Male, Policymaker +OBGYN)**

SEXUAL ABUSE IN CHILDHOOD

Stakeholders highlighted that sexual abuse in childhood is a very common and serious issue that affects both genders. Sexual abuse is not a topic that is easily

discussed, and most victims keep their abuse to themselves. Child molestation is usually associated with feelings of great shame, guilt, and confusion. Victims tend to blame themselves for being sexually abused and are usually afraid that they will be punished and stigmatised for the rest of their lives. Stakeholders highlighted that most cases are being sexually abused by someone they know, either a family member, relative, or a close family friend. This makes speaking up about the abuse even more difficult as they are fearful of the negative consequences to themselves and their abuser.

> *"It [sexual abuse] could happen from another student, a boy who took advantage of a young girl, a neighbour, I mean sadly it could come from a brother, a cousin, someone in the family. It might leave them unable to have a healthy sexual relationship, their marital relationship would be deeply affected. The trauma that they went through needs to be dealt with professionally but sadly that never happens. They need someone to help them through this trauma, but they will never speak up."* **(S3, Female, OBGYN)**

Sexual abuse has a significant impact on the victim's definition of a healthy sexual relationship, sexual pleasure, and could lead to sexual dysfunction in adulthood. Physicians said that they usually do not discover that their patients have been sexually abused in childhood until it has significantly affected their lives, mental health, relationships with their spouse, and even with their children. Many victims are unaware of the link between their sexual problems in adulthood and experiencing sexual abuse in childhood.

> *"It's [sexual abuse] a big issue especially in schools and maybe I hear a lot about it because of my work. Some people are able to overcome the effects of it. They would bury it deep inside; it would be like something locked up inside of them and they will never talk about it. But for some people, it affects them. It has an impact on their life. They will not be able to live a normal life ever again"* **(S3, Female, OBGYN)**

5.1.3. BARRIERS AND FACILITATORS TO SEXUAL AND REPRODUCTIVE INFORMATION AND HEALTHCARE SERVICES

Barriers to sexual and reproductive information and healthcare services were mapped using the conceptual framework **(See Chapter 2).** Stakeholders stated that delays in seeking care, particularly for gynaecological problems, are very common among Saudi women. Barriers to accessing healthcare services included shyness and embarrassment (i.e., personal barriers), marital status (i.e., being unmarried), lack of knowledge, restricted access by family members/husbands, socio-cultural factors, healthcare provider-related barriers, health policy and service level barriers.

PERSONAL LEVEL BARRIERS

Stakeholders mentioned that women are often shy and embarrassed to seek medical care for SRH issues, and seldom ask for help. In addition to being uncomfortable with physical examinations, women are believed to be embarrassed to talk about their SRH issues with anyone, including people in their close social circle.

> *"The problem with SRH issues, it's not something visible like other health issues. So, for example, if my daughter is pregnant, I will tell people she's pregnant because it's visible. But if she's struggling to get pregnant and is going to a doctor for fertility issues, I wouldn't share it. Same with infections and other issues affecting the reproductive organs. I wouldn't share it with my mother or my husband. I will try anything, anything, but talk about it."* **(S10, Female, Policymaker)**

Women's shyness and inability to seek help for gynaecological issues poses a great threat to their health.

> *"After it reaches a point where it affects her life in a significant way, she will seek help, but… this is my personal opinion, not based on any study or statistics but I think most of them no they don't. They don't seek help and they just keep it to themselves. I know a lot of psychologists say a lot of couples or females come to our clinic because she's having problems with her husband for sexual health issues, and she is having sexual problems with her spouse, and this is affecting her mental health. It's common but they deny it. They deny it. You see she went to the psychiatrist to seek help but didn't go to gynaecologist or the obstetrician to seek help for her sexual problem, no she went to psychiatrist to tell them that I have like dysfunction or have problem*

with my marital relationship not to the gynaecologist or the obstetrician or even a specialist urologist to help her she didn't go to them, she went to the psychiatrist to tell them I have a problem." **(S12, Female, Policymaker)**

Experiencing SRH issues are often linked with two perceptions. The first was associated with promiscuous and immoral activities, and the second was that they are associated with lack of cleanliness and basic personal hygiene. This makes it challenging for women to seek help, as they fear being perceived as unclean or having promiscuous activities.

"The embarrassment from reproductive diseases because people perceive it as one of two things: either you have committed something against our religious and cultural beliefs, or you lack basic personal hygiene. So, people deal with it with complete secrecy either go seek help in secret or learn to live with it and hope it goes away on its own" **(S10, Female, Policymaker)**

Barriers to seeking medical help could also be related to perceived illness susceptibility and severity. Many women view SRH problems as trivial issues that resolve with time without requiring medical intervention. One of the most common problems women experience, and usually do not seek help for, are UTIs.

"They don't accept that they have a medical problem. They convince themselves that it is something simple and should be kept a secret. So, they try to look for solutions on their own, but wouldn't seek help for." **(S3, Female, OBGYN)**

Some stakeholders reflected on their own experiences when dealing with SRH issues. For example, this participant admitted that even when she did not have immediate barriers accessing SRH services, she still feared using those services.

"When I was a teenager, I had a medical issue, I developed something, it was external, I don't know if it was a skin disease or what. It wasn't in the reproductive organs [genitalia], it was external. And I was so scared I didn't want to tell my mother. I don't know why, I guess I did not want to know what was going on, I felt it was strange, but I didn't want to be shocked if I knew what it was. The other thing, I did not want to go to a doctor, and I did not want to be examined in that area. This area as you would say is 'sacred', so I

didn't want to, I was scared of being examined. I didn't have a problem telling my mother, but I knew if I told her she would make me go see a doctor and I didn't want that." **(S5, Female, Health educator)**

Healthcare providers revealed that some women would often speak indirectly and consciously avoid open and transparent expression of sexual issues out of shyness or in order to protect modesty. This often leads to misunderstandings between healthcare providers and patients, which can lead to ineffective consultation and treatments.

"It usually differs from woman to woman. Depends on the patient, and how bold the woman is. Because some of them won't even open the door for discussion and some would be hinting from afar and talking around the subject for example saying I have pain. Okay what kind of pain? What causes this pain? So, they are just hinting and talking indirectly. So, it depends on how she gives me the information, and how confident she is in her physician to talk openly or tell them exactly what she is experiencing." **(P7, Male, Policymaker + OBGYN)**

One physician said that although women do often speak indirectly about SRH issues and talk around the topic, he explained that once he starts speaking directly to their patients, making the discussion purely medical, they always open up and start talking freely.

"Usually when they come to me, they would be talking in circles, speaking very vaguely. They don't really speak to you directly. But once I start talking to them directly and clearly, make them understand that this is purely medical, they immediately start talking and tell you everything." **(S11, Male, Urogynecologist)**

MARITAL STATUS

The link between knowledge needs and marital status was observed in stakeholders' opinions regarding when SRH knowledge was necessary and when it would be accepted by the community for women to learn. The expectation that only married women require SRH information and services meant that unmarried women were

unable to access them when they were needed. This was found to be particularly true for contraception. In most cases, it was not external barriers to knowledge acquisition that were the issue, as much as personal barriers and disinterest in these topics. Mainly because they were raised in a culture where SRH is only a married woman's concern.

> *"Women are open to talk about contraception as long as she is married, or about to get married. Before that, she wouldn't want to know"* **(S2, Female, Health educator)**

The link between knowledge needs and marital status was consistent with women stakeholders' opinions about their own knowledge, complying with the idea of expected ignorance before marriage. For example, an unmarried female health educator was asked about her knowledge of SRH issues women face and she replied:

> *"Look, I am not married so I don't really know.*" **(S5, Female, Health educator)**

FAMILY, COMMUNITY, AND SOCIETAL BARRIERS

Family and society acted as barriers to women accessing SRH information and services. Parents often restrict their children's access to SRH information, and young people could face negative reactions if they tried to ask. Social stigma and embarrassment are possibly one of the main reasons to avoid sexual discourse, particularly at the household level and this was believed to be the case for both children and adults.

> *"As I told you, it is fundamentally established that we are raised with boundaries at home. There is like a wall between the mother and her daughter or if the mother is not around, for example her aunt or older sister, she can't go to them for answers. Because kids have nowhere else to turn, they need other trusted sources to turn to other than the home."* **(S3, Female, OBGYN)**

Parents would also restrict girls' access to essential and medically required treatments or procedures, often to their detriment. The reason was mainly because

they believed this treatment, procedure or even consultations were immodest. In certain situations, parents feared that their daughters' virginity would be compromised.

> *"I once saw a nephro patient, she had kidney problems so not something sexual or that sensitive of a topic. The girl had to have an ultrasound, and her father went crazy and refused it completely. I don't even know what he thought was going to happen. I don't know what he understood was going to happen. I think he thought it would be something penetrating [transvaginal ultrasound]. He did not understand the procedure, he wouldn't even let me talk to him. He just got up and took his daughter and left the clinic enraged he didn't even let me explain. So that was for something as simple as an ultrasound, imagine what we deal with when it is something you know, and I would say you will face this difficulty in 70% of the people who come here."* **(S5, Female, Health educator)**

Delayed healthcare seeking is considered normal in the community, this was reflected in physicians' reactions when women sought immediate help for their SRH issue. For example, this participant mentioned that her OBGYN was surprised when she sought help for an SRH issue she experienced for only a few days.

> *"You will be surprised; the majority simply wouldn't seek help. I had a very simple problem four months ago, and I've had the problem for about two or three days. And the doctor was laughing at me, she said my patients usually come to me after six months or two years of having the same problem. She was literally shocked, she made it sound like I was the strange one for seeking help early."* **(S13, Female, Psychologist)**

HUSBAND RELATED BARRIERS

Female healthcare providers explained that sometimes the presence of the husband acted as a barrier to open discussion with their patient. Some female healthcare providers were uncomfortable and shy discussing things in front of men. Others said it was because they sensed that women are unable to talk in front of their spouse. Some physicians admitted that they ask the husband to leave the room during

consultations with their patients to facilitate open discussions and allow women to talk openly.

> *"**S2:** I might be a little bit uncomfortable when the husband is there. Firstly, I don't really know how he will react. Is he going to accept me talking to his wife about this?*
> ***NA:** What do you think you will say or how do you think you will react?*
> ***S2:** Some husbands might feel a little embarrassed or shy when I start going too deep into sensitive topics and they would excuse themselves and leave... So, when the husband is there, I might feel a little shy, but I push through that feeling and try to finish the consultation."* **(S2, Female, Health educator)**

> *"I mean the husband could act as a barrier between the healthcare provider and the patient, they wouldn't discuss these topics freely."* **(S9, Female, Policymaker)**

The presence of the husband made doctor-patient communication even more challenging. Sexual or reproductive issues are extremely sensitive, and often place a huge strain on a couple's relationship. Doctors expressed feeling uncomfortable being put in the middle of the couple's relationship and preferred seeing them separately to have more effective consultations.

> *"Of course, in the beginning it's going to be a little bit challenging. Especially for patients who are difficult, and communication with them is challenging. They might refuse talking to you they will give you very short answers sometimes if the husband and wife are together, you can sense the kind of relationship they have, they would start to argue in front you or maybe say mean things to each other so you can sense that the words being said have meaning behind them and it was not just random so you can explore that probably not from the first visit and you would have to see them separately because they probably won't open up in front of each other."* **(S3, Female, OBGYN)**

SEXUAL HEALTH DISCUSSIONS ARE "TABOO"

There was a consensus among participants that sexual health topics are not easily discussed in the community, considered taboo subjects and a *'black box'* that cannot be opened. This contributes significantly to the deep-rooted negative views towards sex discussed earlier in this chapter. Taboo topics included sexual intercourse and sexuality in general, contraception, reproductive health, puberty, menstruation and STIs.

> "*Taboos around this topic. We have a problem with taboos surrounding this topic and the Eib and no we shouldn't talk about this topic. It's very sensitive and taboo and this is the real problem.*" **(S12, Female, Policymaker)**

Sexual health issues in Saudi are exacerbated by lack of open discussions regarding anything related to this area. Reasons behind lack of open discussions varied from personal (i.e., ignorance and lack of knowledge), to socio-cultural and religious factors. Participants reflected on reasons why sexual health topics are considered taboo and tried to provide explanations behind this sensitivity. Living in a culture where talking about sexual health issues is considered *'improper'* and *'immodest'* was the most common reason given.

> "*No, still, still. It's like a taboo topic. Nobody wants to talk about it. Nobody wants to address it. When you address it, you feel you are giving improper and shameful information... Although they need it, is it openly discussed? No, sadly no."* **(S12, Female, Policymaker)**

> *"**NA:** Why do you think these issues are not discussed in our community?*
> ***S3:** Because of lack of awareness. Because if I had the knowledge, I would seek help before complications happen. But things must be really bad before they seek help. In other parts of the world, education starts at a very young age. A young child knows what is considered sexual abuse and knows the difference between appropriate and inappropriate touching. A child understands that I can talk to my mother openly about it, with my teacher, with my healthcare provider. They know it's okay to talk."* **(S3, Female, OBGYN)**

Avoiding sexual health-related discussions was considered polite, and not speaking about sexual and reproductive matters was associated with being well-raised and having good manners.

> *"Because these are very sensitive topics. We, as a community, we aren't there yet. We are not yet at the point where discussing these topics is acceptable. It is our upbringing and a respect thing. It is considered impolite to discuss SRH matters. But even if a woman is shy and tries to convince herself that she is doing the right thing by not seeking help or talking. They need to understand that it is okay to ask, it is okay to have knowledge. And if I have a problem, it is okay to seek help. But sadly, that's our culture."* **(S8, Female, OBGYN)**

Socially constructed taboos and religious views towards extramarital sex are one of the many reasons why sexual health is not openly discussed. This was reflected in stakeholder's language when talking about extramarital sex, using the terms like *'illegal relations'* or *'forbidden relations'* to describe sex outside of marriage.

Religious beliefs towards family planning in general and the Islamic views forbidding limiting the number of children was another reason given by participants in relation to the cultural sensitivity surrounding SRH discussions.

> *"It's because we link it with religion, and the idea that you are limiting the number of children or preventing pregnancies. And I also think that until now, most people do not prefer using it until after their first or second pregnancy, because we have this myth or concept that it will affect your fertility, and you won't be able to get pregnant if you use it so that's another issue. So that's why it's linked to religion and religious sanctions and that it is, I don't want to say forbidden, but it's still considered a way to limit or prevent reproduction."* **(S12, Female, Policymaker)**

HEALTHCARE PROVIDER AND HEALTHCARE POLICY BARRIERS

BARRIERS TO DOCTOR-PATIENT COMMUNICATION

Stakeholders identified several barriers to effective consultations and provided reasons behind difficulties offering SRH advice to their patients. Barriers included

lack of perceived responsibility by healthcare providers, patients' unwillingness to talk during consultations, indirect and unclear communication from patients and healthcare providers, the presence of husbands during consultations, fear of offending patients, fear of having complaints against them, time and workload constraints, lack of knowledge and/or skills, and the gender of healthcare providers.

> *"**NA:** Do you think these topics are openly discussed in Saudi?*
> ***S4:** No*
> ***NA:** Why not?*
> ***S4:** Because there are barriers, sometimes the patients are not comfortable talking about it, unless you really discuss it further.*
> ***NA:** Why are they not comfortable talking about it? in your opinion?*
> ***S4:** Because it is a cultural barrier, cultural upbringing, that prevents them from talking about this issue."* **(S4, Female, OBGYN)**

RESPONSIBILITY OF INFORMING PATIENTS

Responsibility of informing patients was perceived differently by participants in the sample. Some physicians did not perceive offering SRH advice or initiating discussions as part of their professional duties. Some healthcare providers placed the blame on women's lack of knowledge and delayed health-seeking on women's unwillingness to discuss SRH issues with them. While others have admitted that they themselves avoided discussions and were uncomfortable offering advice *'unless they were asked'*. All physicians in the sample believed that it is not their sole responsibility to provide women with SRH education and advice. They emphasised that it should be a joint responsibility between physicians, nurses, health educators, pharmacists and other healthcare providers working in the field of women's health.

> *"It is the patient's right to get the necessary medical information. But it cannot all be on doctors. For example, advice about medication should be the role of the pharmacist, they have to have an active role in educating the patient about the medication, how it is used, contraindications, side effects. So, education cannot be the sole responsibility of the physician. It is a joint responsibility of everyone working in the medical field whether it was the*

doctor, nurse, educator, nutritionist, pharmacist, each one is responsible for their part." **(S10, Female, Policymaker)**

FEAR OF OFFENDING PATIENTS

SRH discussions were often hindered by sensitivity surrounding SRH topics. In some instances, it was even considered disrespectful to open the discussion with their patients. Physicians believed that patients felt offended if they asked them about SRH issues. Physicians also explained that some patients would feel they are being accused of immoral activities if they were told they have an STI. This made it very difficult for some doctors to do their job and inform patients about their diagnosis, possible causes, and effective treatments.

> *"**S12:** So, some doctors are afraid to go there because they don't want to get in trouble and invade the patient's privacy and comfort zone. So, they don't ask about it. Because they feel that this is an invasion of a patient's privacy and disrespectful. But it's actually the opposite. Many women are waiting and wanting their doctors to open the door for discussion. I won't call them patients, women, they love to ask about their sexual health or sexual life and how they are doing, what if they have any problem.*
> ***NA:** But they [doctors] don't usually initiate the discussion?*
> ***S12:** No. They are scared of getting a negative reaction or them saying why are you asking me these questions?" or maybe they just don't have an interest in this topic, I mean there are two sides to this, or they are just scared of opening this topic with their patients."* **(S12, Female, Policymaker)**

> *"The healthcare provider would struggle trying to give them the diagnosis because they might feel offended, not all of them of course, but some of them they will feel offended. Because to them it's like you are accusing me of doing something wrong [extramarital sex] but that's not but you are telling them. For example, just a UTI can be caused by many different things. It doesn't have to be an STI from your spouse. But even the thought of bringing it up could cause you problems."* **(S5, Female, Health educator)**

Other than concerns over offending their patients, some healthcare providers feared having a complaint filed against them if they talked to them about sensitive issues

relating to SRH. This was revealed to be a recurrent theme among patients when they did not like what the doctor is telling them.

> *"Some people, they will feel offended, so it all depends on the person and their cultural beliefs. For me, I am doing my job offering medical advice, but how will she react to it? Would she be open to talking to me? This is where I struggle. So, some will listen to you and accept the medical advice and follow the instructions. And some won't, she sometimes won't even show up to her follow-up appointment because she doesn't want to see you again. They would even go as far as file a complaint against you. I cannot tell you how common that is. The simplest thing to do is just go and file an official complaint."* **(S5, Female, Health educator)**

PRACTICAL BARRIERS – TIME/WORKLOAD/SKILLS

Time and workload constraints were among the main reasons physicians used to justify their inability to offer SRH advice and information. Doctors acknowledged that sometimes they were to blame for not offering advice for women during consultations due to limited time assigned for each patient. Physicians, especially consultants, discussed the difficulty of providing patients with SRH advice within their busy clinic's schedules.

> *"Every word she says has a lot behind it so we have to explore so you can never understand the real issue behind the visit. From the first visit you will need a lot of time to make them comfortable and open. Clinic time is very tight, every patient has barely 10 to 15 minutes and it is impossible within those 10 minutes to explore their medical history. It would take up to an hour to understand the medical issue... you know this issue is very very sensitive, it is extremely delicate, it's very difficult to get all the necessary information from the first visit. For example, questions about intercourse, they need to trust you first before they can share details about their relationship..."* **(S3, Female, OBGYN)**

Lack of necessary knowledge and skills to provide SRH advice was also highlighted by some stakeholders. A physician who specializes in urogynaecology raised the concern of lack of skilled and qualified physicians in the field of gynaecology,

urology, and obstetrics in Saudi Arabia. There is a significant shortage of skilled doctors in this field. Reasons included lack of incentives and support for this field, and it being a very demanding and challenging specialty.

> *"**S11:** We lack support, we lack encouragement for this speciality. You will find most people who are in this speciality are forced to be in it. It is not a desirable field for many young doctors. For example, you will find 120 fresh graduates applying for paediatrics who only have 30 positions to fill. While obstetrics and gynaecology will have 20 available positions and only 5 or 6 will apply and they usually have the lowest academic grades in the kingdom, and of those who apply, half will quit after 1 or 2 years. So, the input is poor, and output is poor as well."* **(S11, Male, Urogynecologist)**

Stakeholders believed that health educators are the most suitable to provide women with SRH advice and counselling. They are believed to have more time to give to each patient, and possess the necessary skills to educate, counsel, promote or change health behaviours.

> *"Health educators have time to listen to their patients, answer their queries, and look at what each patient needs. They make sure they understand the advice given; they would even repeat the advice. And these qualities are necessary when offering health information."* **(P9, Female, Policymaker)**

HEALTHCARE PROVIDER'S GENDER

The gender of healthcare providers seemed to play an important role in facilitating SRH discussions. Stakeholders said that women usually prefer female physicians for gynaecological related consultations. The gender of healthcare providers was crucial in making patients more open and comfortable to discuss issues. Some male physicians also expressed feeling uncomfortable during consultations. They sometimes felt that it is not their place to offer advice or initiate discussions. Male physicians said that they often offer referring women to a female physician if they felt that women were not comfortable seeing them.

> *"**NA:** Does the gender of the physician matter to women?*

> ***S7:*** *Yes of course … My role as a male OBGYN is somehow sensitive. Patients are women, so discussing these topics is very difficult… that's why I tell my patients I know this topic is very sensitive, I might be someone you are not comfortable talking to, and a male and a stranger, so you can access female physician if you feel that you cannot talk to me or if you feel more comfortable seeing a female physician"* **(S7, Male, Policymaker + OBGYN)**

A policymaker said that they would never assign male health educators to cover women's health related counselling. The preference of a female healthcare provider meant that some women might even consider going to a private clinic to have the choice of a female healthcare provider.

> *"**NA:** Do you think women are comfortable talking to a male health educator?*
> ***S9:*** *We have to go back to the same point about our culture and traditions. We cannot talk about these things openly especially between male and females. They are not comfortable talking to each other about these issues whether it was a male doctor, male nurse, or male educator. It all makes a difference to us women. For example, I can't assign a male educator to cover women's health issues. Why? Because people would never accept receiving this kind of information from a man.*" **(S9, Female, Policymaker)**

Healthcare providers said that male patients are very comfortable and open to discuss any sexual issues or questions they have; it is only women who are believed to be shy discussing such matters. This could be because shyness and modesty are a quality that is only expected of women.

> *"Sometimes I cover cases that are not related to women's health, and I found that men are never shy or embarrassed to talk about their sexual health. They are comfortable asking questions that female patients would never even consider asking"* **(S5, Female, Health educator)**

LABELLING OF SRH SERVICES AND TERMINOLOGY USED

Since women's health services in Saudi are called pregnancy and delivery clinics, participants explained that the clinic's name often led people to relate it to pregnancy. Most women believe that those services are only required in case of

pregnancy. This was found to be true even for married women, where they believed they had to be pregnant to seek OBGYN services.

> "*I think the name of the clinic [pregnancy and delivery] gives the impression that you have to be pregnant to go to it. For me to access it I must be pregnant, right? Even when you go to the clinic, the first thing that they ask you is are you pregnant? I don't really have to be pregnant to go to this clinic! It's even worse for unmarried women who have SRH issues! Many of them don't go seek help because they have this perception that it's only for married pregnant women. They are not sure if the OBGYN physician can help them, because they are not pregnant!*" **(S13, Female, Psychologist)**

One participant explained that she had trouble going to her OBGYN and was extremely uncomfortable to the point that she contemplated using another entrance just because she did not want to be seen accessing the OBGYN clinic.

> "*If we could have services labelled as women's health services in general, and within we could have different areas of women's health like pregnancy, delivery and sexual reproductive health problems, right? When I go to an OBGYN clinic, the driver's smile makes me feel like he thinks I am pregnant! (Laugh) I genuinely would sometimes prefer using another entrance to avoid this awkward situation.*" **(S13, Female, Psychologist)**

GAP BETWEEN POLICYMAKERS, HEALTHCARE PROVIDERS AND THE PUBLIC

There were differing opinions among stakeholders regarding SRH services in the country. Although policymakers have listed many existing SRH programmes and services, the rest of the sample indicated a lack of suitable health services available for women. Highlighting the gap between policymakers and other healthcare providers. This gap is perceived to be due to lack of public awareness and proper advertising of existing services, or that available services do not respond to the public's SRH needs.

> *"**NA:** Are there any programmes focusing on women's SRH here in Saudi?*

S10: *Yes of course! Maybe they don't advertise for them as well as they should be, but we have many programmes established."* **(S10, Female, Policymaker)**

"It is true, we are lacking in SRH education because we don't have demand for it. Our job is to provide the service based on the demand. So, there must be high demand for the service before we can provide it. We never had demand for education in this area [SRH], we have never been asked to provide patient education in this area. The way our job works is there has to be an order for this service, and then we train the staff on that service based on the demand. But for this, we never had demand." **(S9, Female, Policymaker)**

Another existing gap between policymakers and healthcare providers was policymakers' perceptions regarding SRH issues women face, their levels of awareness, demand, and access to services. Policymakers' observations were merely based on people in their close social circle rather than formal assessment of the public.

*"**NA:** Do you think women use contraception with doctors' advice?*
S1: *The problem is there's a lot of medical doctors in my close social circle, so you don't have to physically go to the doctor's office just ask one of your close friends. So, my society is quite different from the rest of the community.*
NA: *So, in your opinion, what do you think?*
S1: *For example, my husband is a physician, so women do come to him for contraceptive advice."* **(S1, Female, Policymaker)**

The inability of some policymakers to relate to the community's views, their misrepresentation of existing issues and what they perceive the public needs was evident in some participants' responses. Policymakers attributed their unawareness of specific issues women face to not closely dealing with patients, instead building their perceptions on the experiences of people in their close social circle.

*"**NA:** Do you think there are specific SRH issues that Saudi women suffer from?*

S1: *I've never come across these things so maybe there is God only knows. I can't really tell you as we don't really have any kind of statistics or maybe because in my job, I don't work closely with patients so if I tell you my opinion it will be based on the community around me."* **(S1, Female, Policymaker)**

Healthcare providers and policymakers admitted that they are unaware of the magnitude of sexual health issues in Saudi Arabia. When asked about their opinions on how common sexual health issues are, healthcare providers highlighted the lack of reliable national data. They explained that their opinions are based on issues their patients encounter and the experiences of people around them. Lack of data sharing, and reporting was the main reason for stakeholders' unawareness of the extent of sexual health issues.

*"**S12:** We don't have a reliable statistic on how much we have. When I asked about the latest statistics about HIV here, I couldn't get a number or exactly how many cases of HIV positive patients we have in Saudi, so we need to teach them how to protect themselves. This is the most important thing. I once asked this question to the lead of the programme, and she said no we do. We do have them, but we can't publish them. So, I don't know why.*
NA: *She didn't give the reason?*
S12: *No, they just said not everything is for publication. She literally said not everything for publication. So they have it, but they don't publish it"* **(S12, Female, Policymaker)**

5.1.4. BARRIERS AND FACILITATORS TO CONTRACEPTIVE USE

Stakeholders identified several factors influencing women's contraceptive use. Factors included personal, social, cultural, religious, healthcare providers, healthcare services and health policy related factors.

PERSONAL BARRIERS

Personal barriers included lack of knowledge about contraception, misconceptions, fear of side effects, doubts about methods' effectiveness and safety. Healthcare providers said some women do not know that contraception existed, while other

women only know of OCPs or IUDs, and they usually lack knowledge on effective use and other available methods.

> *"**S11:** Women's contraceptive knowledge is not optimal. It's not enough, not sufficient.*
> ***NA:** What information do you think they are missing?*
> ***S11:** In general, the different methods. What options they have. How to use them properly, long-term effects and contraindications. There's a lot of misconceptions as well. For example, how the pill causes infertility, cancer, and obesity for example."* **(S11, Male, Urogynecologist)**

> *"There is an unmet need for contraceptives for women in Saudi Arabia. They don't know the options they have. They only know one or two options that their mom or sister or cousin or friend use, but they don't know what suits their bodies. We have a lot of cases where they can't use any hormones. They need to use different kinds of contraceptives. They know? With all honesty no. We have ignorance in contraception and the different methods available we have significant ignorance."* **(S12, Female, Policymaker)**

OCPs were believed to be the most commonly used method among women in Saudi. Reasons included ease of use, effectiveness, availability over the counter, affordability, being less invasive than other methods, and not requiring a clinical procedure. Another important factor contributing to OCP's popularity and wide-spread use was their familiarity, women have been using OCP for decades, their mothers and grandmothers have used it, which makes women more comfortable and confident in their use.

> *"There are many reasons why women prefer to use oral contraceptives. She already knows about it and knows what to expect. She knows that oral contraception is safe and 99% effective in preventing pregnancies and other available known methods required at clinical procedure, so this is easier to use.*" **(S10, Female, Policymaker)**

Healthcare providers said that many women believed that OCPs cause infertility. This belief is deep-rooted in their society and difficult to change. One stakeholder admitted that even though she is aware that there is no medical or scientific

evidence to support this misconception, she could still not use OCP fearing infertility.

> *"We have a lot of misconceptions in our society. I, myself, am one of those people who has misconceptions about contraception. The problem is when you are not taught the correct information from a young age, it's really hard to change or modify those deeply embedded misconceptions that you grew up with. I remember when I was a teenager, a cousin of mine had fertility issues and she said it was because she used oral contraceptives. So, I developed a fear of contraception. And when I got married, I didn't use any contraception, and I told my husband I will not use contraception before having at least one child. I am highly educated, and I know this is irrational..."* **(S13, Female, Psychologist)**

The issue with the lack of knowledge about emergency contraception was raised by some healthcare providers. Women are unaware that a contraceptive method could be used after unprotected sexual intercourse. This is an important issue as it could prevent a lot of unplanned pregnancies. And in case of a pregnancy from extramarital relations, it could possibly save the woman's life. One healthcare provider explained that some people believe that emergency contraception is a form of abortion, which is forbidden in Islam. He called for the need to educate people about EC and correct this misconception to facilitate their use.

> *"They don't know what EC is, and those who know, don't know where to get it! It is not even available in the market here. If a woman comes to me wanting it, I can't prescribe it, it's not available to begin with... And another thing, some people think emergency contraception is terminating a pregnancy instead of preventing it."* **(S7, Male, Policymaker + OBGYN)**

HEALTHCARE PROVIDER RELATED BARRIERS TO CONTRACEPTION USE

Healthcare providers said they would only provide advice only if the patient asked, or if they thought that another pregnancy could lead to serious consequences to a woman's health. One participant also mentioned that she would advise her patient to stop using contraception if she thinks she does not have many fertile years left.

“When she comes to them asking for information, they will give it to her. They won’t offer advice unless they were asked. The only exception is if she has a health problem where pregnancy could be harmful to her. Otherwise, she would have to ask.” **(S2, Female, Health educator)**

“*Sometimes women who are over a certain age. You would have to tell her maybe you should consider stopping contraception and get pregnant now because your chances of getting pregnant reduces with age. So, you don't only offer contraception advice, sometimes you might have to offer the opposite advice.”* **(S6, Female, Policymaker)**

Physicians would commonly prescribe OCPs without offering any advice on other available methods, effective use, contraindications, and possible side effects. This is believed to prevent women from seeking professional advice when wanting to use contraception as they are not receiving the help that they came for. However, some stakeholders said that women are starting to seek contraceptive advice from healthcare providers, especially younger generation women.

“The doctor will only prescribe the contraceptive, and sadly, she takes it without proper advice. They are not teaching her how to use it properly. They just give it to her and say take it once a day, they don’t tell her that she needs to take it at the same time every day, if she forgets what she should do, precautions or side effects, no one tells her anything. And that's why sadly many women take them on their own, without seeing a doctor” **(S9, Female, Policymaker)**

“There’s a noticeable improvement in women's contraceptive knowledge. Some of them come and ask me for contraceptive advice... There is education but we need more. I am noticing more effort from the doctors’ side, but we still need a lot more effort from them.” **(S7, Male, Policymaker + OBGYN)**

Many women rely on the experience of people in their close social circle when deciding to use contraception. Healthcare providers used this reason to justify why they do not usually provide women with advice on the other contraceptive methods available. One participant explained that women will never trust something new

healthcare providers introduce. Instead, women will usually use a contraceptive method that has been tried and tested by someone they know and trust.

> *"Most women don't want to try something new. So, if I try to explain other options, they wouldn't even consider it. Because her mother, aunts, and her cousins all used this method [OCP] so she will be on the safe side and stick to what she knows, because she doesn't want to try something new and then something goes wrong. So, I feel even if I try to explain new methods, they won't even consider it, they will go for what they are used to."* **(S2, Female, Health educator)**

FAMILY, COMMUNITY, AND SOCIETAL INFLUENCES

Family members, in-laws, and husbands put women under a lot of pressure to keep having children. Fertility choices are not usually viewed as private decisions that couples can take independently. Society views having children as the sole purpose of marriage and interfering with people's fertility choices (not just by close family members) was considered normal. These views were perceived to influence women's views regarding family planning or place unwanted pressure for women who have no desire in having more children.

> *"We as a community are very respectful. But when it comes to fertility and marriage, people think it's their right to ask you questions like are you married? Why aren't you married yet? How many children do you have? Why don't you have any children? This should be something private between the couple. Not to mention her mother, mother-in-law, relatives, sisters and then comparisons start. Look at your brother, he got married after you and he already have a kid…."* **(S3, Female, OBGYN)**

An OBGYN who specializes in infertility and IVF treatments provided an example that highlights how the societal expectations of high fertility influences women's views on how many children they should have, negatively impacting their mental and physical wellbeing.

> *"I once had a patient; I swear you would think she doesn't have any kids. You would think she is inflicted with the most severe of illnesses. She has four or*

five kids, as I recall. She was crying hysterically, because the last kid she had was five years ago and she didn't get pregnant after that. Tears were streaming down her face as if you opened a faucet. I asked her is this the same husband? she was like yes, the same but I didn't get pregnant after five years of trying. I asked do you have boys and girls? She said yes! So I told her what's the issue then I really don't get it?? But sadly, she didn't reach this point out of nowhere, it's because of all those external pressures on her. Asking her how are you not pregnant again? Why couldn't you get pregnant? You know what I mean?" **(S3, Female, OBGYN)**

RELIGIOUS INFLUENCES

Religious views regarding family planning seemed to have an influence on women's contraception use and fertility choices. Stakeholders had different views on whether family planning is forbidden in Islam and explained that women had conflicting views regarding its permittance as well. Muslims view children as a gift from God and limiting the number of children is considered a rejection of God's blessings. Many Muslims have the belief that even when finances are lacking, they should keep having children and not worry about providing for them, as God will provide them with necessary means to raise the child.

*"**S4:** It depends. I mean it's different but here usually the trend is that they want more children. They have no limit; they don't have a plan like for example we will stop after 3 or 4 … they just keep having children indefinitely … There is no limit. If they have 3 girls without a boy or two boys without a girl or even if two boys and two girls, they would still want more. They have no limit or plan on when to stop and how to stop ...*
***NA:** Why do you think that is?*
***S4:** Because they say it's a God's gift, children are a blessing from God. God will provide for each child."* **(S4, Female, OBGYN)**

Some healthcare providers mentioned that the influence of religion on fertility choices is marginalised in recent years and socio-cultural factors are considered the most dominant barrier to contraceptive use.

> *"You might find some people who won't use contraception because they believe it is forbidden, but from what I see they are a minority now. I still see patients who think it's forbidden but I think this idea is shrinking. I mean it is not the first barrier you would think about, I believe that culture plays a bigger role in contraception use. Religion is not an issue for most people unlike culture and society. Society is a greater barrier, much greater than religion actually."* **(S5, Female, Health educator)**

Healthcare providers and policymakers were hesitant to share their religious views about contraception. Highlighting an important issue, where even if people had more tolerant views regarding contraception use, it is difficult to share those views with others over fear of being judged as irreligious.

> *"I can't give you the Islamic ruling [on contraception], I am not qualified to give Fatwa [Islamic rule]. But the Quran says, 'His mother bears him with hardship, and she delivers him with hardship, and the period of his gestation and weaning is thirty months.' So, if you look at this verse, Islam actually calls for the use of family planning. So, I can't really give you a religious ruling on this, but in my humble opinion, it is not Haram [forbidden]."* **(S6, Female, Policymaker)**

Healthcare providers and policymakers highlighted that many aspects of the Islamic religion promote the use of contraception. Participants cited verses from the Quran and Sunnah explaining how God does not wish to burden Muslims, emphasising that the quality of children's life and mother's wellbeing, outweighs concern about quantity.

> *"Contraception isn't against our Islamic beliefs, to the contrary, our religion is agreeing with it, and even maybe encouraging it. Because our religion places a huge value on the mother's health and raising children properly. Our religion emphasises the concept of doing no harm to yourself or others. So we have the basic concepts that we should apply to the rest of our day to day life."* **(S3, Female, OBGYN)**

All religious scholars affirmed that contraception use for the purpose of limiting the number of children is forbidden in Islam and goes against Islamic values. They

emphasised that Islam encourage procreation within marriage, and fertility is highly praised. There are exemptions from this rule, for example if pregnancy puts women at risk for health consequences (e.g., multiple c-sections), limiting the number of children is permitted in that case. Religious scholars view family planning as increased birth intervals. They explained that spacing births is permitted for the purpose of making parents' lives easier. Spacing births was considered permitted for the purpose of providing a better life for the children, for women to have healthier bodies and minds, and for women to study or advance their careers. Religious scholars might be more comfortable with the term family planning because they equate it with spacing births, rather than limiting births.

> *"Spacing births is different from limiting. Family planning is permitted; it has been told that Prophet Mohammad's (PBUH) close companions practiced withdrawal, and he never advised against it. So we do not forbid family planning, our religion is against cutting off procreation indefinitely. For the person to say I will only have two children and that's it, it is Haram [forbidden], our prophet praised high fertility. If the person has limited means and cannot support his children, they can space births… If the woman cannot physically handle another pregnancy, or a pregnancy can cause her health problems, in that case limiting is permitted."* **(Religious scholar 3, Female)**

Religious scholars emphasised the importance of getting husband's approval for contraception use. Using contraception without husband's approval is a sin, and women must have husbands' permission before using contraception.

> *"Religiously, it is forbidden for a woman to use contraception without her husband's knowledge. Reproduction is a joint right between the two partners. Scholars also stipulated that a man should be honest about any reproductive problems he might have before marriage, if he has previous knowledge that he is infertile or has fertility issues it is forbidden for him to hide this from his future wife."* **(Religious scholar 2, Male)**

POLICY LEVEL BARRIERS AND FACILITATORS TO CONTRACEPTIVE USE

Stakeholders had conflicting opinions on whether contraception should be sold over the counter. Some stakeholders were strongly against it being over the counter, and voiced concerns over women accessing contraception without doctor's advice.

> "*The biggest problem is that it's available over the counter. Women use it without getting a proper consultation or medical advice, so this is another problem. It's supposed to be not sold over the counter; it should be prescription only. And this should apply to all contraceptive methods."* **(S12, Female, Policymaker)**

Others were concerned that if contraception were prescription only, many women would not be able to access it. Women who can seek medical advice would have to go back every few months to refill a prescription, which some stakeholders thought would deter or delay contraception use and could lead to unplanned pregnancies.

> *"It has to be easily accessible. Because if we complicate things and force women to go see a doctor every time, she needs contraception no one will take it. But we need to make sure women get proper advice before use whether from a doctor, pharmacist, nurse."* **(S3, Female, OBGYN)**

Some stakeholders explained that it would be useless to inform women about different types of contraception, other than OC and IUDs, as it is not provided by MoH. Women interested in using other methods would have to go private, as physicians would not be able to prescribe them in public hospitals.

> *"**S12:** It [EC] is only available in private clinics. A few weeks ago, I went to a reproductive health services workshop where they introduced the two-tablet emergency contraceptive. The pharmaceutical companies were advertising it to the doctors in the workshop but it's not available in the ministry of health; it's only available privately. The ministry of health sometimes doesn't even provide main, commonly used, methods."* **(S12, Female, Policymaker)**

Policymakers did not believe it was necessary to provide all contraceptive methods to women in public hospitals. For example, this policymaker explained that women

will only use what is familiar to them, and having different options was considered a *'luxury'* and *'trends'* beyond the purpose of family planning.

> *"Look you can't provide all different types of contraception. It's not about cost or availability, we must be realistic. You have the basic things, and you have things that are considered a luxury. So, the basics are the OC and IUD. We have to measure effectiveness, and familiarity, what women will most likely choose. So practicality is the Ministry of Health priority, so trends like the patches are costly so it is not efficient for the Ministry of Health to provide..."* **(S6, Female, Policymaker)**

Policy level barriers prevented women from using certain contraceptive methods. Stakeholders mentioned that existing guidelines require husbands' approval for surgical and permanent contraceptive procedures.

> *"After getting the husband's approval, if we feel the woman's life could be in danger, if she had too many caesarean sections, after the husband agrees of course. We could tie her tubes or remove the ovaries."* **(S6, Female, Policymaker)**

5.1.5. SEXUALLY TRANSMITTED INFECTIONS

PERCEPTIONS ON HOW COMMON STIS ARE IN SAUDI ARABIA

Stakeholders had differing opinions on how common STIs are, these opinions were highly influenced by job description, and whether they deal with patients on a regular basis. Policy makers believed that STIs were not an issue, however when asked if they had any figures, they said they do not have any data on STIs in the country.

> *"It exists, but I can't say it is very common, I would say rates are really low."* **(S1, Female, Policymaker)**

On the other hand, physicians and other stakeholders working closely with patients had different views on how common STIs are. Physicians who had experience working in the emergency department said that STIs are increasingly common, and they frequently encounter patients with an STI.

"Lately, I think yes based on what I'm seeing in clinics and what my colleagues working in the ER are telling me and the cases they see. I'm not even exaggerating, when I see my doctor friends, they tell me they have an STI case like every other week they see males or females with an STI. If I'm being honest with you, it's mostly men. And they have an STI that they ignored for too long and are now suffering from serious complications and they come for treatment. They tell them frankly that we had a sexual relationship and I think it's from that." **(S12, Female, Policymaker)**

Despite some stakeholders revealing that there is evidence of rise in STIs cases, they believed that it is unnecessary to educate women about STIs.

"*It is not really a big problem. We should be concentrating on more serious issues, it's good for them to be aware about it, but it is rare. Why should we open their eyes about something that is really rare?*" **(S4, Female, OBGYN)**

CAUSES OF STIS

Stakeholders' perceptions of how common STIs are in Saudi Arabia are often influenced by their views on causes of STI. Some stakeholders believe that STIs are not a significant issue in the country but are going to be a concern in the future. Recent societal openness, ease of travelling, and lack of religious morals were believed to be the most common causes of STIs.

"Openness and recent ease of travelling, I don't want to claim it's because of travelling and going abroad to study, is the cause, but it did create more of exposure, they travel more, they see more, so maybe, maybe, they will practice [extramarital sex]. So, we should talk about it more freely and we need to give them tips on how to protect themselves. Also, it has to be socially acceptable." **(S12, Female, Policymaker)**

"Yes it [STIs] exists. And anyone who denies that is ignorant. The world now is a small village an hour and you are in Dubai, two hours you are in Egypt so STIs exist. Of course, no society is perfect, there will be people who commit forbidden relations and from that STIs spread. So it does exist." **(S7, Male, Policymaker + OBGYN)**

Religious scholars, and some stakeholders, believed that the only cause of STIs are forbidden relationships that are the result of excessive openness and gender-desegregation in the workplace and public places.

> *"**NA:** How can we prevent STIs?*
> ***RS1:** By preventing the source. Such as Khalwa [seclusion with the opposite gender] and free interactions and mixing between genders"* **(Religious scholar 1, Male)**

> *"**NA:** Do you think STIs are an issue here in Saudi?*
> ***S11:** I believe so, and I think it is on the rise.*
> ***NA:** Why?*
> ***S11:** Because of increased openness, uncontained openness. And they don't have any experience, girls and boys can meet easily now and they don't have the background on possible issues, how things are transmitted. So it is increasing rapidly."* **(S11, Male, Urogynecologist)**

One stakeholder believed that unregulated sources of sexual health information on the Internet could encourage premarital sexual experiences and consequently lead to STIs.

> *"**S11:** The Internet has its positives and negatives.*
> ***NA:** What are they?*
> ***S11:** In the area of sexual health, it revealed that we have people who speak scientifically in that area, in a purely medical manner, without judgement and without old, traditional societal views. And at the same time, maybe it could be negative when you are not cautious and there is openness without understanding, which could lead to bad sexual experiences which have a direct relation with STIs."* **(S11, Male, Urogynecologist)**

A policymaker believed that sexual transmission was not the most common cause of STIs in the country. Instead, she believed that blood transfusion and sharing needles are the most common modes of transmission. These opinions are reflective of the belief that extramarital relations do not exist in Muslim communities.

> "***NA:** Why do you say STIs rates are low here?*

S1: *Because of the way it is transmitted here, most infections are from needles or blood transfusions. And infection control in hospitals and clinics is of the best standards, so the possibility of it happening is low. Sexual transmission would depend on the religiosity of that person who commits wrong actions and his awareness. Finally, we have drug use; I would say sharing needles is the number one cause of STIs transmission. So that is probably the reason why STIs exist here, and yet, I think it is still very low."* **(S1, Female, Policymaker)**

MEN AS THE SOURCE OF STIS

Men were viewed as the source of most STIs, and physicians confirmed that most infections among women were transmitted from their husbands. Stakeholders used the term *'travelling'* to refer to extramarital activities by men who travel to countries where sex outside of marriage is easier, permitted by religion, and legal.

"It's basically the activities by men that go outside and travel and do, you know… you know … relationships that are illegal. Probably this will bring in the infection and spread." **(S4, Female, OBGYN)**

Stakeholders revealed an important issue where men with HIV deliberately hide their diagnosis from their wives, even if they were diagnosed before marriage. Women are usually unaware that they are HIV positive until their first pregnancy.

"Yes, especially HIV. We had HIV cases that came when it's her first pregnancy and had routine pregnancy screening and discovered she had HIV. So they broke the news to her and she had a breakdown and said that's impossible how can I get it, and then we discovered that her husband is HIV positive and he knows he is HIV positive and taking medication and got married knowing he had it and did not tell her he is HIV positive. I recently had 3 or 4 cases, all primigravida and discovered they have HIV during pregnancy all from their husbands' and their husbands knew they were positive and did not tell them until the tests came back with the wife being HIV positive. So it's really bad." **(S12, Female, Policymaker)**

There is a general unspoken acceptance for men to have premarital sexual relations. It is considered a part of men's nature to have sexual experiences before marriage, as *'men have needs'*. Stakeholders were concerned over some women's naivety assuming that men never engage in extramarital relations and trusting that men would adhere to religious rules forbidding extramarital sex. This *'blind trust'* that women have could affect their perceived susceptibility to STIs and their uptake of preventative or diagnostic measures.

> *"**S3:** The wives are so simple minded; they don't have enough awareness to understand the severity of the situation. So, she would have an STI, and she is not taking it seriously. They have this trust, no I won't call it trust, it's blind trust... They think what if he did have premarital sex, he is young and a man with needs just like any man. It is like well-accepted, or something that is allowed only for men.*
> ***NA:** And do you think this acceptance is only for men?*
> ***S3:** It is the women who are accepting that men can do this*
> ***NA:** And the same acceptance wouldn't apply to women?*
> ***S3:** No of course, surely not, totally no. It shouldn't be acceptable for both, but what can you do."* **(S3, Female, OBGYN)**

Stakeholders mentioned that women infected from their spouse seemed to be accepting that men are the source of infection. Fearing divorce, not understanding STIs modes of transmission, denial of husbands' extramarital sex, accepting that *'men have needs'*, and accepting God's fate were among the many reasons women are accepting that men are the source of infection.

> *"**NA:** How do women react when they know they got an STI from the husband?*
> ***S13:** Most of them, they just deal with it. I think faith has to do with their acceptance as well. That she is accepting of God's fate. I didn't know he was unfaithful, and I'm already married, I'm not getting a divorce… So they learn to deal with it."* **(S13, Female, Psychologist)**

Women with an STI from their spouse were believed to be more forgiving of their husband's infidelity. Some women even refused to believe that their STI was caused

by their husband and instead blame themselves for getting the infection. Stakeholders explained that if the situation was reversed, men would never accept the idea that their wife might have had extramarital relations.

> *"A man with an STI would never even accept the idea that his wife might have extramarital relations. Even though he did, he had an STI from it."* **(S3, Female, OBGYN)**

STI PREVENTION

Most stakeholders agreed that the first step in STIs prevention is raising awareness. Awareness was not viewed as encouraging premarital sex. Instead, a way to prevent the spread of STIs, and a tool to enable women not to accept being powerless in the marriage.

> *"I don't think there's anything wrong with telling them how to protect themselves, we are not encouraging them to have extramarital sex, but at least they need to know how to protect themselves. Otherwise, it will spread and until now we don't have like reliable statistic on how much we have."* **(S12, Female, Policymaker)**

> *"We need to educate women [about STIs] so they can be strong enough to face their husbands if something [getting infected from spouse] like this happens. Hopefully in the near future."* **(S8, Female, OBGYN)**

Religion was formerly believed to be a governing influence on health behaviours. It was believed that religiosity acted as a barrier to extramarital sex and thus protected against STIs. However, in recent years, religion was believed to be not as significant of a deterrent to extramarital sex. Raising awareness on ways of prevention is an essential step to prevent the spread of STIs, as assuming abstinence is unrealistic.

> *"Before, it used to be this was forbidden and you shouldn't do it and that was enough... And if I tell you anything it means that I am telling you it is Halal [permissible]. So we need to indirectly deliver the information like for example there is a vaccine to protect against cervical cancer or say that condoms protect from STIs so you are not actually telling them to do it but if you are*

planning on doing it this is what you need to know" **(S11, Male, Urogynecologist)**

Religious scholars emphasised that abstinence is the only way to prevent STIs. They also suggested preventing anything that could lead to forbidden relations, as it was believed to be the cause of STIs. This included banning *'gender-desegregation'*, encouraging marriage for youth, using fear appeal, and exaggerating the severity of STIs. Religious scholars also mentioned that no information on prevention (i.e., condom use) should be provided, as this was viewed as permitting and encouraging extramarital sex.

> *"**RS3:** Prophet Mohammad said: 'Whoever among you can afford it, let him get married, for it is more effective in lowering the gaze and guarding chastity.' That's why we need to make it easier for this generation to get married, because nowadays, the temptations are everywhere, for both boys and girls. And what we see now from genders desegregation, it makes people bolder and makes having relationships easier which in turn leads to problems.*
> ***NA:** What is your opinion on providing education on these things [STIs] to prevent the spread of infections, like for example educating them about condom use as a preventative measure?*
> ***RS3:** No, we cannot teach people about condoms. Teaching should focus on using fear appeal. Religious fear, teaching them about the consequences of those forbidden actions. So we cannot give them information on protection. It's like we are telling them go do it but be careful. We have to scare them with religious and medical consequences."* **(Religious scholar 3, Female)**

DISCLOSING AN STI DIAGNOSIS TO PATIENTS

Physicians expressed difficulty disclosing an STI diagnosis to their patients. The difficulty is much deeper than disclosing a diagnosis, it is also about informing the woman that her husband might be having extramarital affairs. Physicians also said asking women about having multiple partners would be extremely offensive and inappropriate. Other issues included fearing verbal or physical harm from the husband if they explained to the woman probable causes of infection.

*"**NA:** Would you tell the woman that the infection could be sexually transmitted from her partner?*
***S7:** No of course not I can't say that. My job is to tell her possible modes of transmission and that's it. For example, we could have an HIV patient who got it from a needle, blood transfusion, organ transplant so I can't accuse anyone of doing anything without having the whole picture."* **(S7, Male, Policymaker + OBGYN)**

Most physicians admitted that they would never tell women that their STI could be from their spouse. They would simply explain the infection and modes of transmission, letting the wife *'try to figure it out on her own'*. Doctors explained that they do not share this information with women because they do not want to be involved in any trouble. Telling women that it might be from her spouse would usually result in conflict with the patient's spouse.

"We once had a husband who came with his wife. When we told the wife, he made a huge scene and started screaming at us, we had to call security. His wife was completely silent throughout the whole thing she did not say a single word. And you know what? She might be even thinking, how dare you accuse him of such a thing. She was totally silent, did not react, did not scream... He was HIV positive, and his behaviour was very scary... He said you have no right to say this, I will be filing a complaint against you. And another man came with his wife, he left saying how dare you say that about me. And then came for the second visit alone. And told us: please do not tell my wife, I don't want her to know. And we never saw his wife again, she disappeared from the clinic completely." **(S3, Female, OBGYN)**

Physicians mentioned that women would often disappear after their diagnosis and never follow up with them again, particularly if women were encouraged to share their diagnosis with their spouse.

*"**S3:** Most women have never had sexual intercourse before marriage. So it's either the husband has had extramarital relations or he has another wife... What usually happens after we share the diagnosis; we never see her again. Maybe they want to look for a place where they can have more secrecy*
***NA:** Secrecy in what way?*

S3: *That his wife can never find out. He doesn't want anyone to tell his wife."*
(S3, Female, OBGYN)

One physician even said that there is no point in telling the woman that she might have the infection from her spouse or explain methods of prevention as *'the damage is already done'*. She believed that it would be pointless to tell her now, as it would possibly ruin her marriage. Informing women about the possible cause of infection is not viewed as part of the physician's role.

"It would cause marital problems [to tell the woman it was her husband who transmitted the infection], I mean you have to weigh the benefits over the risks many gynaecologists have tended to discuss these issues and then they said it is up to him to tell her it is not our role to tell her. He did something bad and that is what has led to these consequences. They don't usually tell them; the husbands don't tell their wives about their previous promiscuous activities."
(S4, Female, OBGYN)

Some physicians also justified not sharing the fact the STIs might be from her spouse because they cannot know for certain how she got the infection, as she might have got the infection from another unknown source.

S11: *It would be extremely difficult. You can't ask her if she has another partner. It's difficult. And if you tell her it comes from an infected partner, she will say but I only have my husband. she would say ok this means that my husband is travelling alone and is doing things and he brought this to me, and this would open a can of worms.*
NA: *What do you usually say to women who are infected?*
S11: *I usually just talk about treatment. I say a very general sentence about modes of transmission and then change the subject to treatment plan.*
NA: *Would you be able to tell her that the infection could be from her husband?*
S11: *I try to avoid going into this topic. I try very hard to avoid telling her how she might have got it. If she asks, I will just tell her it comes from sexual intercourse. She would ask does this mean it is from my husband? and I would say I don't know If it is from your husband or from something else, I am*

just telling you it comes from sexual intercourse that's all I can say." **(S11, Male, Urogynecologist)**

5.1.6. Developing and implementing Sexual and reproductive health education in Saudi Arabia

Perceived acceptability of SRH education

Stakeholders emphasised the importance of teaching youth about their SRH and explained that it is crucial to start education at schools. However, they believed that it would be easier to gain community's approval for the proposed SRH educational programme by starting with couples about to get married. Linking it with the Eib culture, and how it is more acceptable for women to be discussing and learning SRH topics as marriage is on the horizon. This would be the first step to introducing SRH education to the wider community by gradually implementing the programme to a more appropriate segment of the population. Offering the programme, initially, to couples soon to be married is viewed as being culturally and religiously appropriate and therefore minimising any anticipated backlash.

"I think it is a brilliant idea to start with premarital education. I believe it will be much easier to start with that because starting with education in schools would be very challenging and it will take a very long time to gain community's approval. So starting gradually by introducing premarital counselling it will be very easily accepted. It can actually be implemented immediately because people will already be coming to you for the premarital screening, so it should've already been a part of the premarital screening." **(S5, Female, Health educator)**

Religious scholars emphasised that it is not against Islamic beliefs to provide SRH education. Religious scholars noted that Islam promotes prevention and preserving individual's wellbeing. Muslims who preserve their health are viewed as good and strong Muslims. Therefore, SRH education is consistent with the belief that the benefit of all, health and otherwise, overrides any expected challenges.

"Islam urges knowledge of anything that brings benefit to the individual and the group. Knowledge is the guidance of all believers. So Islam urges

acquiring and spreading knowledge of all things beneficial." **(Religious scholar 1, Male)**

"People always tend to link everything with religion, but as religious view, if you ask any sane person with common sense, even a religious leader, but a sane one, they will tell you that SRH education is essential, every girl should understand that this area [genital area] is forbidden to anyone except your husband, so that if anyone tries to sexually assault her, she's not an idiot and doesn't know what is happening." **(S7, Male, Policymaker + OBGYN)**

Stakeholders, however, anticipated some initial resistance to the programme by some people in the community. This resistance is expected, as many people are unwilling to accept new changes on a community level, regardless of whether this change is beneficial. Some stakeholders used women's driving as an example of community's resistance to positive changes, referring to how some people were completely against it, including women.

"If you want to introduce something new this is the time to do it. I will give you the example of women's driving. People said it is Haram. This violates women's purity and modesty, and you know that kind of talk. But once it happened life was rosy and now women have the freedom to drive and come and go as they please and nothing happened to their purity. And you have many more examples that happened in the past so it is expected that the community will be against anything new, but we need to raise awareness." **(S7, Male, Policymaker + OBGYN)**

Many stakeholders referred to the recent societal openness as possibly changing the way SRH are dealt with in Saudi. Recent societal openness meant that people are exposed to different cultures and ideas; therefore, more accepting of community-level changes in general. It could facilitate the introduction of SRH education, as people will be more open and accepting of these topics.

*"**S10:** In the last few years, people are moving towards being more open-minded and accepting. And people are starting to be educated about these [SRH] topics. Especially with the younger generations. So the situation is much better than what it used to be years ago.*

NA: *What do you think has changed?*
S10: *The level of education is higher in the community. They have been introduced to different cultures and that makes them more accepting. I believe that offering scholarships to people to study abroad has helped young people become more open-minded and have civilized conversations in this area. So elevated levels of awareness and education, openness to different cultures and social media all helped our society to be more open-minded and accepting of new changes."* **(S10, Female, Policymaker)**

Stakeholders emphasised the importance of having a culturally appropriate label to the proposed SRH educational programme and this was believed to encourage its use. Cultural appropriateness was mostly discussed in the context of removing the term sexual from SRH education to facilitate their use and encourage community's acceptance.

*"**NA:** Do you think we would reach a point where we could call a programme sexual and reproductive health education?*
S1: *It's not about reaching that point. I feel like the ministry of health feels there is resistance to present these things. They see it as sensitive topics, and they are afraid of the backlash they would get so they try to be on the safe side and avoid it. So no, it's not that people working there are backwards and close-minded. They are just trying to err on the side of caution."* **(S1, Female, Policymaker)**

The term sexual health would cause a lot of resistance and unnecessary backlash, especially among people who are conservative. A particularly important point raised by some participants is that people who are accepting of the term sexual health are people who are already open, aware, and most likely talking to their children about SRH topics. The reason behind avoiding the term *'sexual'* is so that people who are more conservative and less likely to allow their children to discuss or access SRH services and education would be accepting of the programme. It was believed that SRH education was most crucial for this segment of society, more than any other.

"The noise around it [Sex education] would most likely be negative, I don't think there will be a lot of acceptance. Some people might be shy to use it just because of the name. Maybe I have a negative perception of the community

or gave you the impression that most people are close-minded and ignorant. But no, I admit that this is not the only part of society, and people who are open-minded and willing to discuss this with their children exist. They don't wait for school to teach them, they take initiative. They teach their kids, discuss this with their wives and their daughters. But we want to reach the other half of society, the half who are ignorant and are unable to seek medical care for whatever reason. Was it because of barriers to this specific hospital? Was it shyness? Or cultural beliefs? So you have to reach everyone, the part of society who are open and already aware, and the people who are close-minded and unaware; those are the people who need it the most." **(S5, Female, Health educator)**

Most expected challenges were related to initial resistance and technical difficulties. Stakeholders mentioned challenges including the availability of skilled staff providing the counselling sessions, the availability of resources to train staff, challenges related to the content of education (i.e., what to include), lack of suitable venues to conduct the sessions, how and when the counselling should be provided, and finally whether people will attend the counselling sessions. Stakeholders provided suggestions on how to overcome these challenges, for example, offering online counselling services and conducting counselling sessions immediately after the premarital screening. Mandating premarital counselling at first until people are familiar with the programme and what to expect from the premarital counselling was suggested to ensure attendance and success of the programme.

"You will have varying degrees of acceptance, but if you have policies mandating couples to attend one session with the screening, at least help people understand if they are genetically compatible. It will help with acceptance. We need to enforce strict policies." **(S10, Female, Policymaker)**

"I anticipate some technical difficulties, like finding health educators, developing content, training them, if you are doing one to one session you might have issues with time, other than that I don't see any other challenges." **(S1, Female, Policymaker)**

CONTENT OF SRH EDUCATION

Stakeholders provided suggestions on topics to be covered in the proposed SRH educational programme. Some stakeholders provided key areas to be covered specifically in the premarital counselling, while others provided suggestions for educational content to be offered at schools. Stakeholders expressed the need for younger generations to be educated about physical maturation, recognizing, and understanding signs of puberty, menstruation, expected changes in reproductive anatomy, and most importantly, recognizing the signs of sexual abuse and the differences between appropriate and inappropriate touching.

> *"We need to educate young people about sexual abuse, what is considered abuse, and how to avoid that. This should be taught at elementary level. And then when they get a bit older you can educate them about menstrual cycles, what does it mean, what are the signs of puberty, how reproductive organs would change, because at home, parents can be too embarrassed to tell their children that. So if it could be taught at schools that would be best."* **(S7, Male, Policymaker + OBGYN)**

Stakeholders suggested that premarital counselling should focus on the following areas: sexual relationship, STIs, contraception, preconception, conception, and prenatal health. Educating couples about sexual intercourse, sexual pleasure, sexual dysfunction, what is expected from sexual partners, communicating, and managing sexual expectations was expressed to be crucial to having a healthy marital and sexual relationship.

> *"Teach women signs of UTIs or STIs, if you have itchiness or redness what does it mean? If you see this on your husband, what does it mean? And then we have to teach them what sex is; how to have a pleasurable sexual experience, let's be honest the different positions ... that shouldn't be Eib. they need to know."* **(S13, Female, Psychologist)**

> *"I think premarital education is an excellent idea. You could add topics like the details of sexual relationships, when to seek help, what is expected from the sexual partner, things that are directly related to the sexual relationship itself. So, we start with teaching the basics at school, and then we go into deep*

topics before marriage. So, when they reach that point [premarital education], they already know the ABCs of SRH." **(S7, Male, Policymaker + OBGYN**

Some stakeholders emphasised the importance of educating women about STIs, as women are most vulnerable to unknowingly becoming infected from their spouse. Education about STIs should include the different types of infections, signs, and symptoms of different STI, when to seek help, methods of prevention and available treatments. Stakeholders identify the importance of providing education on STIs prevention in a way that would not be considered immodest or promoting extramarital sexual relations.

"So that when you go through sensitive topics like for example STIs and diseases that are transmitted through sexual intercourse in an acceptable manner. You can't just say if you want to go and have sex try to protect yourself, no, you need to present it by saying these diseases exist, and that's how it could be transmitted. You cannot present it in a way that could be harming modesty and like we are promoting that they go and experience or do it. No. It's more to how to protect themselves rather than use this to protect yourself. You know? So by this way HIV should be the same way, we should have clinics or even to go and just you know? Test yourself if you feel or have any doubt that I might have HIV." **(S12, Female, Policymaker)**

Stakeholders suggested including prenatal care to the premarital counselling. Providing women with education on healthy conception, the importance of taking folic acid supplements prior to conception. Educate women on supplements to take during pregnancy and avoid risk behaviours (i.e., smoking), in order to have a healthy pregnancy and prevent complications for both the mother and the baby. Finally, raise awareness about different contraceptive methods, side effects of each method, contraindications and how to use contraception to space births and plan pregnancies.

"Education should include STIs, contraception, preconception and conception. If she gets pregnant or plans to, what she needs to take before pregnancy like folic acid for example and what she needs to stop, what tests to do after getting pregnant." **(S2, Female, Health educator)**

Religious scholars highlighted the importance of framing the educational content within Islamic religious principles. Since Islam places a huge emphasis on preserving people's health and disease prevention, having a religiously sensitive content is predicted to improve the programme's acceptance and success.

> *"It is very important to link medical knowledge with Islamic knowledge. Islamic knowledge does not mean that you do not educate people about sensitive yet important subjects such as the marital relationship between the husband and wife, the different diseases, and ways of prevention. Our religion is so encompassing that these topics were discussed in the time of our prophet peace be upon him…"* **(Religious scholar 2, Male)**

IMPORTANCE OF EDUCATION FOR MEN

Stakeholders emphasised the importance of including men in premarital education, as men play a major role in women's sexual and reproductive wellbeing. Men are often viewed as the source of STIs infection among women, they are also more likely to engage in extramarital sexual relationships. As such, it is essential to educate men about STIs and ways of protection in order to prevent the spread of STIs. A female physician suggested that STIs education should only be offered to men, while focusing on contraception and reproductive health topics for women.

> *"**NA:** Why is it better to provide education to both genders separately?*
> ***S4:** Why it is better, because the things that might interest her, are not the same things that might interest him. With men we would focus more on condoms, a prevention in sexual intercourse, not to encounter any sexual activities that are beyond the marital level. But for her we will focus on contraception, things that are related to women more."* **(S4, Female, OBGYN)**

Educating men about contraception was viewed as an important tool in facilitating women's contraception uptake and use. Husband's disapproval of women's contraception use was mainly due to misconceptions about side effects of modern contraception, and lack of knowledge about the impact of frequent pregnancies on women's mental and physical wellbeing. Raising men's awareness about contraception was believed to improve men's engagement in family planning and encourage sharing the responsibility for preventing pregnancies.

*"**NA:** Why is it important for men to be educated?*
***S2:** So, he knows modes of transmission, and understands what to do so he doesn't transmit the infection to his wife in case he was infected with an STI. Also, contraception, when men understand how they work, and the different methods available. Because many men do not allow their wives to use contraception because of misconceptions they have. And the poor woman is the one affected because she keeps getting pregnant. So, if we teach them about contraception, it could facilitate contraception use for women."* **(S2, Female, Health educator)**

CHAPTER SIX - DISCUSSION

CHAPTER OVERVIEW

In this chapter, I summarise the main findings of my thesis, provide a critical discussion of my findings in relation to existing literature and describe the overall strengths and limitations of my thesis.

6.1. SUMMARY OF MAIN FINDINGS

My research revealed that there are multiple levels of factors that influence Muslim women's sexual and reproductive wellbeing. Poor SRH knowledge and practices among Muslim women is a complex matter that is affected by personal, community, cultural, religious factors and national policies and regulations. All these factors overlap and are affected by one another. Many similarities were observed among Muslim women from different countries, both Muslim and non-Muslim countries, highlighting the important influence of socio-cultural and religious factors on SRH beliefs, practices, and experiences.

SRH KNOWLEDGE

Barriers to SRH knowledge and information include personal perceptions of knowledge needs, intentional ignorance that is linked with notions of purity, modesty, and positive SRH experiences. However, as observed in my results, the profound lack of SRH knowledge among Saudi women contributed greatly to negative experiences both in childhood and adulthood. Women described shame, fear and confusion about puberty, menstruation, and sex. Lack of knowledge about sexual intercourse, in addition to negative views towards sex and sexuality that are deeply embedded in many Muslim cultures had a negative impact on women's physical and emotional wellbeing. Stakeholders confirmed that Saudi women's SRH knowledge is lacking in many different areas including puberty, menstruation, basic human anatomy, reproduction, contraception, pregnancy, childbirth, and STIs.

BARRIERS TO SRH INFORMATION AND HEALTHCARE SERVICES

Schools have contributed to lack of awareness; it was revealed that teachers often avoided sexual and reproductive subjects and refused to answer any SRH-related questions.

Unmarried women's access to sexual and reproductive information and healthcare services was often restricted or controlled by their family. Being unmarried poses a significant barrier to Muslim women's access to SRH information and services. Marital status might hinder women from accessing required healthcare services, which could influence women's sexual and reproductive wellbeing.

Healthcare providers' judgement and mistreatment act as a barrier to seeking SRH healthcare services and medical advice. For married women, healthcare providers exhibited judgement towards women's lack of SRH knowledge and lack of control over reproductive choices. For unmarried women, socio-cultural and religious views towards premarital sexual relations influenced healthcare providers' attitudes and perceptions towards unmarried women's need for SRH services.

Several barriers to doctor-patient sexual health communication and discussions were identified. From the healthcare providers' perspective, fear of offending patients and fear of negative reactions are the most significant barriers, followed by discomfort with the topic, perceived patient's discomfort disclosing sexual information, lack of clear communication from patients, perceived sense of responsibility, lack of time, gender of healthcare providers and the presence of a family member during health consultations. For many women, shyness and modesty prevented them from asking healthcare providers sexual health-related questions and seeking sexual or reproductive medical care when needed.

BARRIERS AND FACILITATORS TO CONTRACEPTION AND FAMILY PLANNING

Access and use of contraception were influenced by women's lack of knowledge and misconceptions, desire for more children, and fear of negative side effects. However, family, community, socio-cultural and religious factors had a more significant role on Muslim women's contraceptive use than personal factors. Many Muslim women lacked reproductive autonomy, and husbands were believed to be the primary

decision makers on fertility.

Family control and community pressures acted as a significant barrier to women's reproductive choice. However, qualitative findings revealed that many Saudi women exhibited control over their fertility choices and believed they had the right to decide when, and how many children they have. My qualitative research revealed an important finding, where education played a fundamental role in reproductive autonomy. This explains the results in my systematic review, where education was found to be a statistically significant predictor of contraceptive use, therefore reproductive autonomy.

I found conflicting results on the influence of religion on family planning. In my review, the majority of Muslim women agreed on the permittance of family planning only for the purposes of birth spacing and believed it is forbidden for limiting the number of children. However, Saudi women in my qualitative findings believed that it is not against Islamic religious beliefs to limit the number of children in order to have a better quality of life, and improve their, and their children's, overall wellbeing. Religious scholars in Saudi Arabia affirmed that family planning is only permitted for spacing births.

VIEWS TOWARDS STIS

Muslim women held extreme negative views towards individuals with an STI. These negative views were influenced by lack of knowledge, in addition to cultural and religious views towards extra-marital relations. Consistent with my review findings, Saudi women exhibited poor knowledge of STIs, worrying misconceptions and extreme negative views towards individuals with an STI. People living with HIV were viewed as *'bad, bad, bad, bad people'* who are being punished for their immoral behaviour.

A specific vulnerability to STIs among Saudi women was expressed by almost all research participants, and husbands were believed to be the main route of STIs transmission. This was confirmed by stakeholders working closely with patients, where they believed that most infections among women were from their spouse.

Barriers to STIs testing and diagnosis included personal, socio-cultural, religious, and institutional barriers including lack of knowledge, misconceptions, fear of test

results, denial, low risk perception, and fear of being stigmatised and ostracised from society. Healthcare providers' judgement and breaches of patient confidentiality is an important barrier to early testing and diagnosis.

VIEWS TOWARDS SRH EDUCATION

All research participants had extremely positive attitudes towards introducing SRH education in Saudi Arabia. Although educating youth was viewed as a priority, participants agreed that starting with education for couples getting married as a premarital preparatory course would aid the introduction of SRH education to younger age groups and improve the community's acceptance. The premarital preparatory course is suggested by research participants to focus on a variety of topics including sexual intercourse, sexual satisfaction, reproduction, STIs, contraception and family planning, communication between partners and conflict resolution. Participants said that for the programme to reach its full potential and benefit the Saudi public, it is essential for men to be included in the premarital educational programme.

There were variations in women's preferences for mode of delivery of the premarital educational programme. Some women preferred one-to-one sessions, while others preferred group sessions. However, almost all agreed that education should be provided for each gender separately. Health educators were believed to be the most suitable and most qualified agents to deliver SRH education. The gender of health educators would play an important role in uptake among women. They expressed embarrassment and shyness asking a male health educator about sex and reproduction. It was also believed that men are more judgemental, dismissive, less likely to pay attention to details, and more likely to rush through a session, whereas women are more willing to listen, more accepting, and overall easier to talk to.

In terms of appropriate agencies to design and deliver SRH education, the sponsoring of SRH educational programmes by governmental agencies was believed to be essential for the programme's acceptability and success. Cultural and religious sensitivity in designing any sexual health-related programme was highlighted in my research. The involvement of religious leaders in formulating curriculums can be valuable. However, differences in viewpoints on what messages

should be presented (moral messages vs. scientific information) were observed. Although all research participants, excluding religious scholars, agreed on the importance of a harm reduction approach, religious scholars were against any approach that promoted anything other than abstinence.

Designing and implementing SRH education in Saudi Arabia would be challenging but not impossible. My research provides insight into the public's perceptions towards introducing SRH education in the country. All women and stakeholders showed acceptance and eagerness towards having a formal SRH education, even for school children. Some resistance is expected from conservative individuals in the community. However, it was believed that this segment of the population is the most vulnerable and in need of education, and strategies to ensure cultural appropriateness to improve acceptance are necessary. Combining religious teachings with SRH education is likely to be strongly accepted even among the most conservative groups. Designing a culturally and religiously sensitive programme is crucial, especially since Islamic values and beliefs dictate all aspects of many Muslims life.

6.2. DISCUSSION

6.2.1. ACCESS TO SRH INFORMATION AND HEALTHCARE SERVICES

Saudi women's access to sexual and reproductive information and healthcare services is a complex matter that is affected by a wide range of factors from personal perceptions of sexual and reproductive knowledge to external factors including family, socio-cultural, religious, and institutional factors. The profound lack of SRH knowledge among Saudi women contributes greatly to negative experiences both in childhood and adulthood.

THE ROLE OF MOTHERS IN SRH AWARENESS

Many women in my research expressed feelings of resentment towards their mothers due to lack of open SRH discussions in childhood. In most cultures, mothers are the first source of SRH information for girls (193-195). Mothers have a very important role in transmitting information and moulding health behaviours (193-195). Mothers' attitudes towards SRH education affects their daughters' access to

information and education (135, 137, 196). My findings revealed that Saudi mothers had a very limited role in educating and informing girls about SRH. Barriers to mother-daughter discussions include mothers' lack of knowledge, social taboos, embarrassment, and mothers' negative attitudes towards SRH discussions (196-199). Poor mother-daughter communication and relationships act as a barrier to girls' access to accurate information (198). Mothers may delay discussions about sexual maturation and sex fearing that their daughters are too young to know (199). It is also believed that sexual health discussions would make girls more curious or tempt them to engage in risky sexual behaviours (193, 199). Public health initiatives are needed to improve parents' SRH knowledge and raise their awareness about the importance of timely and proper SRH discussions with their children.

Mothers may want their daughters to learn about SRH but feel that they have inadequate information to give them, or find it embarrassing to discuss such matters with their daughters (196). Some girls may be too shy to tell their mothers that they had their period, they were also unable to ask their mothers any questions or seek support (118, 199). Many girls do not ask their mothers sexual health questions fearing negative reactions or serious repercussions (196, 199-201). Being raised in an environment where sexual maturity is viewed positively, giving girls a safe space to ask questions and seek information, and parents establishing a good relationship with their children was linked with girls being more confident to ask for information and seek support (193-195).

FAMILY AND COMMUNITY INFLUENCES ON SRH

Strong family ties and patriarchal structures are common in many Muslim communities. Patriarchal cultures where male family members and husbands are the primary decision-makers, even when it comes to women's healthcare needs, negatively impacts women's sexual and reproductive wellbeing (130, 202). Patriarchy influences women's autonomy and restricts their access to required and essential information and services **(Chapter 2)**. Family control over unmarried Muslim women of all ages means that they are unable to access healthcare services when needed **(Chapter 2)**. Unmarried women's reproductive health concerns are often dismissed, and in some cases, they are prevented from seeking medical care when required.

Social constructions of disease aetiology and the impact of specific tests or interventions can inhibit unmarried women from seeking healthcare services (203). For example, reproductive issues (e.g., UTI) are commonly linked with sexual activity and certain examinations or medical procedures are believed to affect virginity. This can lead parents to deny their daughters access to certain tests or procedures out of fear of compromising the daughters' virginity. Stakeholders in my study confirmed that family members, specifically fathers, have been known to prevent their daughters from undergoing tests or medical procedures. Additionally, unmarried women themselves fear being judged as having premarital sex or being viewed as flawed women when seen accessing sexual or reproductive health services, fearing that this will affect future marriage prospects (135).

Socio-cultural taboos create a major obstacle to discussions around sexual and reproductive topics, particularly with regards to unmarried women (136). Socio-cultural control of sexual discussions and practices can act as a barrier to preventive health behaviours, possibly leading to high risk sexual activities (202, 204). A number of studies reported on Muslim women, and girls, experiencing opposition from family members when attempting to seek answers on certain SRH topics (132, 134, 135, 196), mainly because SRH information and discussions are perceived as encouraging premarital sex. Yet, a number of reviews on the effects of sex education worldwide suggests that sexual and reproductive knowledge could lead to delayed first intercourse, effective contraceptive use and safer sexual practices (205, 206).

PERSONAL BARRIERS TO SRH KNOWLEDGE

My findings show that irrespective of external barriers (e.g., family, community, socio-cultural), many women view ignorance in sexual and reproductive matters positively, with sexual ignorance viewed as a sign of purity, modesty, and femininity. This was reflected in stakeholders' views on women's SRH knowledge, and their own knowledge as women, reemphasising the societal expectation of women's sexual ignorance before marriage. It is a common belief in Islamic cultures that unmarried women do not need to be knowledgeable about SRH topics, and sexual knowledge is associated with immodesty and impurity (207). This influences a woman's perceptions of her knowledge needs, and negatively impacts how sexual and reproductive knowledge is perceived. Literature suggests that many Muslim

women avoid sexual health information in order to maintain their image as sexually inexperienced, thus deemed of a good marriageable quality (208). This was consistent with findings from my systematic review **(Chapter 2)**, where negative attitudes towards SRH education for unmarried women were reported. SRH education for unmarried women is believed to be against Islamic religious beliefs and perceived to be encouraging premarital sexual relations **(Chapter 2)**. Having the support of religious leaders when developing sex education programmes has the potential to improve its acceptability and success in conservative Muslim cultures **(Chapter 2)**.

Most evidence exploring Muslim women's sexual health is conducted in non-Muslim countries and among migrant populations (130, 145, 202, 209). Yet, many similarities in sexual health experiences were observed among Muslim women residing in Muslim and non-Muslim countries (204, 209). Muslims living in non-Muslim countries tend to retain Islamic values and traditions, and were less likely to adapt or identify with non-Muslim Western cultures than other migrant populations (209). This highlights the strong influence of culture and religion over the influence of the surrounding environment and available services. Facilitating SRH discussions through well-developed programmes may improve Muslim women's awareness of sexual and reproductive topics and encourage health seeking behaviours.

THE INTERNET AS A SOURCE OF SRH INFORMATION

Research participants believed that the internet is the most convenient and private source of SRH information, and Saudi women preferred using the internet for most of their SRH information. The main source of sexual health knowledge for many women in Saudi Arabia is the internet (72%) (210). The internet is the preferred source for learning about sensitive or embarrassing subjects, particularly topics that people are uncomfortable discussing openly (211-213). Girls may prefer to seek information online rather than from their parents, making the Internet an important source of sexual health information (201). Lack of open communication with family members, and difficulty seeking medical care could lead women to favour seeking SRH information through the Internet (196, 201).

The Internet can increase women's autonomy and improve access to essential health information (16, 201, 212, 213). However, research participants expressed concerns over girls' ability to evaluate the validity of health information available online. Concerns over the authenticity of health information available online have been well-documented, particularly for non-English websites (16, 201, 214). This issue is especially important as many women and young people are unable to evaluate the accuracy of health information online (201, 209, 212). This could explain why despite the recent shift in reported main sources of information from peers to the internet, sexual health knowledge among Saudis is still very poor (171, 215).

BARRIERS TO HEALTHCARE PROVIDER-PATIENT SEXUAL AND REPRODUCTIVE HEALTH COMMUNICATION

Time constraints, lack of practitioner skills, and lack of privacy are significant barriers to offering SRH advice in clinical encounters. Healthcare providers in my research feared offending patients, and this was a significant barrier to sexual health communication and discussions. Fears of disrespecting patients by initiating sexual health discussions is a significant barrier to offering sexual health advice worldwide (36, 160, 216). It has been argued that sexual health discussions and communication are particularly difficult in Islamic cultures as Islam is more than just a religion, it is a way of life, where personal behaviours are policed by restrictions and penalties that are well-known in Sharia law (36). This adds extra pressure for healthcare providers to be extremely careful and respectful about their professional and personal conduct with Muslim women, particularly in relation to sexual health. Literature suggests that Muslim women rarely object to sexual health discussions once initiated, but Muslim women fear being perceived as immodest by their healthcare provider if they ask sexual health-related questions and preferred that their healthcare provider initiate the discussion (36, 160). This was confirmed in my research, where physicians admitted that once the discussion was initiated, almost always, women were inclined to talk. It is therefore recommended that healthcare providers initiate sexual health discussions with women to facilitate open discussions in medical settings.

The gender of healthcare providers seems to play an important role in facilitating SRH discussions during health consultations. Muslim women's preference for a female Muslim healthcare provider has been consistently reported in the literature, and a female Muslim healthcare provider is the first choice followed by a non-Muslim female healthcare provider (217). Other religious factors that can also act as a barrier to women's access to sexual health services is the concept of *khalwa* (خلوه). However, views about healthcare provider's expertise and medical abilities could override gender preferences. For example, a study conducted in Saudi Arabia suggested that some women prefer a male physician during labour as they believed that they are more experienced in dealing with labour complications than female physicians (218).

In addition to religious reasons for choosing a female healthcare provider, evidence shows that female healthcare providers involve their patients in decision making and take more time gathering information including psychosocial issues more than male healthcare providers (217). Male healthcare providers on the other hand are more likely to have direct consultations, use more medical jargon, and focus the discussion on medical conditions (217). Providing women with the choice of female provider is likely to enhance healthcare seeking particularly for conditions that require gynaecological examinations.

Healthcare providers' bias and discrimination, poor communication, rushed service delivery, and long waiting times are barriers to accessing healthcare services (196, 219). Some Muslim healthcare providers believe that gynaecological issues only affect married women (135). Facing potential judgement and discrimination from healthcare providers makes it challenging for unmarried women to seek medical care when needed **(Chapter 2)**.

6.2.2. THE INFLUENCE OF LACK OF KNOWLEDGE ON SRH EXPERIENCES

EXPERIENCES WITH MENARCHE

Many women in my research recalled having unpleasant memories of menarche. Negative experiences and stigma associated with menstruation are influenced by several factors including lack of knowledge, lack of parental support, girls being

inadequately prepared for puberty, social and religious expectations, and perceived loss of childhood (193, 197, 200, 220). Across cultures, menarche is widely considered as an event that moves girls into a 'different age bracket' involving sexual maturity and the beginnings of sexual curiosity (199). Upon menarche, Muslim girls are expected to behave in a socially appropriate manner as 'adults', dress modestly, stop acting childishly and have no interactions with men (220). In some instances, fathers would stop playing and interacting with their own daughters once they start menstruating, which contributes greatly to the stigma and shame associated with menstruation (221). In Islam, menstruating girls and women are not allowed to enter holy mosques and practice certain religious activities as menstruating women are perceived as unclean (200). However, this is true for many cultures and religions in which menstruation is stigmatised and is constructed as dirty and impure (200).

Recent evidence from low and middle-income countries showed that almost universally, women recalled feelings of intense distress, fear, and confusion when they lacked awareness of menstruation upon menarche (220). In contrast, girls who had information about menstruation prior to menarche reported more positive experiences (220). Negative experiences with menstruation and sexual maturation are true for women from different religions globally, and socio-cultural taboos seem to be the most significant contributor to those negative experiences (193, 197, 198, 200, 220). Women in my study did not want their daughters to experience the menstrual taboos, shame, and confusion that they had experienced.

SEXUAL PERCEPTIONS AND EXPERIENCES WITH SEXUAL INTERCOURSE

Women and healthcare providers said that many women are unprepared for sexual intercourse upon marriage. Lack of information regarding sex, lack of open discussions and taboos around sex creates anxiety and negatively impacts women's sexual experiences (200, 209). Women with limited premarital sexual knowledge described the experience of first sexual intercourse as scary, traumatic, and painful (196, 200). This could result in a woman feeling pressure and apprehension towards having sexual intercourse, affecting a woman's perceptions of her sexual self, and impacting her future sexual experiences (208, 209).

Sex outside marriage in many Muslim cultures is viewed as ‘immoral’, ‘forbidden’, and is illegal in some countries (222, 223). Discussions about sex are considered improper for both married and unmarried women, and even the thought of sex before marriage is believed to be ‘harming one’s religion’ (200, 202, 207). Virginity has a high value in Muslim cultures, with premarital sex being the ‘ultimate corruption’. Virginal women are positioned as pure and preserving the family’s honour (202, 224). These factors contribute to the difficulty women face changing their views towards sex upon marriage, leading to a number of physical and emotional issues such as anxiety, sex guilt, and sexual dysfunction (208, 209, 225).

6.2.3. CONTRACEPTION AND FAMILY PLANNING

CONTRACEPTIVE KNOWLEDGE

Lack of knowledge about reproduction and family planning is one of the most significant barriers to preventing unwanted pregnancies worldwide **(Chapter 2)**. It was highlighted in my results that younger age was associated with poorer contraceptive knowledge. An association between age and contraceptive knowledge is well-documented **(Chapter 2)**. Women who are most vulnerable to lacking contraceptive awareness often receive information and advice only after they have had many, closely spaced, births (226). Providing women with knowledge can empower them to be decision makers over their reproductive choices, leading to better health outcomes and life satisfaction. However, in the absence of credible sources of information, women often receive misleading and inaccurate information, causing misconceptions that can hinder effective contraceptive use. Information provision requires an understanding of the specific socio-cultural barriers and common misconceptions to improve women’s overall contraceptive awareness and use.

Women’s knowledge of contraceptive methods is often limited to the most commonly used methods. Most research on Saudi women’s contraceptive knowledge focuses exclusively on oral contraception, with high levels of knowledge reported regarding this method (227). Consistent with my findings, a systematic review on Saudi women’s contraception use concluded that OCPs are the most commonly used methods among women in Saudi Arabia, followed by the IUD (227). However,

women in my study said that they only received medical advice on OCPs and IUDs, with healthcare providers often prescribing the pill without any advice. This could explain why these are the two most commonly used methods in Saudi Arabia. Physicians tend to favour OCP because they are effective in preventing pregnancy, readily available, and easy to use (228). Healthcare providers have also been known to deny access to a specific contraceptive method due to their own prejudice regarding the method or its delivery system (228).

HEALTHCARE PROVIDER AND POLICY LEVEL BARRIERS

Healthcare providers in my research said that they tend to only prescribe OCPs and IUDs and offered explanations for their preference for those methods. They believed that women would not be willing to try new methods, as they often want something that has already been tried by someone they know, therefore it would be pointless to offer advice on other available methods. However, irrespective of providers' biases towards a certain method, I found that barriers to contraceptive choice went beyond providers' biases to policy-level barriers. Policymakers in my study explained that only OCP and IUD are covered by the national healthcare system, and other options were believed to be a 'luxury' and beyond the purpose of family planning. Therefore, even if advice was given by healthcare providers, women would not have access to other available methods.

Evidence on contraceptive counselling and healthcare providers' contributions to Saudi women's contraceptive use is non-existent (227). However, all studies that examined Saudi women's contraceptive use recommend effective family planning counselling and education to improve women's awareness of all available contraceptive methods. Effective counselling increases women's awareness of the different choices they have, increases contraceptive use, and most importantly effective use.

CONTROL OVER FERTILITY CHOICES

Most women in my study exhibited control over their fertility choices. Women felt that they have the right to decide on when to get pregnant, and how many children they have, as they will be bearing, and often have the sole responsibility of raising and caring for their children. This contradicts existing evidence on Muslim, and Saudi

women's contraceptive decision-making. Traditionally, husbands and older family members tend to have the prime control over women's fertility choices **(Chapter 2)**. For example, 75% of Saudi women reported acquiring informed consent from their husband as the main barrier to hormonal contraceptive use (120). However, most women in my research felt that they should have the right to control their reproduction, and in some instances, believed they have the right to lie to their husbands if they disapproved. It is important to note that all women in my research were highly educated and said that education had empowered them to take charge of their own fertility. Education's contributions to women's empowerment, particularly with regards to reproduction, has been previously highlighted as key to women's reproductive autonomy (229). Furthermore, as evident by my findings, globalisation, the internet, the introduction of social media outlets, and the availability of smartphones has allowed women and girls to be exposed to other cultures and information sources. This could be another contributing factor to the improvements to women's sexual and reproductive autonomy in the last few years.

The responsibility of preventing pregnancy falls disproportionately on women in all settings globally (230, 231). In addition to the physical burden, preventing pregnancies can be emotionally and mentally taxing (230). Reasons why women take full responsibility include their lack of awareness that there are methods that could be used by men, partners not taking the woman's desire to prevent pregnancies seriously, condoms being associated with disease and promiscuity and condoms seen as undermining men's masculinity (231-233). Viewing pregnancy as something that physically happens to women also shapes men's belief that birth control is 'a woman's responsibility' (231). Efforts working towards normalising men's contribution to fertility regulation are highly needed. It has the potential to improve men's engagement, thus relieving women from having to bear the sole physical and emotional burden of family planning. Future research should focus on exploring men's views towards sharing the responsibility for fertility regulation and explore the possible barriers to men's contraceptive use.

RELIGIOUS VIEWS ON FAMILY PLANNING

Religion is a significant barrier to Muslim women's contraception use. A number of studies conducted in Saudi Arabia reported that many Saudi women believe that it is

against Islamic beliefs to use contraception (227, 234). Yet, my research showed opposing findings, where religion did not seem to act as a barrier to Saudi women's contraceptive use. Similarly, stakeholders, excluding religious scholars, believed that the influence of religion on fertility choices have been reduced in recent years, and socio-cultural factors play a more significant role.

Family planning is a highly debated subject in Islam. Religious scholars supporting the use of family planning stated that there are no clear texts in the Quran and Sunnah that forbid its use **(Chapter 2)**. Islam encourages high fertility, and having many children is something that many Muslims adopt in order to become good Muslims **(Chapter 2)**. Some scholars have interpreted an Islamic emphasis on high fertility as forbidding family planning. These different views lead to inconsistencies in contraception use among Muslim women, both in Saudi and worldwide, depending on religious doctrine followed. Religious leaders in my research affirmed that family planning is forbidden for limiting the number of children and is only permissible in certain situations where multiple pregnancies can harm the mother's health.

6.2.4. SEXUALLY TRANSMITTED INFECTIONS

STIs KNOWLEDGE

Women in my study had poor knowledge of STIs and worrying misconceptions regarding modes of transmission, which was confirmed by stakeholders. Poor STIs knowledge has been consistently reported among Saudi women (171, 210). Poor knowledge contributes greatly to the stigma and discrimination against people living with HIV (235). In Saudi Arabia, physicians who had poor knowledge of HIV had significantly higher mean stigma scores than those who had good knowledge (236). Stakeholders in my study emphasised the importance of educating people about STIs routes of transmission. The purpose of raising awareness is to change society's views towards people with an STI and reduce stigma associated with STIs. This implicitly highlights how stigma is attached to the route of transmission (extra-marital sex).

Compared to other STIs, HIV/AIDS is the most widely known STI universally, mainly due to the extensive awareness campaigns taking place globally since the mid 1980s (237). This highlights the importance of national and international level

awareness campaigns in improving health literacy and promoting health behaviours. Although improved sexual health knowledge is not sufficient by itself to promote protective health behaviours, it has the potential to promote safer sexual practices, condom use, and improve attitudes towards STIs that are necessary for timely testing and diagnosis (238). An urgent need for education was expressed by participants in my study, to raise awareness and prevent the spread of STIs in the country. Nearly 86% of adolescents in Saudi Arabia called for the need for school-based sex education, with 92.2% believing that sex education is required to protect against STIs and establish healthy sexual behaviours (34). Efforts should be directed towards improving STIs awareness in Saudi Arabia to promote protective health behaviours.

PERCEPTIONS ON THE EXISTENCE OF STIS

The MENA region has a low HIV prevalence (less than 0.1%) as well as other STIs (239). Although reports attributed the low prevalence to the region's conservative socio-cultural norms, and religious views that forbid extra-marital sex, it could also be due to under-diagnosis, under-reporting, and poor data collection. The conservative culture does not mean that the risk is low among all groups. According to a Saudi study, 72.2% of male adolescents believed that men experience sexual intercourse before marriage (34). The common perception among most participants in my research, as well as all Islamic countries in the region, that STIs are not an issue amongst them, and religious practices provide sufficient protection against STIs (29). The lack of available data makes it challenging, if not impossible, to advocate for the need for preventive measures or take informative action. According to a report by Abu Raddad et al, denial of the existence of HIV/AIDS in the region has been a longstanding challenge (29). The lack of available data has sparked the problematic, and unrealistic argument that adherence to cultural norms provides 'cultural immunity', and people in the MENA region are 'immune' to STIs on the basis of 'moral prophylaxis' (29). Similar views were expressed by some stakeholders in my research, where STIs were believed to be non-existent in the country. On the other hand, it has been argued that there is indeed a public health crisis, with HIV in particular, and failure to combat the infection is rooted in socio-cultural norms that are slowing, if not deterring, the region's ability to deal with the infection (29). My

research shows that there is an urgent need for better surveillance and reporting of STIs in the region, to understand the magnitude of the problem, identify vulnerable groups, plan, and implement effective prevention and care for at risk individuals.

ATTITUDES TOWARDS PEOPLE DIAGNOSED WITH AN STI

Consistent with evidence on Muslims' attitudes towards people diagnosed with any STI, women in my research exhibited extremely negative views towards people with an STI, especially HIV **(Chapter 2)**. This is mainly because HIV is the most widely known STI among my research participants. Attitudes towards people living with HIV are influenced by many factors including lack of knowledge, religious and socio-cultural beliefs **(Chapter 2)**. The rejection and stigma around people living with HIV are highly influenced by social disapproval of the acts that led to the infection. People associate HIV/AIDS with sex outside of marriage, prostitution, drug use, or homosexuality (29, 240), all of which are considered sinful and immoral acts that some believe are punishable by death (241). Many Muslims believe that STIs are a punishment from God, and it is also generally believed that affected individuals deserved it **(Chapter 2).**

Extreme negative views towards people living with HIV are highly prevalent among Muslims both in the community and among healthcare workers (242). This strong stigma and taboos towards HIV have been consistently reported across the MENA region. According to a study in Egypt on people living with HIV, 51% participants reported feeling stigmatised, 67% reported isolating themselves from the community following their diagnosis mainly out of fear of being stigmatised, and 44% reported changes in people's behaviours towards them (243). Stigma and discrimination in healthcare settings is also evident in other Islamic countries (242). Research from Saudi Arabia reported extreme negative views among healthcare providers towards people living with HIV despite high levels of knowledge. In another study in Iran on people living with HIV, all study participants, with no exception, reported experiencing denial of care from healthcare providers due to their negative views towards drug use, sex work, and extra-marital sex (242).

MEN AS THE SOURCE OF STIS

In my research, both women and stakeholders thought of men as the source of most STIs, and women are usually viewed as the 'victims'. Healthcare providers in my research said that almost all HIV cases among Saudi women are from their spouse. Unfortunately, most infections among married women in the MENA region are from their spouse, and marriage is considered a risk factor (27, 29, 244, 245). Research from other low HIV prevalence countries (e.g. India) report marriage as the primary risk factor for HIV infections among women (246). Nearly 97% of women living with HIV in Saudi Arabia (50), 76% in Iran (247), and 70% in Morocco are infected from their spouse (29). Husbands could possibly, either knowingly or unknowingly infect their wives with an STI (240, 244). Women generally lack the power to negotiate safe sex with their partners or guarantee their faithfulness (244). In Egypt for example, women infected with HIV from spouses explained that they were aware of their husbands' risk behaviours (i.e., infidelity and injecting drug use) but felt helpless and unable to protect themselves, mainly due to lack of sexual autonomy and inability to influence their husbands' behaviours (248). Cultural, economic, and societal factors combined with the imbalance of power in a marital/sexual relationship all contribute to women's vulnerability to STIs (242).

BARRIERS TO STIS TESTING AND DIAGNOSIS

Barriers to testing and diagnosis exist on many levels including personal, socio-cultural, religious, healthcare providers and policy level barriers. Personal factors include lack of knowledge about STIs, denial, low risk perception, fear of a positive result, and fear of being exposed due to breaches in confidentiality (249). Fear of a positive test result and fear of the disease are among the most significant barriers to testing and diagnosis (249).The perception that HIV is a deadly infection rather than a chronic manageable illness is a major part of that fear. A study from the US reported that fear was the most cited reason for delayed testing, as participants were 'afraid of the answer' (250). People who engaged in high risk behaviours (e.g. injecting drug use) were more likely to be afraid of getting tested (250).

Low perception of risk can lead to significant delays in STIs diagnosis, particularly for married women who have never engaged in premarital sex and believe the same is

true for their sexual partner. Low perception of risk is influenced by many factors including lack of knowledge and strong religious beliefs (251). For many women in the MENA region, their husbands are the first and only lifetime sexual partner, so they assume that they are at no risk of contracting an STI and therefore do not need to be tested. As a result, there is a strong likelihood of under detection for women in the MENA region (27, 29, 239). The majority of married women living with HIV were diagnosed either during their first pregnancy as a result of routine antenatal testing, when their children became very ill and tested positive for HIV, or when their husbands disclosed that they are HIV positive (29, 244).

Women in my research explained that people in Saudi are afraid of seeking medical care for a possible STIs out of fear of being exposed either by healthcare providers or by someone in the healthcare facility. Worries about being exposed directly through breaches in patient confidentiality, or indirectly by being seen getting tested, is a significant obstacle to STIs diagnosis and treatment (249, 252).

Healthcare providers' prejudice, judgement, and mistreatment of people with an STI can also prevent at risk individuals from getting tested and seeking treatment (249). Fear of breaches in patient confidentiality is one of the most cited barriers to HIV testing among sexually active youth (253). Fear of disclosure of an STI diagnosis to family members is not unjustified, and concerns over lack of patient confidentiality in medical settings has been previously reported in the MENA region (116, 160, 254). These fears were confirmed by women in my study, where they believed that breaches in confidentiality were the most significant barrier to STIs testing among Saudis.

The results show that stigma and shame associated with STIs acted as a barrier to testing and diagnosis. Stigma is a major obstacle to combating HIV/AIDS in the MENA region (240, 241). The majority of infections are among sex workers, injecting drug users or men who have sex with men, all of which are forbidden by religion and even illegal in most countries in the region (29). Those groups are forced to conceal their lifestyle out of fear of being physically harmed, punished, or ostracized from society (29, 240). This stigma makes it hard, and frightening, for those individuals to seek counselling and testing, or to disclose their diagnosis to anyone in their community (240).

DISCLOSING AN STI DIAGNOSIS

Informing patients of an STI diagnosis can be extremely difficult and uncomfortable for many healthcare providers. Some physicians in the research interviews admitted to omitting STIs facts from women (e.g., modes of transmission). It was viewed as unnecessary and even problematic to tell women that the infection is sexually transmitted for several reasons. It can be viewed as accusing women of extra-marital sex, which can bear severe consequences for women. Healthcare professionals also stated that they often feared the husband's reaction to sharing the diagnosis with the wife. Additionally, protecting marriages from divorce in the Arab and Muslim world is viewed as a priority, and since sharing causes of STIs can cause marital problems, it was deemed unnecessary. This confirms evidence reported in the Middle East with physicians misrepresenting facts about HIV to women (160). The justification of omitting/misrepresenting facts about HIV to women is to prevent marital problems and therefore avoid divorce (160). While this may be viewed as an infraction to doctor-patient trust, physicians explained that they are not acting maliciously by misinforming women about their diagnosis, they were trying to protect them as divorce can bring even more serious problems for women (160).

IMPLICATIONS OF PREMARITAL SEX: GENDER INEQUALITY

As a result of the normalised discrimination against women, the social implications of STIs are much more significant and serious for women regardless of the route of transmission (240). This gendered discrimination has been consistently reported, and women with an STI are subjected to significant judgement and blame compared to men **(See Chapter 2)**. Although Islam does not discriminate a sinful act based on gender, society and culture view the sins of women significantly different than men. The consequences of premarital sex are much more severe and dangerous for Muslim women. Premarital sex, more specifically losing virginity or unintentional pregnancy, is one of the leading causes of suicide and death for young Muslim women worldwide. For example, in Algeria, 30% of women who committed suicide were pregnant outside of marriage. In Turkey, hymen examinations, to confirm virginity before marriage, are the most common cause of suicide among young Turkish women (29).

Honour killings[15] are still happening to women and girls globally (255). The United Nations Population Fund estimated that nearly 5000 women and girls are killed globally every year in the name of honour by one of their own family members (256). Many of these murders go unpunished, and deaths are concealed as suicides or accidents (255). Honour killings are committed for a range of perceived offenses regarding female sexuality, most notably extra-marital and premarital relationships (255). 'Improper' behaviours may also include communicating with a male from a different faith, initiating separation or divorce, being a victim of rape (losing virginal status), and even actions such as alleged flirting can be seen as bringing dishonour to the family (255).

6.2.5. Sexual and Reproductive Health education in Saudi Arabia

All research participants supported the idea of SRH education, and largely suggested it is best to start SRH education for youth at schools. Ultimately, it would be best to provide SRH education in schools, as it has the potential to improve youth knowledge about their bodies, help them cope with the changes happening during puberty, and promote positive SRH behaviours. For school aged children, the topic of sexual abuse was highlighted by all mothers and some stakeholders. In Saudi Arabia, it is estimated that one in four children has been sexually abused at some point in their life (257, 258). The topic of sexual abuse prevention was previously highlighted by stakeholders in another Saudi study as an essential part of school-based sex education (25).

Comprehensive sex education has been shown to delay or reduce sexual activity and promote protective behaviours (259, 260). Yet, multiple challenges exist in implementing such programmes around the world, particularly in conservative Muslim communities. Challenges to the provision of sex education are related to the attitudes of teachers, students, and parents, and most importantly, the cultural sensitivity around sex-related topics. Cultural factors surrounding sex-related topics and worries about compromising Islamic values when providing sex education to

[15] The murdering of women by family members, due to the belief the victim has brought dishonour upon the family. The death of the victim is viewed as a way of restoring the reputation and honour of the family.

Muslim children have been consistently reported (261-263). A study explored barriers to the provision of sex education for Saudi adolescents and identified a number of barriers (264). In addition to cultural taboos, there are a number of structural barriers relating to inadequate training schemes, weak inter-ministerial communication and collaboration, lack of educational standardisation and lack of sexual health data (264).

APPROACHES TO SEXUAL AND REPRODUCTIVE HEALTH EDUCATION

Approaches to sex education are usually divided into two contrasting approaches. The first focuses on abstinence, while the other approach promotes harm reduction. An abstinence-based model focuses on waiting until marriage to have sex, while harm reduction models acknowledge that not everyone is abstaining from sexual relations until marriage, and therefore focuses on promoting protective health measures to reduce the risks associated with unsafe sexual activity including STIs and unplanned pregnancies. Opinions on the content of education differed among the study participants. While many acknowledged that abstinence is unrealistic and the expectations of abstinence among all is ‘naïve’, others, particularly religious scholars, strongly opposed adopting a harm reduction approach, as it was seen as giving youth ‘the green light’ to engage in forbidden sexual activity.

Research from Saudi Arabia revealed that sexual health was typically considered to be incompatible with Islamic values and beliefs by healthcare providers, as well as Saudi women (36). The concepts of safe sex and sex education are believed to be irrelevant topics for the Saudi public and should not be covered in a Muslim country, highlighting the widespread societal belief of abstinence until marriage (36). In my study, religious scholars viewed harm reduction approaches such as promoting condom use, is giving youth the tools to engage in premarital sex. These views are common among religious leaders, and similar findings have been reported in other settings. For example, in Rankin et al. both Muslim and Christian Religious leaders condemned promoting condom use, stating that agreeing with condom use is promoting sin, encourages marital infidelity, and undermines the message of abstinence until marriage (265). My findings were consistent with evidence from Saudi Arabia, where an abstinence-based approach to sex education was favoured

by religious scholars, as well as other stakeholder groups including policymakers, teachers, and healthcare providers (25).

The use of sex-related terms in the title of the educational programme (i.e., sex education) would be unacceptable for some people in a conservative Muslim community. According to participants in my study, it would be more culturally appropriate to frame SRH education as a premarital educational programme. The gradual implementation, and the framing of education as 'premarital education' rather than 'sex education' might improve the community's acceptance and avoid unnecessary backlash. This was consistent with another study that explored stakeholders' opinions on the provision of sex education in Saudi Arabia, where stakeholders suggested introducing sex education within a premarital preparatory course before starting with children and adolescents (25). The premarital educational programme was seen as a gateway to the introduction of sex education to younger age groups indirectly and gradually (264).

SRH EDUCATION AS A PREMARITAL PREPARATORY COURSE

The introduction of SRH education within a premarital preparatory course has been implemented in a number of Arab and Muslim countries (266, 267). However, existing programmes have several limitations that could be used to facilitate the design of a premarital preparatory course in Saudi Arabia. For example, in Iran, attending a premarital programme is mandatory for a marriage license. However, the educational session consists of a one-hour class covering family planning and personal health. While these topics are essential, it has been consistently suggested that sexual health should be covered more extensively in these programmes (268, 269). Particularly since many Muslim women may have never had sexual intercourse prior to marriage, with some women lacking basic sexual and reproductive information. To achieve optimal SRH, women need to be empowered to exercise control over their bodies, have knowledge and access to SRH healthcare services.

Premarital counselling has the potential to improve men's sexual and reproductive awareness, communication skills, and make them more understanding and considerate to women's SRH needs (269). Saudi women's desire for their spouse to be educated, to enhance women's autonomy, has been previously reported in the

literature. For example, ethnographic evidence from Saudi Arabia showed that women would often ask their doctors to educate their husbands about the health benefits of birth spacing in order to persuade them to allow the use of contraception (36). Interestingly, the same study reported that highly educated women were able to influence their husband's decision to use contraception, reemphasising the significance of education in sexual and reproductive autonomy (36).

Although sex before and outside marriage is forbidden in Islam, it cannot be assumed that everyone will adhere to this. Ignorance about sexual health and risks of unprotected sex could result in severe adverse effects. It is essential to educate women, and men, about sexual health since abstinence is not enough to protect them against STIs. This is particularly true in the case of married women whose husbands are not monogamous or already have an STI before marriage. Premarital counselling is critical to educate young couples about sexual health and STIs prevention (26, 27).

CONTENT OF SRH EDUCATION

Suggestions for different topics to be covered for each gender has been previously reported in another study from Saudi Arabia (25). The differences in suggested content for women highlight the gendered discrimination in relation to sexual expectations and sexuality in general. In Muslim societies, men are viewed as hypersexual and cannot control their sexual desires, and tolerance towards their engagement in 'illegal' sexual activity is well-documented (25, 265). In contrast, women are usually viewed as victims (50). In a study from Saudi Arabia, healthcare professionals and policymakers emphasise the importance of teaching men about STIs not only for their own protection, but for the protection of their wives as well (25).

The importance of marital satisfaction was discussed and highlighted by research participants. Marital satisfaction is highly influenced by sexual pleasure, and sexual satisfaction has been linked with higher marital satisfaction (270-272). It has been previously suggested that lack of knowledge about basic human anatomy and sexual pleasure can lead to sexual dysfunction and sexual dissatisfaction (273). In a study from Iran, where premarital education is offered, couples reported that sexual

pleasure and sexual relations are the most needed elements of education. This is especially important as these topics are not taught in any formal setting, nor discussed openly, even among couples (269, 274). In a study from Saudi Arabia, almost all participants emphasised the importance of sexual satisfaction, stating that it is a spousal right and duty. It was also highlighted that lack of sexual satisfaction can negatively impact marital harmony and is a contributor to divorce or adultery. In the same study, women participants stressed the importance of sexual satisfaction as a 'woman's right' within marriage (25).

6.3. STRENGTHS AND LIMITATIONS

To my knowledge, this is one of the few studies to use qualitative methodology for sexual health research in Saudi Arabia, as most research conducted in Saudi Arabia is quantitative, and qualitative research is not commonly encouraged or recognized. Qualitative research has provided me with the opportunity to study the complex and sensitive matter of Saudi women's SRH in great detail, offering unique findings in this area.

I have synthesised findings from a large number of studies, from different countries and settings, and whilst the specific detail varies in different settings, synthesising the findings within a conceptual framework facilitated a comprehensive understanding of the factors influencing Muslim women's SRH. The ecological model of health allowed me to examine a wide range of factors. It guided me to look beyond individual factors, and consider wider societal, cultural, and environmental influences on sexual and reproductive wellbeing. The framework facilitated exploring different aspects of my data, provided structure for my analysis, interpretation, and write up of my thesis, with flexibility to explore the topic in-depth.

Interviewing women from different age groups and marital status allowed for comparisons to be made across different experiences, offering an opportunity to explore the narratives of unmarried women. In SRH research, it is uncommon to interview or survey unmarried women in Islamic societies. Previous research conducted on Muslim women's SRH focused exclusively on married women, partly because researchers may feel that it is inappropriate to ask unmarried women about sexual and reproductive matters **(Chapter 2)**. However, since sexual and

reproductive issues and experiences can differ according to marital status, I included both married and unmarried women in this study to gain a deeper understanding of both groups' experiences and share the underreported accounts of unmarried women. One limitation of my thesis is the absences of men's perspectives. It is essential to explore men's views and understand their influence on women's SRH.

A key strength of this study is the range of stakeholders interviewed. This is the only study that explored both women and stakeholders' views in Saudi Arabia. Interviewing different stakeholder groups allowed me to represent the views of those not usually represented in Saudi women's SRH literature such as religious leaders, who have a powerful influence on the public's views. It also allowed me to capture the views of people in charge of implementing, influencing, and delivering policies and services such as policymakers and healthcare providers. However, it should be noted that the views of stakeholders who participated in this study represents the views of those who are enthusiastic about improving women's SRH in Saudi Arabia and believe in the importance of providing SRH education in the country.

Although my qualitative study focused on Saudi women's experiences, many of the findings are transferable to women in other Muslim communities around the world, as many Muslims share similar socio-cultural values and traditions (157, 209, 217, 220). My systematic review also provided findings and conclusions from different countries and settings which has improved the transferability of my thesis findings. However, specific cultural beliefs held by Muslim women should not be used to perpetuate stereotypes, instead, it should be used to create an understanding of how culture affects sexual and reproductive wellbeing

Qualitative interviews were conducted in Arabic, the participants' native language. While collecting data in another language from which the findings are presented can be challenging, it is extremely common in social research. It allowed participants to express their views with confidence and use local idioms, euphemisms and expressions that were natural to them. It can also help participants identify with the researcher, building trust and rapport, and allowed me to understand the nuances and subtleties in their answers. Some cultural references are not easily translated, and some of the meanings might have been lost in translation. Yet, the translation

process can be an analytically productive process and a critical challenge that can add to the interpretations (184, 185).

Face-to-face interviews have the potential to introduce social desirability bias. I attempted to reduce social desirability bias through careful wording of the questions, avoid leading questions, and avoid showing judgment and emotional reactions towards participants' responses. Guaranteeing the privacy of the participants and ensuring confidentiality throughout the interviews encourages participants to provide their honest, more private accounts. Rigour was enhanced by keeping a reflexive diary **(See Chapter 3, for more details on Reflexivity)**, offering a clear account of procedures used, providing evidence from the data for all interpretations made, comprehensive analysis of the whole data set, analysis of deviant cases and disconfirming data, comparing data between and within cases in the data set, and comparing findings with other studies (181).

My qualitative research took place in Riyadh, the capital city of Saudi Arabia. The views and experiences of the residents in a metropolitan city may be more liberal than those living in other areas in Saudi Arabia. The results also reflect the views of women who are highly educated, agreed to participate, and are open to discuss their SRH views and experiences with others. Therefore, it is possible that the views of women who are less educated, more conservative, and less likely to be willing to discuss their SRH were not captured or underrepresented. Assumptions were also made about the sexual orientation of my research participants. Cultural, religious, and legal reasons made it challenging, or even impossible, to explore or report the accounts of people in same sex relationships.

It is important to note that focusing on the views of people from a specific cultural or religious background can falsely create the presence of 'issues' for this particular group when often there are similar issues for people from different cultures and religions (110). Moreover, by reporting key findings, it is easy to give the impression that a particular experience is common to an entire group, when in fact there are considerable variations both within and between every culture and religion. Arousell & Carlbom's suggest that future research needs to move beyond simplified and generalised idea of Muslims as 'one group', to recognize religious heterogeneity and acknowledge individuals' ability to negotiate Islamic mandates (111).

CHAPTER SEVEN – RECOMMENDATIONS AND CONCLUSIONS

CHAPTER OVERVIEW

In this chapter, I discuss the implications of my findings for policy, research, and practice and provide conclusions for my thesis.

7.1. IMPLICATIONS FOR POLICY, RESEARCH AND PRACTICE

In line with Saudi vision 2030 **(See Chapter 1)**, which aims to facilitate access to healthcare services for all and promote preventive health behaviours, my research provides recommendations for introducing SRH education in Saudi Arabia, offering approaches to improve access to sexual and reproductive healthcare services and education (275). In general, my study highlighted the lack of sexual health data and weak public health infrastructure in Saudi Arabia. As such, efforts to encourage and support research and training within this field are highly needed.

7.1.1 RECOMMENDATIONS FOR A PREMARITAL EDUCATION PROGRAMME

The introduction of SRH education as a premarital preparatory course has been implemented successfully in a number of Arab and Islamic countries (266, 267, 276). My findings provide the first steps for the planning and development of premarital SRH education in Saudi Arabia. SRH education and services can play a fundamental role in improving women's health and wellbeing, providing them with the necessary tools to be informed about sexual health, and improves autonomy in decisions about fertility, sex and relationships (277).

It is my recommendation that a premarital education programme is developed to inform women in Saudi Arabia about their SRH, particularly sex and reproduction which has the potential to improve SRH outcomes and experiences (278). The Ministry of Health (MoH) could benefit from my findings when developing interventions targeting Saudi women of reproductive age. My research also provides insight into Saudi women's information needs and the preferred content for SRH educational programmes throughout multiple stages of women's development **(See Chapter 4 & 5 for detailed description of content)**.

7.1.2. RECOMMENDATIONS FOR EDUCATIONAL INSTITUTIONS

My findings provide recommendations that are likely to be of interest to the Ministry of Education (MoE) and MoH. However, it must be emphasised that collaborative effort between the MoH and the MoE is of utmost importance for any public health programme to be formulated and implemented in school settings. Current school curriculums in the area of SRH require extensive reform, and concerns over content and language used have been previously reported (264). Many women in my research experienced stigma, negative emotions, physical and emotional distress in childhood and adulthood as a result of poor knowledge, with schools contributing to the lack of awareness. To help young girls cope with the physical, social, religious, and emotional changes associated with puberty and menstruation, it is imperative to improve their awareness about puberty, menstruation, and reproductive changes. It is my recommendation that school curriculums undergo extensive research and reform to include age appropriate, tailored SRH content for each age group based on the specific requirements for that group.

7.1.3. RECOMMENDATIONS FOR HEALTHCARE DELIVERY

Healthcare providers in Saudi Arabia tend to avoid sexual health discussions with women out of respect to the patients' socio-cultural norms (36). Nonetheless, it is important for healthcare providers to play a more active role in approaching, initiating, and facilitating sexual health discussions during health consultations. Providing patients with written information such as leaflets or posters is suggested to be a useful tool in enabling patients to initiate sexual health discussions during health consultations (216).

Since fear of offending patients, and fear of patients' negative reactions acted as barriers to offering sexual health advice, guaranteeing healthcare providers' safety by having strict rules and penalties for threatening providers' safety either verbally or physically is likely to enhance healthcare professionals' engagement in sexual health discussions. Practitioner training in addressing 'sensitive' topics is crucial for open and direct sexual health discussions with patients. It is essential to establish national policies and guidelines describing the standard of care in the area of sexual health and clarifying healthcare providers' roles in offering sexual health advice.

Most provider related barriers are due to issues with the lack of policies protecting patients' privacy and autonomy. Women highlighted the need for having their privacy respected by providers by not sharing any of their confidential information with family members and restricting family members or other people from being in the room during consultations. It is good practice for healthcare providers to announce their arrival before entering examination rooms. Enforcing policies on privacy and autonomy is likely to improve women's access to services.

Some healthcare providers' attitudes and conduct hinder women from seeking medical care. Further research is needed to explore facilitators to healthcare providers offering sexual health advice for Muslim women. Ensuring that healthcare providers working in the area of women's health are equipped with adequate training and skills to offer sexual health advice can facilitate effective sexual health consultation.

Saudi women's SRH can greatly benefit from having specialised clinics in women's sexual health. It is recommended that strategies should focus on encouraging more Saudi healthcare providers to specialize in sexology and sexual health counselling. It is important to introduce training and skills development related to sexual health in medical schools, encouraging the use of the term 'sexual health' in discussions and communications with patients.

The thesis revealed several factors that could facilitate women's access to SRH services. These factors included having services labelled as general services or instead of using the terms 'reproductive' or 'sexual'. Women may prefer not having their identities disclosed, for example using codes instead of their names in clinics. The gender of the healthcare provider seemed to highly influence their access to services for some women. Having female doctors available or giving women the option of choosing the gender of practitioners could enhance their health seeking behaviours.

7.1.4. RECOMMENDATIONS FOR STIS PREVENTION

Several implications related to STIs prevention, early diagnosis and treatment can be drawn from my findings. For instance, one of the reasons for delayed testing is lack of knowledge and understanding of STIs. It is therefore essential that healthcare

providers carefully assess their patients' understanding of common STIs and presentation of symptoms, offering advice and tests accordingly.

Another important implication is reducing the vulnerability of women to STIs. Women need to be informed about STIs symptoms, modes of transmission, and prevention to recognize the signs of STIs and provide them with the tools to protect themselves. This is especially important for women who are aware of their partners' behaviour but uninformed on ways to protect themselves. Women and girls should be informed about preventative measures including HPV vaccine in order to protect themselves and their reproductive health.

Since HIV risk in the MENA among the general population is low yet considerable among priority groups, programmes directed towards the general population should stress stigma reduction, rather than personal risk reduction. Prevention efforts should primarily focus on priority populations as they are at highest risk of acquiring the infection (29). Nonetheless, access to counselling, testing, and treatment need to be substantially expanded in the region. In order to prevent future transmissions, It is imperative to work towards removing all barriers to testing and diagnosis, particularly among priority groups (29).

One of the most significant barriers to early STIs testing and diagnosis is concerns over breaches in patient confidentiality or fears of exposure. It is therefore crucial to enforce stricter rules and regulations against breaches in patient confidentiality. Although there are currently sexual health clinics offering anonymous testing in Saudi Arabia, those clinics are private and tests are expensive, making them inaccessible to everyone (237). It would therefore be useful to provide anonymous free testing clinics to encourage individuals to get tested without fear of exposure.

7.1.5. RESEARCH IMPLICATIONS

My results confirmed that taboos around sexual health topics acted as a barrier to accessing knowledge and information. Future research needs to explore ways to overcome those barriers in Muslim societies in order to provide recommendations on changing societal views towards SRH information and discussions, particularly for unmarried youth. It should be emphasised, in any future programme directed

towards both parents and youth, that the purpose of open SRH discussions is to promote knowledge and understanding rather than promoting sexual activity. It should also be highlighted that facilitating open SRH discussions with young girls improves autonomy and self-confidence. Freeing women from social inhibitions and stigma associated with sexual and reproductive discussions has the potential to improve their experiences and overall wellbeing (209).

This body of evidence revealed that better quality studies particularly in the MENA region are needed. However, conducting high quality research might be a difficult task in some countries due to restrictions on data sharing and reporting (154, 168). Improved reporting and better surveillance are essential for accurate future estimates to inform public health policies and prevention measures.

Evidence on barriers to HIV/AIDS and STIs testing among Muslims is limited; my systematic review identified only one qualitative study examining barriers to testing and diagnosis (134). The limited research done in this area makes it difficult to draw conclusions. However, my findings provide insight into possible existing obstacles specific to conservative Muslim cultures. More research should be directed towards tackling barriers to STIs testing and diagnosis among Muslims, particularly among women.

While my research focused on women's perspectives, men's knowledge and behaviour significantly impact on women's SRH, particularly regarding decision making, sexual relations and reproduction. As such, future research should aim to include the perspectives of men.

A prominent absence of any duty for fathers to educate their children was observed both in my study and in the literature. It is worth exploring the possible contribution of fathers in supporting and educating their children throughout all stages of their development.

Most contraception and family planning research in Muslim countries focused exclusively on married women. Research on unmarried Muslim women's contraceptive knowledge, experiences, and attitudes are limited. More research is

needed to explore unmarried women's knowledge and experiences and understand the barriers to accessing contraception among unmarried women.

In this thesis I focused on specific aspects of sexual health and reproductive health, other, equally important aspects, (e.g., sexuality, sex rights, sexual pleasure, sexual dysfunction) were not explored. Future research is needed to explore and report the experiences of Muslim women in under explored areas of sexual health.

Future research should focus on exploring teachers' views towards delivering SRH education, understanding the barriers and facilitators to providing students with SRH information. Before implementing any school based SRH education, it is my recommendation that strategies to improve teachers' SRH knowledge, and their attitudes towards providing SRH education are established.

The internet has huge potential for the dissemination of convenient, private, accurate, and trustworthy health information (279). Since the internet is one of the preferred outlets for health information, particularly SRH information, policy and research efforts should be directed towards regulating and facilitating Arabic evidence-based health information on the internet. Most importantly, reducing disparities in access to SRH information by making it accessible in different languages online.

7.2. CONCLUSIONS

Personal, familial, socio-cultural, institutional, and religious factors all contributed to restricting Saudi women's access to SRH information and services. Family control can hinder women and girls from accessing essential SRH information and services. Public health initiatives are needed to improve parents' SRH knowledge and raise their awareness about the importance of timely and comprehensive SRH discussions with their children.

There is a substantial unmet need for SRH information, education, and healthcare services for Saudi women. Lack of sexual health knowledge and negative views towards sexuality greatly influenced women's sexual experiences, negatively impacting their physical and psychological wellbeing. The findings assert the need for policy and research efforts to be directed towards improving girls' and women's

awareness about reproductive changes during puberty, sexual maturation, sex, reproduction, relationships, pleasure, sexuality, sexual abuse, and STIs.

All research participants unanimously agreed on the need for SRH education in Saudi Arabia. Framing SRH education as a premarital preparatory course was believed to be the most appropriate way for gradually introducing sex-related education in Saudi Arabia. Establishing SRH education is achievable but will require extensive effort to ensure cultural appropriateness and improve community acceptance. The findings from this thesis provide the first steps for planning and development of culturally and religiously sensitive SRH interventions for Muslim women worldwide.

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APPENDICES

APPENDIX 1: MEDLINE SEARCH STRATEGY

Database: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) <1946 to Present>
Search Strategy:
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1 Islam/ (4993)
2 islam*.tw. (4289)
3 Muslim/ (4993)
4 Muslim*.tw. (4222)
5 (arab or arabs or arabic or arabia or arabian).tw. (27492)
6 middle east/ or afghanistan/ or bahrain/ or iran/ or iraq/ or jordan/ or kuwait/ or lebanon/ or oman/ or qatar/ or saudi arabia/ or syria/ or turkey/ or united arab emirates/ or yemen/ (88185)
7 (Middle East* or Afghan* or Bahrain* or Iran* or Iraq* or Jordan* or Kuwait* or Leban* or Oman* or Qatar* or Saudi or Syria* or Turkey or Turkish or UAE or United arab emirates or Palestin* or Yemen*).tw. (140558)
8 MENA.tw. (575)
9 (middle east and north africa*).tw. (860)
10 africa, northern/ or algeria/ or egypt/ or libya/ or morocco/ or tunisia/ (33194)
11 (Algeria* or Egypt* or Libya* or Morocc* or Tunisia*).tw. (36483)
12 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 (222681)
13 exp Sexually Transmitted Diseases/ or Reproductive Health/ or Sex Education/ or Women's Health/ or Women's Health Services/ or Family Planning Services/ (412735)
14 (women* adj2 (health or healthcare)).tw. (22251)
15 ((reproductive or reproduction or sexual) adj4 (health or healthcare)).tw. (23956)
16 ((sexual or reproductive) adj2 behavio?r).tw. (24400)
17 (sex* adj2 counsel*).tw. (910)
18 ((sex* or reproduct*) adj4 educati*).tw. (17771)
19 family planning.tw. (20962)
20 exp Contraception/ (26892)
21 (Contraception or contraceptive* or birth control).tw. (69649)
22 (Sexually Transmitted Disease* or sexually transmitted infection* or sti? or std?).tw. (44799)
23 or/13-22 (543782)
24 12 and 23 (7709)
25 (wom?n* or female* or girl* or lady or ladies or wife* or wives).tw. (1939517)
26 24 and 25 (4698)
27 limit 26 to yr="2000 -Current" (2998)

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APPENDIX 2: DETAILED DESCRIPTION OF THE EXTRACTED DATA

General information

Author
Article title
Study year
Country of origin

Study characteristics

- Study design
- Study aims and objectives
- Study setting
- Method of data collection (questionnaires, interviews, focus groups etc.)
- Method of analysis
- Sample size
- Recruitment procedure
- Participant characteristics
    - Age
    - Gender
    - Marital status
    - Educational level
    - Socioeconomic status
    - Country of origin
- Eligibility and exclusion criteria

Outcome data\results

Contraception:

- Knowledge of different contraceptive methods
- Sources of information on contraceptive methods
- Attitudes towards contraception and family planning
- contraceptive methods used
- Factors associated with contraceptive use
- Barriers and facilitators to contraceptive use

STIs

- Knowledge of different STIs (modes of transmission, symptoms, treatment, and prevention)
- Sources of information on STIs
- Attitudes towards STIs
- Educational needs

Access to SRH services

- Main barriers and facilitators to service access and use as reported by participants
- Knowledge of available services

APPENDIX 3: SUMMARY OF INCLUDED STUDIES

Table 1: Quantitative study and sample characteristics

Author (year)	Country	Instrument	Outcomes reported	Mean age of participants	Sample size for female participants	Eligibility criteria	Response rate
Abdel-Fattah et al. (2007)	Saudi Arabia	Interview questionnaire	FP Knowledge, sources of info, attitudes, use and reasons for non-use	Mean= 31.95 SD (7.3)	837	Ever married women of reproductive age (15-49) + attended Alhada armed forces hospital	93%
Agha & Rasheed (2007)	Iraq	Interview questionnaire	FP Knowledge, sources of info, and use + reasons for non-use	Not reported	800	Married women of reproductive age (15-49) + living in Dohuk	100%
Mawajdeh (2007)	Jordan	Interview questionnaire	Factors associated with FP use	Mean= 30.7	2,406	Married woman of reproductive age (15-49) + visiting a health centre for any reason	Not reported
Sadat-Hashemi et al. (2007)	Iran	Interview questionnaire	FP Knowledge, use, and factors associated with use	Mean= 23.8 SD (4.33)	4,042	Women of reproductive age (15-49) who delivered in the teaching hospitals + who had at least one child living during the first 24 hrs of delivery	Not reported
Kulczycki (2008)	Turkey	Interview questionnaire	FP sources of info, methods used, attitudes, and factors	Not reported	1,971	Married women of reproductive age (15-49)	Not reported

			associated with use				
Altay & Haberal (2009)	Turkey	Interview questionnaire	FP knowledge, use, , and factors associated with use	Adolescents: Mean=18.33 SD (0.74) Adults: Mean=24.95 SD (3.79)	157 adolescents + 107 adults	Pregnant women from adolescence to adulthood	Not reported
Ayaz & Efe (2009)	Turkey	Not reported	FP knowledge, attitudes and use	Not reported	300	Married women of reproductive age (15-49)	Not reported
Al Sheeha (2010)	Saudi Arabia	Interview questionnaire	FP Knowledge, sources of info, attitudes, use, reasons for non-use, and factors associated with use	Mean=33.5 SD (4.1)	502	Ever married Saudi women, aged (18-49) years + who have had at least one child	Not reported
Bal & Sahin (2010)	Turkey	Interview questionnaire	Sources of info, use, reasons for non-use, and factors associated with use	Not reported	695	Women of reproductive age (15-49) + who were sexually active at the present in the past + attended an FP clinic of a state hospital in Karaman City	Not reported
Sueyoshi & Ohtsuka (2010)	Jordan	Interview questionnaire	FP use and reasons for non-use	Not reported	354	Sexually active and fertile women + not pregnant at the time of the survey	Not reported
Alturki (2011)	Saudi Arabia	Interview questionnaire	Sources of FP info and reasons for non-use	Non-users: Mean=39.81 SD (8) Contraception users:	215	Married women of reproductive age (15-49)	Not reported

				Mean=33.23 SD (7.3)			
Ali et al. (2011)	Sudan	Interview questionnaire (pretested)	FP use, reasons for non-use, and factors associated with use	31.1 ± 7	270	Married women of reproductive age (15-49)	Not reported
Arbab et al. (2011)	Qatar	Interview questionnaire (pretested)	FP Knowledge, sources of info, attitudes, use, reasons for non-use, and factors associated with use	32.5± 7.6	1,130	Married women of reproductive age (15-49)	86.9%
Kotb et al. (2011)	Egypt	Interview questionnaire (pretested)	FP Knowledge, sources of info, use, reasons for non-use, and factors associated with use	31.4± 7.4	2,340	Married women of reproductive age (15-49)	Not reported
Awadalla (2012)	Egypt	Interview questionnaire	FP use and factors associated with use	Not reported	18,134	Married women of reproductive age (15-49)	99%
Golbasi et al. (2012)	Turkey	self-administered questionnaire	FP knowledge, attitudes and sources of info	Mean=21.12 SD (1.76)	1,089	Both male and female university students- only female results are extracted	Not reported
Ali & Okud	Sudan	Interview questionnaire	FP attitudes, use, and factors associated with use	Mean=31.8 SD (7.3)	812	Married women of reproductive age (15-49)	Not reported
Cayan & Karaçam (2013)	Turkey	interview questionnaire	FP knowledge, attitudes, and use	Mean=33.5 SD (7.8)	427	Married women of reproductive age (15-49)	85.4%
Eltomy et al. (2013)	Egypt	Interview questionnaire	FP attitudes and reasons for non-use	Not reported	500	women who had stopped using FP methods (discontinued) and women	Not reported

						who had never used any FP method	
Hayat et al. (2013)	Kashmir	Interview questionnaire	FP Knowledge, sources of info, attitudes, use, reasons for non-use, and factors associated with use	Not reported	1,900	Married women of reproductive age (15-49)	Not reported
Motlaq et al. (2013)	Iran	Interview questionnaire	FP use, sources of info, reasons for non-use, and factors associated with use	25-34	2,120	Married women of reproductive age (15-49)	92.2%
Shahpoorian et al. (2014)	Iran	not reported	FP knowledge and use	Mean=18 SD (1)	500	Women aged under 20 years old + minimum one year of marriage + living in Tehran	Not reported
Osmani et al. (2015)	Afghanistan	not reported	FP use, and factors associated with use	Not reported	13,654	Married women of reproductive age (12-49)	Not reported
Petra et al. (2015)	India	Interview questionnaire	FP use, reasons for non-use, and factors associated with use	Not reported	70,016	Married women of reproductive age (15-49)	Not reported
Rasooly et al. (2015)	Afghanistan	Interview questionnaire	FP use, and factors associated with use	Not reported	25,743	Married women of reproductive age (15-49)	Not reported
Kharif et al. (2016)	Saudi Arabia	self-administered questionnaire	FP use, reasons for non-use, and factors associated with use	Not reported	343	Ever married women of reproductive age (15-49)	Not reported
Mubashar et al. (2016)	Saudi Arabia	Interview questionnaire	FP Knowledge, sources of info, attitudes, use, and reasons for non-use	Mean= 32.2 SD (1.2)	500	Married women of reproductive age (15-49)	Not reported

saelim et al. (2016)	Thailand	self-administered questionnaire	FP Knowledge, attitudes, use, reasons for non-use, and factors associated with use	Mean=30.2 SD (6.62) Mean=31.8 SD (9.09)	423	Literate women of reproductive age (15-49)	90%
Sapkota et al. (2016)	Nepal	Interview questionnaire	FP use, reasons for non-use, and factors associated with use	Not reported	160	Married women of reproductive age (15-49)	Not reported
Marafie et al. (2007)	Kuwait	self-administered questionnaire	FP use, knowledge of Emergency contraception, reasons for non-use	Mean=35.1 SD (6.3)	66	Married women of reproductive age	Not reported
Aksu et al. (2009)	Turkey	Interview questionnaire	FP use, knowledge of Emergency contraception, and reasons for non-use	Mean=29.5 SD (5.6)	284	Women of reproductive age (15–49) + able to communicate and speak in Turkish	Not reported
Baser et al. (2009)	Turkey	Interview questionnaire	FP use, knowledge of Emergency contraception, source of info, and reasons for non-use	Mean=31.2 SD (9.2)	1,600	Not reported	Not reported
Kisa et al. (2011)	Turkey	self-administered questionnaire	FP use, knowledge of Emergency contraception, reasons for non-use, and factors associated with use	Not reported	318	Women of reproductive age (15-49)	Not reported
Yapici et al. (2011)	Turkey	self-administered questionnaire	FP use, knowledge of Emergency contraception, and	Mean=20.4 SD (1.8)	1,042	university students - sample included male and female but only female	94%

			factors associated with use			results are extracted	
El-Sabaa et al. (2013)	Egypt	Interview questionnaire	FP use, knowledge of Emergency contraception, source of info, and reasons for non-use	Not reported	151	women of reproductive age (15-49)	94%
Karim et al. (2015)	Saudi Arabia	Not reported	FP use, knowledge of Emergency contraception, source of info, and reasons for non-use	Mean=37.85 SD (10.62)	298	Women in the reproductive age (18-55)	84%
Ganczak et al. (2007)	UAE	self-administered questionnaire	STIs knowledge, attitudes, and sources of info	Mean=18.3	148	University students	89%
Husseini & Abu-Rmeileh (2007)	Palestine	Not reported	STIs knowledge, attitudes, and sources of info	Mean=33.3 SD (0.136)	4,967	ever-married women 15-49	88%
Coleman & Testa (2008)	UK	self-administered questionnaire	STIs knowledge, attitudes, and sources of info	Not reported	335	Male and female students in school Years 11-13, aged (15-18)	99%
Fageeh (2008)	Saudi Arabia	self-administered questionnaire	STIs knowledge, attitudes, and sources of info	Not reported	345	(18 – 25) year olds	Not reported
Mansoor et al. (2008)	Afghanistan	self-administered questionnaire	STIs knowledge, attitudes, and sources of info	Mean=19.4 SD (1.8)	287	Male and female University students	75%
Al-Iryani et al. (2009)	Yemen	self-administered questionnaire	STIs knowledge, attitudes, and sources of info	Mean=16.4 SD (0.9)	1,337	Male and female Students in school Years 11-13 aged (15-18)	Not reported

Badahdah & Foote (2010)	Kuwait, Bahrain, and Jordan	self-administered questionnaire	STIs knowledge, attitudes, and sources of info	Mean=20.6 SD (1.4)	83 Kuwaiti, 108 Bahraini, and 86 Jordanian women	Male and female University students	Not reported
Salem et al. (2012)	Saudi Arabia	self-administered questionnaire	STIs knowledge and attitudes	Not reported	95	Female secondary school students	Not reported
Bakri M (2013)	Saudi Arabia	Not reported	STIs knowledge and attitudes	Not reported	250	Female University students	Not reported
El Gelany & Moussa (2013)	Egypt	interview questionnaire	STIs knowledge, attitudes, and sources of info	Mean= 19.64 SD (1.40)	220	Female university students aged 17 - 23	Not reported
Khajehei et al. (2013)	Shiraz	self-administered questionnaire	STIs knowledge, attitudes, and sources of info	Mean=21.2 SD (4.4)	281	Men and women attending pre-marital screening classes	92%
Alkhasawneh et al. (2013)	Jordan	self-administered questionnaire	STIs knowledge, attitudes, and sources of info	Mean=30	128	Any University student or employee over 18 years of age	Not reported
Eksi & Komurcu (2014)	Turkey	not reported	STIs knowledge, attitudes, and sources of info	Mean=19.85 SD (1.59)	420	First year university students	Not reported
Haroun et al. (2014)	UAE	self-administered questionnaire	STIs knowledge and attitudes	Not reported	1,888	Male and female University students s	50%
Rahimi et al. (2016)	Iran	self-administered questionnaire	STIs knowledge and attitudes	Mean=29.4 SD (8.3)	411	Men and women aged (15-49) years living in Tehran	Not reported
Bazarganipour et al.	Iran	Interview	SRH knowledge and	Mean=21.82	400	Female students in B.S or	Not

(2012)		questionnaire	attitudes + SRH educational needs	SD (1.14)		lower degree in non-medical universities.	reported
Kobra et al. (2014)	Iran	self-administered questionnaire	Facilitators and barriers to SRH services	Mean=21.57 SD (3.82)	317	Female University students	Not reported
Abdel-Tawab et al. (2015)	Egypt	Interview questionnaire	Facilitators and barriers to SRH services	Not reported	481	Married women aged (18-24)	Not reported
Abdulrahman et al. (2018)	UAE	Interview questionnaire	FP use, and factors associated with use	Not reported	722	Married women of reproductive age (18-49)	47%
Al-musa et al. (2019)	Saudi Arabia	Questionnaire, Not specified if self-administered or interview	FP knowledge, attitudes, and use	Mean=29.6 SD (10.5)	314	Married women of reproductive age (15-59)	Not reported
Budhwani et al. (2018)	US	Self-administered questionnaire	FP use, and factors associated with use	Mean=32.19 SD (0.50)	224	Women who self-identified as Muslim, at least 18 years old, and current residents of the United States	Not reported
Dakhly et al. (2018)	Egypt	Self-administered questionnaire	FP knowledge, attitudes, and use	Mean=30.75 SD (6.71)	2128	Married women of reproductive age (15-59), not pregnant	90%
Böttcher et al. (2019)	Palestine	Interview questionnaire	FP use, and factors associated with use	Mean=30.8 SD (±7.5)	213	Women of reproductive age	Not reported
Safi & Doneys (2019)	Afghanistan	Interview questionnaire	FP use, and factors associated with use	Mean=31.4 SD (11.2)	176	Married women	Not reported
Abdel-Salam et al.	Saudi Arabia	Interview	FP use and reasons for	Mean=34.09	369	Married women of	Not

(2020)		questionnaire	non-use	SD (6.42)		reproductive age (15-49)	reported
Dhakal et al. (2020)	Nepal	Interview questionnaire	FP knowledge, attitudes, and use	Mean=29.91 SD (6.01)	164	Married women of reproductive age (15-49)	95%
Komasawal et al. (2020)	Jordan	Interview questionnaire	FP use, and factors associated with use	Mean=35.2 SD (7.6)	1019	Married women of reproductive age (15-49)	Not reported

SD= standard deviation; FP= family planning

Table 2: Qualitative study and sample characteristics

Author (year)	Country	Design	Outcomes reported	Mean age of participants	Sample size for female participants	Eligibility criteria
Ay et al. (2007)	Turkey	Focus group discussions (FGDs)	FP knowledge & attitudes +Barriers & facilitators to contraception use	Mean=33 SD (8.1)	6 FGD - 53 women total	Married women
Lowe et al. (2007)	UK	Semi- structured interviews	Attitudes and experiences towards FP services	From 22 to 44 years	19 Semi-structured interviews, 100 women total	South Asian women (aged 18–45 years) of Pakistani ancestry
Haider et al. (2008)	Afghanistan	FGDs & in-depth individual interviews	FP knowledge & attitudes +Barriers & facilitators to contraception use	Mean= 24.8	4 FGDs (4-5) + 6 per group + in-depth individual interviews	Being part of an immediate post-partum couple, willingness to take part in either a focus group or in-depth interview for approximately 30–60 minutes, and the ability to speak Dari or Pashto.
Khalaf et al. (2008)	Jordan	Focus group discussions (FGDs)	FP knowledge & attitudes +Barriers & facilitators to contraception use	Mean= 34	Not reported	Women who had used a FP method during the prior year and who represented diverse socioeconomic and educational levels.
Izugbara et al. (2010)	Nigeria	FGDs & in-depth individual interviews	Barriers & facilitators to contraception use	Mean= 37	9 FGDs +13 in-depth interviews	Married women (14 - 81 years)
Rustagi et al.	India	FGDs & semi-	FP knowledge &	Not	5 FGDs (7-9)	Women in the reproductive age

(2010)		structured individual interviews	attitudes +Barriers & facilitators to contraception use	reported	per group + and 16 semi-structured interviews	(15-49), who had two or more children and have not accepted terminal methods of contraception
Him & Hosgor (2011)	Turkey	In-depth interviews	FP knowledge & attitudes +Barriers & facilitators to contraception use	Mean= 31	40 in-depth interviews	Married Kurdish migrant women
Hughes, C. L. (2011)	Morocco	Ethnographic study + unstructured & semi-structured interviews	FP knowledge & attitudes +Barriers & facilitators to contraception use	Not reported	23 semi-structured interviews	Married women
Hasnain et al. (2013)	Karachi, Pakistan	Focus group discussions (FGDs)	FP knowledge & attitudes +Barriers & facilitators to contraception use + HIV knowledge & attitudes	Not reported	3 FGD - 20 per group	Males and females aged 17-21 years, unmarried, living in Karachi and belonging to different social strata.
Memmi et al. (2015)	Palestine	Semi- structured interviews	FP knowledge & attitudes +Barriers & facilitators to contraception use	Not reported	22 in-depth interviews	Ever- married women of reproductive age
Sapkota et al. (2016)	Nepal	Semi- structured interviews	FP knowledge & attitudes +Barriers & facilitators to contraception use	Not reported	2 FGDs – (8-10) per group	Married women of reproductive age (15-49)
West et al. (2016)	Jordan	Semi- structured interviews	FP knowledge & attitudes +Barriers &	Not reported	16 semi-structured	Married women of reproductive age + who had given birth in the

			facilitators to contraception use		interviews	last year + residing in the refugee camp
Pell S. (2017)	Palestine	Semi- structured + in depth interviews	FP knowledge & attitudes +Barriers & facilitators to contraception use	Not reported	14 Semi-structured + in depth interviews	Palestinian women
Maticka-Tyndale et al. (2007)	Canada	Semi- structured interviews	Access to SRH services + barriers & facilitators to accessing services + SRH education needs	Not reported	10 semi-structured interviews	Married women of reproductive age (15-49)
George et al. (2014)	Canada	Focus group discussions (FGDs)	Access to SRH services + barriers & facilitators to accessing services + SRH education needs	Not reported	FGDs - 22 women total	New immigrant Muslim women who have lived in Canada for at least a year, be familiar with the health care system and be able to converse in English.
Shariati et al. (2014)	Iran	Focus group discussions (FGDs)	Barriers & facilitators to accessing services + SRH education needs	Not reported	FGDs - with 247 adolescent girls and 26 of their mothers (6-12) per group	Adolescents aged 14-19, never married and lived with their parents
Yari et al. (2015)	Iran	FGDs & semi-structured individual interviews	SRH issues and needs + barriers and facilitators to sexual health education	Mean=22.4 SD (3)	25 semi-structured interviews + 2 FGDs 8 per group	University students
Khalesi et al. (2016)	Iran	Semi-structured in-depth interviews	Barriers and	Not	23 Semi-structured in-	Married women and engaged women referred to pre-marital

			facilitators to sexual health education	reported	depth interviews	counselling
Kohan et al. (2016)	Iran	Semi- structured in-depth interviews	Access to SRH services + barriers & facilitators to accessing services	Not reported	17 Semi-structured in-depth interviews	Unmarried women aged (25–60) years living in Isfahan city, who were not legally or traditionally married, had experience of visiting health centres (for various reasons).
Meldrum et al. (2016)	Australia	Semi- structured interviews	Barriers & facilitators to accessing services + SRH education needs	Not reported	11 Semi-structured interviews	Women aged (18–25) years who were living in Melbourne and identified as Muslim.
Mohammadi et al. (2016)	Iran	Semi- structured in-depth interviews	Barriers & facilitators to accessing services	Not reported	16 Semi-structured in-depth interviews	Unmarried women willing to participant with no history of mental illness aged (27-53)
Abdi et al. (2020)	Kenya	Focus group discussions (FGDs)	FP knowledge & attitudes +Barriers & facilitators to contraception use	Not reported	11 FGD – 93 participants	Muslim women aged (15-49)
Zhang et al. (2019)	US	Focus group discussions (FGDs)	FP knowledge & attitudes +Barriers & facilitators to contraception use	32.2 ± 8.95	8 FGD – (6-8) per group	Somali women aged (18-49)

APPENDIX 4: QUALITY APPRAISAL FOR QUANTITATIVE STUDIES (CEBM TOOL)

Question / Author	*1.Did the study address a clearly focused question / issue?*	*2. Is the research method (study design) appropriate for answering the research question?*	*3. Is the method of selection of the subjects (employees, teams, divisions, organizations) clearly described?*	*4. Could the way the sample was obtained introduce (selection) bias?*	*5. Was the sample of subjects representative with regard to the population to which the findings will be referred?*	*6. Was the sample size based on pre-study considerations of statistical power?*	*7. Was a satisfactory response rate achieved?*	*8. Are the measurements (questionaires) likely to be valid and reliable?*	*9. Was the statistical significance assessed?*	*10. Are confidence intervals given for the main results?*	*11. Could there be confounding factors that haven't been accounted for?*	*12. Can the results be applied to your organization\ Study?*	*Score (poor<5, fair 5-7, good 8-12)*
Abdel-Fattah et al. (2007)	**Yes**	**Yes**	**No**	**Yes**	**No**	**No**	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Fair**
Agha & Rasheed (2007)	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**N/A**	**Yes**	**Yes**	**Good**

Mawajdeh (2007)	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**NR**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Good**
Sadat-Hashemi et al. (2007)	**Yes**	**Yes**	**No**	**Yes**	**No**	**No**	**NR**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Fair**
Kulczycki (2008)	**No**	**No**	**Yes**	**No**	**Yes**	**No**	**NR**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Fair**
Altay & Haberal (2009)	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**NR**	**No**	**Yes**	**N/A**	**Yes**	**Yes**	**Fair**
Ayaz & Efe (2009)	**Yes**	**Yes**	**No**	**Can't tell**	**No**	**No**	**NR**	**Can't tell**	**Yes**	**Yes**	**Can't tell**	**Yes**	**Fair**
Al Sheeha (2010)	**Yes**	**Yes**	**Yes**	**Can't tell**	**Yes**	**Yes**	**NR**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Good**
Bal & Sahin (2010)	**No**	**Yes**	**No**	**Yes**	**No**	**No**	**NR**	**No**	**Yes**	**N/A**	**Yes**	**Yes**	**Fair**
Sueyoshi & Ohtsuka (2010)	**No**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Can't tell**	**Yes**	**N/A**	**Yes**	**Yes**	**Fair**
Alturki (2011)	**Yes**	**Yes**	**Yes**	**Yes**	**Can't tell**	**No**	**NR**	**Yes**	**Yes**	**N/A**	**Yes**	**Yes**	**Good**

Ali et al. (2011)	**Yes**	**Yes**	**No**	**Can't tell**	**Can't tell**	**Yes**	**NR**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Fair**
Arbab et al. (2011)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Good**
Kotb et al. (2011)	**Yes**	**No**	**No**	**Can't tell**	**No**	**No**	**NR**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Fair**
Awadalla (2012)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**N/A**	**No**	**Yes**	**Good**
Golbasi et al. (2012)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**NR**	**No**	**Yes**	**No**	**No**	**Yes**	**Fair**
Ali & Okud	**Yes**	**Yes**	**Yes**	**Yes**	**Can't tell**	**No**	**NR**	**Can't tell**	**Yes**	**Yes**	**No**	**Yes**	**Fair**
Cayan & Karaçam (2013)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Good**
Eltomy et al. (2013)	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**NR**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Good**
Hayat et al. (2013)	**Yes**	**Yes**	**No**	**No**	**Yes**	**No**	**NR**	**Yes**	**No**	**No**	**Yes**	**Yes**	**Fair**
Motlaq et al. (2013)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Good**
Shahpoorian et	**Yes**	**Yes**	**Yes**	**Yes**	**Can't tell**	**No**	**NR**	**No**	**No**	**No**	**Yes**	**Yes**	**Fair**

al. (2014)													
Osmani et al. (2015)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**NR**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Good**
Petra et al. (2015)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**NR**	**Can't tell**	**Yes**	**Yes**	**No**	**Yes**	**Fair**
Rasooly et al. (2015)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**NR**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Good**
Kharif et al. (2016)	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**NR**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Good**
Mubashar et al. (2016)	**Yes**	**Yes**	**Yes**	**Yes**	**Can't tell**	**Yes**	**NR**	**Can't tell**	**No**	**No**	**Yes**	**Yes**	**Fair**
Saelim et al. (2016)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Good**
Sapkota et al. (2016)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**NR**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Good**
Marafie et al. (2007)	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**NR**	**Yes**	**Yes**	**N/A**	**Yes**	**Yes**	**Good**
Aksu et al. (2009)	**Yes**	**Yes**	**Yes**	**Yes**	**can't tell**	**No**	**NR**	**Yes**	**No**	**N/A**	**Yes**	**Yes**	**Fair**
Baser et	**Yes**	**Yes**	**No**	**Yes**	**Can't tell**	**No**	**NR**	**Yes**	**Yes**	**N/A**	**No**	**Yes**	

al. (2009)													**Fair**
Kisa et al. (2011)	**Yes**	**Yes**	**No**	**Yes**	**can't tell**	**No**	**NR**	**Yes**	**Yes**	**N/A**	**No**	**Yes**	**Fair**
Yapici et al. (2011)	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**	**Yes**	**Can't tell**	**Yes**	**No**	**No**	**Yes**	**Fair**
El-Sabaa et al. (2013)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**N/A**	**No**	**Yes**	**Good**
Karim et al. (2015)	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**No**	**N/A**	**Yes**	**Yes**	**Good**
Ganczak et al. (2007)	**No**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**No**	**N/A**	**Yes**	**Yes**	**Good**
Husseini & Abu-Rmeileh (2007)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Good**
Coleman & Testa (2008)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**N/A**	**No**	**Yes**	**Good**
Fageeh (2008)	**Yes**	**Yes**	**No**	**Can't tell**	**Can't tell**	**No**	**NR**	**Can't tell**	**Yes**	**N/A**	**Yes**	**Yes**	**Fair**
Mansoor et al. (2008)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Can't tell**	**Yes**	**N/A**	**Can't tell**	**Yes**	**Fair**

Al-Iryani et al. (2009)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**NR**	**Yes**	**Yes**	**N/A**	**Can't tell**	**Yes**	**Fair**
Badahdah & Foote (2010)	**Yes**	**Yes**	**No**	**Can't tell**	**Can't tell**	**No**	**NR**	**Yes**	**Yes**	**N/A**	**Can't tell**	**Yes**	**Fair**
Salem et al. (2012)	**Yes**	**Yes**	**Yes**	**YES**	**No**	**Yes**	**NR**	**Can't tell**	**Yes**	**N/A**	**Yes**	**Yes**	**Good**
Bakri M (2013)	**Yes**	**Yes**	**No**	**Can't tell**	**Can't tell**	**No**	**NR**	**Can't tell**	**No**	**N/A**	**Can't tell**	**Yes**	**Poor**
El Gelany & Moussa (2013)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**NR**	**Can't tell**	**No**	**N/A**	**Can't tell**	**Yes**	**Fair**
Khajehei et al. (2013)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**N/A**	**Can't tell**	**Yes**	**Good**
Alkhasawneh et al. (2013)	**No**	**Yes**	**Yes**	**Yes**	**No**	**No**	**NR**	**Yes**	**Yes**	**N/A**	**Yes**	**Yes**	**Fair**
Eksi & Komurcu (2014)	**Yes**	**Yes**	**No**	**Yes**	**No**	**No**	**NR**	**Can't tell**	**Yes**	**N/A**	**Yes**	**Yes**	**Fair**
Haroun et al.	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	**N/A**	**Yes**	**Yes**	**Good**

(2014)													
Rahimi et al. (2016)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**NR**	**Yes**	**Yes**	**N/A**	**Can't tell**	**Yes**	**Good**
Bazarganipour et al. (2012)	**No**	**Yes**	**No**	**Can't tell**	**Can't tell**	**No**	**NR**	**No**	**NR**	**N/A**	**Can't tell**	**Yes**	**Poor**
Kobra et al. (2014)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**NR**	**Yes**	**Yes**	**N/A**	**Yes**	**Yes**	**Good**
Abdel-Tawab et al. (2015)	**No**	**Yes**	**Yes**	**No**	**Yes**	**No**	**NR**	**Can't tell**	**NR**	**N/A**	**Can't tell**	**Yes**	**Poor**
Abdulrahman et al. (2018)	**Yes**	**Yes**	**Yes**	**can't tell**	**yes**	**no**	**no - 47%**	**Yes**	**Yes**	**no**	**Yes**	**Yes**	**Yes**
Al-musa et al. (2019)	**Yes**	**Yes**	**Yes**	**Can't tell**	**Yes**	**No**	**NR**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**
Budhwani et al. (2018)	**Yes**	**Yes**	**can't tell**	**Yes**	**No**	**Yes**	**NR**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Dakhly et al. (2018)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**no**	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**	**Yes**
Böttcher	**Yes**	**Yes**	**Yes**	**No**	**yes**	**No**	**NR**	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**

et al. (2019)													
Safi & Doneys (2019)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**NR**	**yes**	**Yes**	**No**	**No**	**Yes**	**Yes**
Abdel-Salam et al. (2020)	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**	**NR**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Dhakal et al. (2020)	**Yes**	**Yes**	**Can't tell**	**No**	**Yes**	**Yes**	**Yes**	**Can't tell**	**Yes**	**No**	**Yes**	**Yes**	**Yes**
Komasawal et al. (2020)	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**NR**	**yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

NR= not reported

N/A = for studies that did not report CI, the results were expressed as % so the question not applicable

APPENDIX 5: QUALITY APPRAISAL FOR QUALITATIVE STUDIES (CASP TOOL)

Questions / **Author**	*1. Was there a clear statement of the aims of the research?*	*2. Is a qualitative methodology appropriate?*	*3. Was the research design appropriate to address the aims of the research?*	*4. Was the recruitment strategy appropriate to the aims of the research?*	*5. Was the data collected in a way that addressed the research issue?*	*6. Has the relationship between researcher and participants been adequately considered?*	*7. Have ethical issues been taken into consideration?*	*8. Was the data analysis sufficiently rigorous?*	*9. Is there a clear statement of findings?*	*10. How valuable is the research?*	*Score (poor<4, fair 4-6, good>6)*
Ay et al.	**Yes**	**Yes**	**Yes**	**Can't tell**	**Yes**	**No**	**Can't tell**	**No**	**Yes**	**Valuable**	**Fair**
Lowe et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Haider et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Khalaf et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Can't tell**	**Yes**	**Valuable**	**Good**
Izugbara et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**

Rustagi et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Valuable**	**Good**
Him &Hosgor	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Can't tell**	**Can't tell**	**Yes**	**Valuable**	**Good**
Hughes, C. L.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Hasnain et al.	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Memmi et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Can't tell**	**Yes**	**Yes**	**Valuable**	**Good**
Sapkota et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
West et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**yes**	**Yes**	**Yes**	**Valuable**	**Good**
Pell S.	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Maticka-Tyndale et al.	**Yes**	**Yes**	**Yes**	**Can't tell**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
George et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Can't tell**	**Yes**	**Valuable**	**Good**
Shariati et al.	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Yari et al.	**No**	**Yes**	**Yes**	**Can't tell**	**Yes**	**No**	**Yes**	**Yes**	**No**	**Valuable**	**Fair**

Khalesi et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Kohan et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Meldrum et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Mohammadi et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Abdi et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**
Zhang et al.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Valuable**	**Good**

APPENDIX 6: TOPIC GUIDE FOR SAUDI WOMEN

Research on reproductive health of Saudi women
Topic guide

1. Introduction

- Thank you for taking part in the study
- Introduction to researcher: my name, PhD student at UCL, topic of my research is Reproductive health of Saudi women
- Explain to the participants why they have been chosen to take part, and explain the aims and objectives of the study
- Aim: To explore your experiences, perceptions, practices and sexual and reproductive health needs
- Explain confidentiality and anonymity, reassure participants that all answers are confidential, and data will be anonymised
- Reconfirm that they are happy to be recorded, explain length of interview and nature of the discussion
- Remind participants that they may stop at any time and that they don't need to answer any questions they wouldn't feel comfortable answering
- Sign the consent form
- Check if they have any further questions and if they are happy to continue

2. Socioeconomic and family characteristics

Demographic sheet (ID, age, level of education)

For this study, I'm interested in women's health in terms of sexual and reproductive health for example relationships, STIs, pregnancy and contraception.

3. So, when you hear the term sexual and reproductive health, what do you think of?

4. Where have you learned about sexual and reproductive health?

- Probe: School/home/parents/youth group /friends /media /Internet.
- How was the teaching delivered? (Video, class, written material)
- What did you learn about?
- How did you find this information?
    - Probe: Useful, informative vs. basic, useless – why or why not?
- Did you receive enough information, or do you feel like you needed more?
- From whom?

What would you like to have been taught or known more about? What SRH topics do you think are important for Saudi women? (e.g., sexual intercourse, family planning,

STIs, relationships and abuse, knowing about bodies and sex…)

3. Contraceptive methods knowledge/ attitudes

Could you tell me what you know about birth control methods?

- Do you know what contraception is available for men and women in Saudi?
- How and where did you learn about those methods?
- Do you know the place or person where you could obtain those methods?
- What does religion say about using contraceptives?
    - Is it halal or haram?
- What does your family say about using contraceptives?
- Do you agree with their views?
- [If relevant] What does your partner say about using contraceptives? What do you think about that?
- Who do you think men should be involved in deciding what methods to use?
- Who decides on contraception use?
    - Probe: You, spouse or both?
- Is it mainly a woman's responsibility to ensure that contraception is used regularly?
- Are you worried about using contraception?
- [If okay to ask] What is your experience with using contraception?
- Do you support the use of contraception?

4. Knowledge of sexually transmitted diseases

- Do you think STIs are an issue here in Saudi?
- Do you think you are at risk?
- Could you tell me what you know about STIs?
- Do you feel at risk of STIs?
    - Probe Why/why not?
- Do you think STIs can be prevented?
- Do you know where would someone go to get advice or treatment?
- Do you think people would go to get checked out?
    - Why/why not?

Attitudes towards infected individuals

How do you feel about living with someone who has an STI?

5. Attitudes towards SRH services: summaries here

- What are your SRH needs (info, services)?
- If you had a sexual health related concern, who would be the first person you talk to?
    - Why? If not, why not?

- Are there any health services that you would feel comfortable contacting or using if you needed to seek sexual health assistance?
- [If okay to ask] Have you ever seen a doctor or nurse for a sexual health problem?
- Tell me about that experience
- Have you been to get contraception?
    - Tell me about that experience
- What do you feel that the current services are lacking?
- Who do you think should use them?
    - Only married women, anyone
- What would stop from you going to a clinic/getting help or information?
- Is there anything that would make it easier for you to use these services?
- Does it matter who provides the services? (gender)

Do you feel that there is a need to provide more culturally appropriate education and services for young Saudi women? If yes, what do you think would be useful in order to improve education and services?

Indicate that interview is now coming to an end – just a few more questions....

6. **Attitudes towards SRH education:**

How would you feel about having SRH education?

When do you think it is most appropriate?

- At school, university, pre-marriage

Who should be educated?

- Men, women, or both
- Why should men be educated?

Do you think SRH education is important?

Why or why not?

- Do you think that providing youth with SRH education is helpful to you?
- Who do you think needs SRH education and why?
- What is the appropriate timing of SRH education?
- What is the appropriate setting?
- Who should teach SRH?
- What do you think is the most appropriate method of delivery? (One to one or in a class? Or do you prefer reading about it)
- How would you say your views or experiences that you have expressed so far are similar or different to other young Muslims that you know?
- What do you think should be in the educational program and when is the best time to provide it?

Close

- Thank them and tell participants how they'll receive the gift voucher for their time and help
- Do you have any questions at all or anything else that you would like to add that I might have missed?
- Address important misunderstandings
- Give out advice and info sheet

APPENDIX 7: TOPIC GUIDE FOR KEY STAKEHOLDERS

A. Health professionals

Research on reproductive health of Saudi women

Topic guide

Introduction

- Thank you for taking part in the study
- Introduction to researcher: my name, PhD student at UCL, topic of my research is Reproductive health of Saudi women
- Explain to the participants why they have been chosen to take part, and explain the aims and objectives of the study
- Aim: To explore your experiences, perceptions, practices and reproductive health needs
- Explain confidentiality and anonymity, reassure participants that all answers are confidential, and data will be anonymised
- Reconfirm that they are happy to be recorded, explain length of interview and nature of the discussion
- Remind participants that they may stop at any time and that they don't need to answer any questions they wouldn't feel comfortable answering
- Sign the consent form
- Check if they have any further questions and if they are happy to continue

Socioeconomic and family characteristics

Demographic sheet (ID, age, level of education)

What do you think your role is and what do you think your responsibility is?

- Do you think there are issues related to sexual and reproductive health affecting women in Saudi Arabia? If yes, what?
- How do you think these issues are talked about and addressed?
  - With friends, family members, partner, in the media
- Do you know of any programs/courses that focus on sexual and reproductive health in Saudi Arabia for women?
  - Schools, colleges, online
- What about other sources of information, like the Internet, social media, films
  - Do patients mention any sources of information for SRH issues?

- How often do you see patients with unmet needs in regard to SRH?
- What types of cases related to SRH do you encounter?
- How do you feel (would you feel) about discussing sexual health issues with your patients?
- What is your approach for dealing with sexual health issues with patients?
- What sources of information do you use?
- Do you think it is a part of your job to provide SRH information?

Attitudes towards SRH education

- Do you think there should be a formal SRH education programme as part of the pre-marital screening programme?
- Where? For whom? (Women, men)? And how should this be delivered?
  - Who do you think should provide the education? (GPs, OB GYN, nurses or health educators)
  - How open do you think the public would be to this program?
  - What topics do you feel should be covered?
  - Can you see any difficulties that might be faced?
  - What do you think would make it easier?

Contraception

- Do patients come for advice on contraception?
  - Do they usually take it without medical advice?
- Do you think oral contraception should require a prescription?
- Do you think it is an issue to take oral contraception without medical advice?
- If a patient comes to you for advice on birth control, how do you deal with it?
- What is the most common method of contraception and why?
- What sources of information do women use for contraceptive knowledge?
- What do you think the level of awareness among women about different methods of birth control?
- Do you think health professionals sufficiently discuss the effectiveness and side effects of contraception with their patients?
- What would facilitate or hinder that discussion?

STIs

- Do you think STIs are a problem in Saudi Arabia?
- Why/why not?
- What do you think of the level of awareness among women about STIs?
- What kind of information is the public lacking?
- How should this be addressed?
- In what situation will you be inclined to discuss STIs risk with patients?
- Who do you think is responsible for preventing/educating the public about sexually transmitted diseases?

Topic guide for key stakeholders

B. Ministry of health (MOH)

Research on reproductive health of Saudi women

Topic guide

Introduction

- Thank you for taking part in the study
- Introduction to researcher: my name, PhD student at UCL, topic of my research is Reproductive health of Saudi women
- Explain to the participants why they are taking part, and explain of the aims and objectives of the study
- Aim: To explore your experiences, perceptions, practices, and reproductive health needs.
- Explain confidentiality and anonymity, reassure participants that all answers are confidential, and data will be anonymised
- Reconfirm that they are happy to be recorded, explain recording length and nature of the discussion
- Remind participants that they may stop at any time and that they don't need to answer any questions they wouldn't feel comfortable answering
- Check if they signed the consent form
- Check if they have any further questions and if they are happy to continue

Socioeconomic and family characteristics

Demographic sheet (ID, age, level of education)

SHR in Saudi Arabia

- Do you think there are challenges related to sexual and reproductive health affecting women in Saudi Arabia? If yes, what?
- How do you think these issues are talked about?
    - With friends, family members, partner, in the media
- Do you know of any programs that focus on sexual and reproductive health in Saudi Arabia?
    - Schools, colleges, online
- What about other sources of information, like the Internet, social media, films

Attitudes towards SRH education

- Do you think there should be a formal SRH education programme as part of the pre-marital screening programme?
- Where? For whom? (Women, men)?
- Who do you think should provide the education? (GPs, OB GYN, nurses or health educators)
- How open do you think the public would be to this program?
- What topics do you feel should be covered?
- Can you see any difficulties that might be faced?
- What are the possible challenges to the provision of sexual education in Saudi Arabia?
- What do you think would make it easier?

Contraception:

- What are your thoughts on regulating the use of oral contraception?
  - Making it prescription only drug?
- The impact of regulating the use of hormonal contraceptives.
  - Positive or negative impact?
- Do you know of any available family planning programmes or Services that are available to the public?

STIs

- Do you think STIs are a problem in Saudi Arabia?
- Why/why not?
- Do we have any statistics in the country about STs?
- Can you share those statistics? If no, why not?
- Who do you think is responsible for preventing/educating the public about sexually transmitted diseases?

Topic guide for key stakeholders C

Religious leaders/scholars

Research on reproductive health of Saudi women

Topic guide

Introduction

- Thank you for taking part in the study
- Introduction to researcher: my name, PhD student at UCL, topic of my research is Reproductive health of Saudi women
- Explain to the participants why they have been chosen to take part, and explain the aims and objectives of the study
- Aim: To explore your experiences, perceptions, practices, and reproductive health needs
- Explain confidentiality and anonymity, reassure participants that all answers are confidential, and data will be anonymised
- Reconfirm that they are happy to be recorded, explain length of interview and nature of the discussion
- Remind participants that they may stop at any time and that they don't need to answer any questions they wouldn't feel comfortable answering
- Sign the consent form
- Check if they have any further questions and if they are happy to continue

Socioeconomic and family characteristics

Demographic sheet (ID, age, level of education)

SRH in Saudi Arabia

- Do you think there are issues related to sexual and reproductive health affecting women in Saudi Arabia? If yes, what?
- How do you think these issues are talked about and addressed?
    - With friends, family members, partner, in the media

Attitudes towards SRH education

- What are Islamic views on sexual education?
    - What does Islam say about teaching sexual education?
        - Is it against religion to teach and discuss sexual health issues?

  - Do you think there should be a formal SRH education programme as part of the pre-marital screening programme?
  - Where? For whom? (Women, men)?
  - Who do you think should provide the education? (GPs, OB GYN, nurses or health educators)
  - How open do you think the public/ other religious leaders would be to this program?
  - What should the SRH education programme look like? in your opinion?
  - Should it be addressed solely from a religious viewpoint?
  - Should we present young people with scientific information about virus/bacterial transmission? Ways of protection?
- What would be the appropriate way of presenting information on safe sex practices?
- Can you see any difficulties that might be faced?

Contraception:

- Religious views on family planning and contraception
- Do you think there are contradicting views about contraception use? If yes, why?
- Do you think those contradicting views have a negative impact on a certain segment of the population?

STIs:

- Do you think STIs are a problem in Saudi Arabia?
- Why/why not?
- Who do you think is responsible for preventing/educating the public about sexually transmitted diseases?

APPENDIX 8: DEMOGRAPHIC QUESTIONNAIRE

Sexual and reproductive health of Saudi women: needs, perceptions, and experiences

Some questions about you

In order for us to learn about the range of people taking part in this research, we would be grateful if you could answer the following questions. All information provided is anonymous.

Please either write your answer in the space provided, or circle the answer, or answers, that best apply to you.

<table>
<tr><td>1</td><td>How old are you?</td><td colspan="3"></td></tr>
<tr><td>2</td><td>I am:</td><td colspan="2">Male</td><td>Female</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">I am:</td><td>Full-time employed</td><td>Part-time employed</td><td>Full-time student</td></tr>
<tr><td>Part-time student</td><td colspan="2">Other: _____</td></tr>
<tr><td>3a</td><td colspan="2">If you work, what is your occupation?</td><td colspan="2"></td></tr>
<tr><td>6</td><td colspan="3">How would you describe your social class? (e.g., working class; middle class; no class category)</td><td>_____</td></tr>
<tr><td>8</td><td colspan="3">How would you describe your relationship status?</td><td>Single
Partnered
Married/Civil Partnership
Separated
Divorced/Civil Partnership
Dissolved
Other:</td></tr>
<tr><td>9</td><td colspan="2">Do you have children?</td><td>Yes</td><td>No</td></tr>
</table>

Thank you!

APPENDIX 9: INFORMED CONSENT FORM FOR PARTICIPANTS IN RESEARCH STUDIES

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Project: **sexual and reproductive health of Saudi women: needs, perceptions and experiences**
This study has been approved by the UCL Research Ethics Committee (Project ID Number): 10157/001

Thank you for your interest in taking part in this research. Before you agree to take part, the person organizing the research must explain the project to you.

If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

Participant's Statement

I agree that:

- I have read the notes written above and the Information Sheet and understand what the study involves.
- I understand that if I decide at any time that I no longer wish to take part in this project, I can notify the researchers involved and withdraw immediately.
- I consent to the processing of my personal information for the purposes of this research study.
- I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.
- I agree that the research project named above has been explained to me to my satisfaction and I agree to take part in this study.
- I Agree that my data, after it has been fully anonymised, can be shared with other researchers *[to satisfy Research Council funded projects as Research Councils have changed their guidance regarding data sharing]*
- I understand that my participation will be audio recorded and I consent to the use of this material as part of the project.
- I understand that the information I have submitted will be published as a report and I will be sent a copy. Confidentiality and anonymity will be maintained, and it will not be possible to identify me from any publications.
- I agree that my non-personal research data may be used by others for future research. I am assured that the confidentiality of my personal data will be upheld through the removal of identifiers.

Signed: **Date:**

APPENDIX 10: SUMMARISING MAIN THEMES ACCORDING TO CONCEPTUAL FRAMEWORK DOMAINS (WOMEN'S STUDY)

Domain / Theme	Personal	Family and community	Religion and culture	Institutional	Health policy and health services
Knowledge of sex and reproduction	●	●	●	●	
Experience with menarche	●	●	●		
Deep-rooted negative views towards sex		●	●		
Perceptions of SRH	●	●	●		●
Ignorance signifying modesty and purity	●	●	●		
Family control over unmarried women		●	●	●	●
Experiences of SRH education at school			●	●	
Experiences with Healthcare providers			●		●
STIs are "not our problem"	●	●	●	●	
Protection against STIs	●	●	●	●	●
Attitudes towards people with STIs	●	●	●		
Views towards a spouse with an STI	●	●	●		
Barriers to STI testing and diagnosis	●	●	●	●	●
Attitudes towards contraception	●	●	●		
Barriers to contraception use	●	●	●	●	●
Control over contraceptive decisions	●	●	●		
Responsibility for preventing pregnancy	●	●	●		●
Attitudes towards SRH education	●	●	●	●	

APPENDIX 11: SUMMARISING MAIN THEMES ACCORDING TO CONCEPTUAL FRAMEWORK DOMAINS (STAKEHOLDER'S STUDY)

Theme \ Domain	Personal	Family and community	Religion and culture	Institutional	Health policy and health services
Women's sexual and reproductive knowledge	●	●	●	●	
Deep-rooted negative views towards sex and sexuality	●	●	●		
Communication between partners	●	●	●		
Societal expectations of women's SRH knowledge: Modest women are shy and uninformed	●	●	●		
Gender inequality and traditional gender roles	●	●	●	●	
Sexual abuse in childhood		●	●	●	●
Barriers and facilitators to sexual and reproductive information and healthcare services	●	●	●	●	●
Barriers and facilitators to contraceptive use	●	●	●	●	●
Perceptions on how common STIs are in Saudi Arabia	●	●	●	●	
Men as the source of STIs	●	●	●		
STI prevention	●	●	●	●	●
Disclosing STI diagnosis to patients	●	●	●		●
Developing and implementing Sexual and reproductive health education in Saudi Arabia	●	●	●	●	●
Attitudes towards contraception	●	●	●		
Barriers to contraception use	●	●	●	●	●
Control over contraceptive decisions	●	●	●		

RESPONSIBILITY FOR PREVENTING PREGNANCY	●	●	●		●
ATTITUDES TOWARDS SRH EDUCATION	●	●	●	●	